

## **SCHEDULE OF MENTAL MATHS QUIZ COMPETITIONS FOR THE YEAR 2010-11**

Preparation from Question Banks and Practice to students	01.04.10 to 22.10.10
School level Quiz Competition	23.10.10 to 24.10.10
Cluster level Quiz Competition	17.11.10 to 20.11.10
Zonal level Quiz Competition	01.12.10 to 04.12.10
District level Quiz Competition	04.01.11 to 06.01.11
Regional level Quiz Competition	11.01.11 to 13.01.11
State level Quiz Competition	First week of February

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## A NOTE TO THE TEACHERS

This Mental Maths book for class-V is based not only on the conceptual knowledge that has been prescribed in the NCERT book for class-V but also has two additional topics namely *Roman Numbers and Dodging tables and simplification*, as by our experience in classroom teaching a student of this age-group is expected to have command over these too.

To assist the teachers in a better way, a summary of the facts related to the particular chapter is given in the beginning of every chapter and the index has been formed in such a way that the chapters of this book, along with the placement of the concepts of these chapters in the NCERT book, can be located.

Varying levels of difficulty along with a variety of questions are the best features of this book which will cater to the needs of students with different mental levels. As no book can have enough to make a student become the best, it is suggested that the teachers must provide extra questions too for practice but, without the use of paper and pen.

Healthy criticism is the path to excellence. Since teachers directly involved with the students are the best judge, we appeal to all the teachers to feel free to send in their views and suggestions online to :

**[mentalmathsdoe@gmail.com](mailto:mentalmathsdoe@gmail.com)**

Looking forward to the support and good luck to all of us in this venture!

– Authors

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## Chapter - 1

### NUMBERS

(Refer to the chapter # 1 and 7 of the NCERT book for class-V)



#### FACTS AT A GLANCE :

#### 1. Comparison of Numbers :

A number having more digits is always greater.



For example :

H	T	O
4	3	6
4	3	9

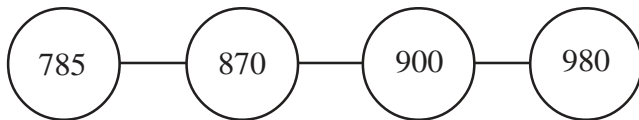
↓            ↓            ↓

Same        Same        Different

- ◆ In the above shown example, numbers 436 and 439 have same digit at hundreds and tens places. Only the digits at ones or units place differ.
- ◆ Since 439 has greater digit i.e. 9 at ones or units place,  $439 > 436$ .

## QUESTIONS

1. How many two-digit numbers are there in all?
2. How many three-digit numbers are there in all?
3. Find the greatest 3-digit number formed by the digits 5, 8, 3.
4. Change the positions of digits in 9735 to get the smallest number of four digits.
5. What is the successor of the greatest 4-digit number?
6. What is the predecessor of the smallest 4-digit number?
7. Find the greatest number out of 7212, 7122 and 7211.
8. Find the smallest number among 6191, 9161 and 1961.
9. See the number chain



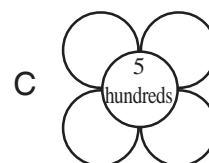
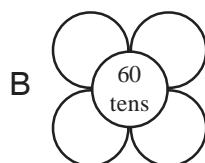
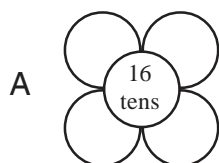
Which number is more than 875 but less than 975?

10. Make the smallest 5-digit number using digits 1, 3, 0, 9 and 7. Each digit should be used only once.
11. What will be the smallest 5-digit number having five different digits?
12. Which is the greatest 5-digit number formed by 4, 0, 7, 8 and 5 when each digit is used only once?
13. What is the place value of 6 in 26307?
14. 999 comes just before \_\_\_\_\_.
15. Which of the following pairs is not correct?
  - (a) Four hundred sixteen - 416
  - (b) Two hundred two - 202
  - (c) Nine hundred ninety - 919
  - (d) Six hundred fifteen - 615
16.  $7000 + 600 + 50 + 7$  in short form is \_\_\_\_\_.
17. 4 thousand 1 ten and 3 ones = \_\_\_\_\_.
18. 100 tens = \_\_\_\_\_ ones.
19. 10 \_\_\_\_\_ = one thousand.

20. \_\_\_\_\_ thousands = 10 lakh.
21.  $90000 + \underline{\hspace{2cm}} + 6 = 90076$
22. If 8 hundreds 4 tens and 2 ones =  $800 + a + 2$ , then what is the value of  $a$ ?
23. In four thousand three hundred twelve which digit is at tens place?
24. Tell the place of 0 in sixteen thousand twenty three.
25. Which digit has the greatest place value in 19870?
26. What is the sum of place value and face value of 7 in 87,639?
27. What is the sum of place values of 5's in 13550?
28. The sum of place values of 6 and 4 in the number 654389 is \_\_\_\_\_.
29. What is the difference of place values of two 6's in 26567?
30. What is the difference between place value and face value of 7 in 7150?
31. Counting by hundreds, the number next to 6894 will be \_\_\_\_\_.
32. Counting by thousands, what will be the number next to 21,037?
33. The number 100 more than 689 is \_\_\_\_\_.
34. Which number is 10000 more than 20,039?
35. What is one less than one lakh?
36. Choose the number in which place value of 6 is the greatest : 6582, 5682, 5826.
37. Using only three different digits, what will be the smallest 5-digit number?
38. The number 100 less than the smallest 4-digit number is \_\_\_\_\_.
39. Which box has the smallest value?

$3000 + 40 + 2$	$4000 + 300 + 2$	$3000 + 20 + 4$
<i>A</i>	<i>B</i>	<i>C</i>

40. 36 thousand + 12 hundreds = \_\_\_\_\_.
41. Which one of the following is greater :  
(4000 + 9) or Four thousand ninety?
42. Which flower has the largest value?



43. When arranged in increasing order, which number will be in the 2nd position?  
1508 1000 1431 1341
44. How many digits are there in six lakh six?
45. How many zeros are there in seventy lakh?
46. How many hundreds are there in 5640?
47. I am a 2-digit number. I have 7 in the ones place. I am less than 80 but more than 70.  
Tell who am I?
48. 18 tens more than \_\_\_\_\_ is 280.
49. Which of the following statement is true?  
(a)  $1791 > 1971$     (b)  $1387 = 1397$   
(c)  $3149 < 3249$     (d)  $4300 < 4003$
50. Which digit should come in place of ★ to make the following statement correct :  
 $62 \star 3 =$  Six thousand two hundred three?

## ANSWERS

- |           |              |
|-----------|--------------|
| 1. 90     | 15. c        |
| 2. 900    | 16. 7657     |
| 3. 853    | 17. 4013     |
| 4. 3579   | 18. 1000     |
| 5. 10000  | 19. Hundreds |
| 6. 999    | 20. 1000     |
| 7. 7212   | 21. 70       |
| 8. 1961   | 22. 40       |
| 9. 900    | 23. 1        |
| 10. 10379 | 24. hundreds |
| 11. 10234 | 25. 1        |
| 12. 87540 | 26. 7007     |
| 13. 6000  | 27. 550      |
| 14. 1000  | 28. 604000   |



- |     |        |     |                      |
|-----|--------|-----|----------------------|
| 29. | 5940   | 40. | 37200                |
| 30. | 6993   | 41. | Four thousand ninety |
| 31. | 6994   | 42. | B                    |
| 32. | 22,037 | 43. | 1341                 |
| 33. | 789    | 44. | 6                    |
| 34. | 30039  | 45. | 6                    |
| 35. | 99999  | 46. | 56                   |
| 36. | 6582   | 47. | 77                   |
| 37. | 10002  | 48. | 100                  |
| 38. | 900    | 49. | c                    |
| 39. | C      | 50. | 0                    |

## Chapter - 2

### OPERATIONS ON NUMBERS

(Refer to the chapter # 7, 13 of the NCERT book for class-V)



#### FACTS AT A GLANCE :

#### 1. About Addition :

(a) When 1 is added to a number, we get the next number (successor)

e.g.  $17 + 1 = 18$

(b) When 0 is added to a number, the number remains the same

e.g.  $20 + 0 = 20$

(c) Numbers added in any order give the same sum.

e.g.  $15 + 7 + 9 + 31$  and

$$9 + 15 + 7 + 31$$

#### 2. About Subtraction :

(a) When 1 is subtracted from a number, we get the previous number (predecessor)

e.g.  $20 - 1 = 19$

(b) When 0 is subtracted from a number, the difference is the number itself.

e.g.  $78 - 0 = 78$

(c) When we subtract a number from itself, the difference is always 0.

e.g.  $219 - 219 = 0$



***Addition and Subtraction are inverse operations***

If  $1236 + 3163 = 4399$  then  $4399 - 1236 = 3163$

and ,  $4399 - 3163 = 1236$

**3. About Multiplication :**

(a) Multiplication is “*Repeated addition*”. It means we can write numbers in multiplicative form if same number is added many times.

e.g. If we add 3 five times



$3+3+3+3+3$  is same as  $3 \times 5$

(b) When a number is multiplied by one, the product is the number itself.

e.g.  $608 \times 1 = 608$

(c) When a number is multiplied by zero, the product is always zero.

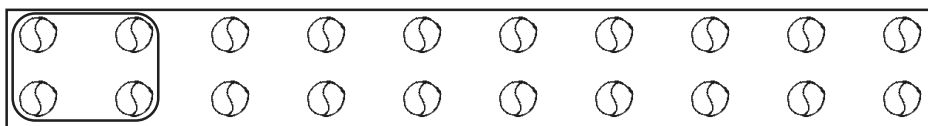
e.g.  $608 \times 0 = 0$

(d) Two numbers multiplied in any order give the same product .

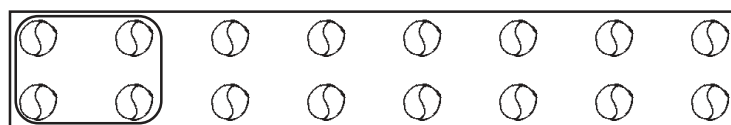
e.g.  $15 \times 5 = 75$   
 $5 \times 15 = 75$

**4. About Division :**

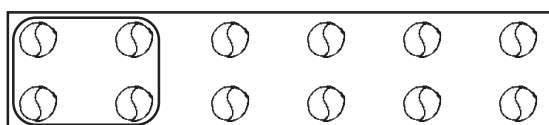
(a) Division is “*Repeated subtraction*” If 20 items are to be distributed equally among 4 children, 4 items will be taken from 20 repeatedly (till we get zero) to know how many items will each child get.



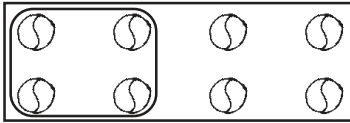
$20 - 4 = 16$



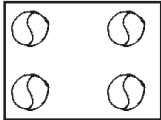
$16 - 4 = 12$



$12 - 4 = 8$



$$8 - 4 = 4$$



$$4 - 4 = 0$$

Since, we have subtracted 4 for five times from 20 to get 0, therefore, we conclude that each child will get five items.

or, we can divide 20 by 4 i.e.  $20 \div 4 = 5$

(b) When a number is divided by one, the answer is the number itself.

e.g.  $18 \div 1 = 18$

(c) When a number is divided by itself, the answer is one.

e.g.  $23 \div 23 = 1$

(d) When zero is divided by any number, the answer is zero.

e.g.  $0 \div 3 = 0$



**Multiplication and Division are inverse operations**

If  $40 \times 2 = 80$  then  $80 \div 2 = 40$

and  $80 \div 40 = 2$

## QUESTIONS

**Fill in the missing numbers :**

1.  $683012 + 100 = 683012 + 50 + \underline{\hspace{2cm}}$
2.  $46506 + 303 + 10 + \underline{\hspace{2cm}} = 303 + 46506 + 101$
3.  $99637 + 100 = 89637 + \underline{\hspace{2cm}} + 100$
4.  $1900 - \underline{\hspace{2cm}} = 1100$
5.  $7 \times 4 - \underline{\hspace{2cm}} = 25$
6.  $800 \div 16 = \underline{\hspace{2cm}}$
7.  $1530 \div \underline{\hspace{2cm}} = 9$

**Tell relation between the given pairs (< or > or =) :**

8.  $630 \div 7$    $630 \div 9$
9.  $18 \div 2$    $60 \div 2$
10.  $24 \times 5$    $12 \times 2 \times 5$
11.  $900 - 100$    $300 \times 2$
12.  $600 \times 4$    $120 \times 20$
13. If  $28 + 47$  is 75, then what will be  $280 + 470$ ?
14. If  $692 + 810 = 1502$ , then what is  $69200 + 81000$ ?
15. If the sum of numbers from 1 to 10 is 55 then what is the sum of numbers from 101 to 110?
16. By how much is 96 greater than 72?
17. What number should be added to 29 to get 100?
18. What number should be added to 689 to get 4000?
19. The sum of the smallest 2-digit number, the smallest 3-digit number and the smallest 4-digit number is           .
20. In a garden, there were 70 coconut trees, 28 mango trees and 45 neem trees. How many trees were there in the garden?

21. There are 131 books on one shelf and 149 books on the other shelf of an almirah. How many books are there in all?

22. If  $\Delta + \Delta + \Delta = 57$ , then what is the value of  $\Delta$  ?

23. See the given statement

$$38 + \underline{\quad\quad} = 63$$

What will you do to find the number in the box?

(a) add 38 and 63

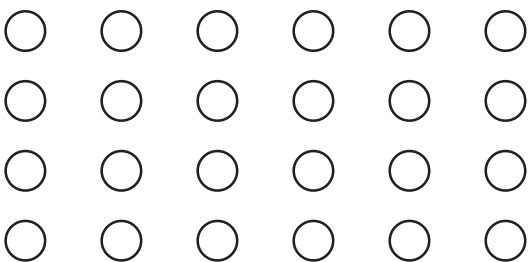
(b) subtract 38 from 63

(c) subtract 25 from 38

(d) none of these

24. Rita bought 2 pens for Rs 67 and a book for Rs 83. How many rupees did she have to pay to the shopkeeper?

25. What should be subtracted from 10,000 to get 6851?

26. 

Which of the following statements are correct for calculating the number of circles in the given figure?

(a)  $4 \times 6$

(b)  $6 + 6 + 6 + 6$

(c) both a and b

(d) none of these

27. How much is  $25 - 24 + 37 - 36 + 15 - 14 + 19 - 18$ ?

28. How much is  $48 - 45 + 29 - 26 + 18 - 15 + 24 - 21$ ?

29. Calculate  $100 - 90 + 80 - 60 + 50 - 20 + 40$

30. Rita had 150 rupees with her. She gave 7 ten rupee notes to her friend. How many rupees are left with her ?

31. Rohan purchased a card for Rs 28 and a gift for Rs 722. How much money the shopkeeper will return to Rohan if he gave a thousand rupee note to the shopkeeper ?

32. The cost of a radio is Rs 2560. The cost of a CD player is Rs 2440 more than that of the radio. What is the cost of the CD player ?

33. Tell the numbers that should come in place of  $a$ ,  $b$  and  $c$  so that the sum of numbers from every side is same.

22	27	20
21	$a$	25
$b$	19	$c$

34. Tell the numbers that will replace  $\Delta$ ,  $\odot$  and  $\star$  in the given square so that the sum of numbers from every side is 105.

32	39	$\odot$
$\Delta$	35	33
36	$\star$	38

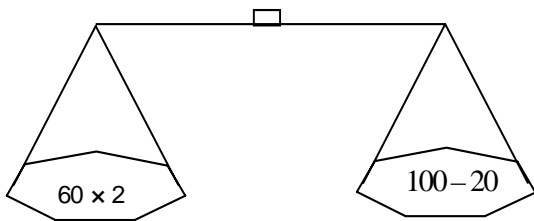
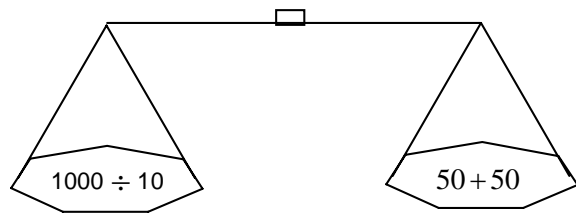
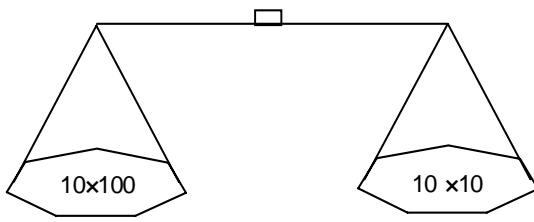
35. How many times we can subtract 25 from 625 ?
36. There are 50 balloons in a packet. How many balloons are there in 15 packets?
37. 40 flowers are needed to make a garland. How many flowers are needed to make 12 such garlands?
38. A box contains 24 fire crackers. How many fire crackers are there in 12 boxes?
39. A cycle costs Rs 1500. What is the cost of 15 such cycles?
40. In a club, 44 members paid Rs 30 each. How much money was collected by the club members?
41. 3 dozens + 2 scores = \_\_\_\_\_
42. How many bananas are there in 12 dozens?
43. Anoop bought 3 frocks each costing Rs 253. What is the cost of 3 frocks?
44. One bottle of milk contains 250 ml milk. How many litres of milk will be there in 8 such bottles?
45. Cost of 250 g of Amul butter is Rs 24. What is the cost of 3 kg of butter?
46. How many beds can be arranged in 19 rooms of a hospital if there are 19 beds in each room?
47. How many chocolates are there in 21 boxes if there are 21 chocolates in each box?
48. The annual school fee is Rs. 3600. What is the monthly fee?
49. There are 16 sweets in a packet. Find the number of packets needed for 1280 sweets.
50. How many cars are needed for 144 persons if 6 persons can sit in one car ?
51. Ten children planted 480 trees. How many trees did each child plant ?
52. There are 38 toffees in a basket. After dividing them equally among 6 girls, how many toffees remain in the basket?

53. Ashok reads 9 pages daily from a book which has 58 pages. After 6 days, how many pages remain unread?

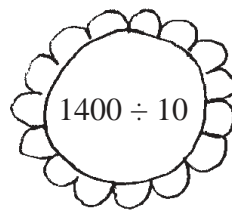
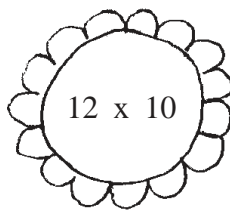
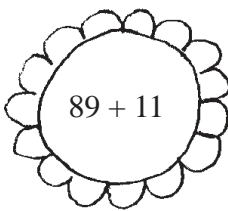
54. Which of the following number boxes shows the maximum value?

$25 \times 4$	$75 \div 5$	$100 - 20$	$171 \div 9$
A	B	C	D

55. Which of the following scales is balanced ?



56. Tell the sequence in which the following flowers would appear if they are arranged in increasing order of their value.



57. Which of the following pairs is not correct ?

(a) 13 added 2 times is  $13 + 2$

(b) 13 added 2 times is  $13 \times 2$



(c) 2 added 13 times is  $2 \times 13$

(d) 13 added to 2 is  $13 + 2$

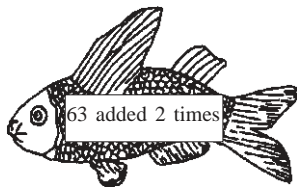
Choose the appropriate sign  $+$ ,  $\times$ , or  $\div$  to make the statements correct in Q. 58 - 60.

58.  $9 \quad \underline{\quad} \quad 3 \quad \underline{\quad} \quad 2 = 54$

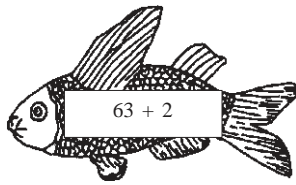
59.  $16 \quad \underline{\quad} \quad 4 \quad \underline{\quad} \quad 15 = 60$

60.  $389096 \quad \underline{\quad\quad\quad} \quad 100 = 100 + 389096$

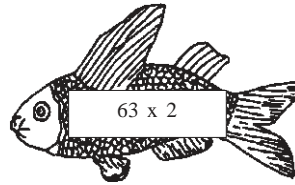
61. Find the fish whose value is different from others.



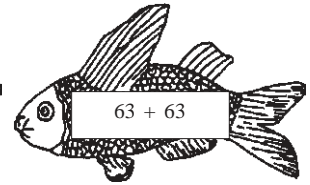
A



B



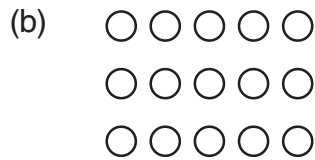
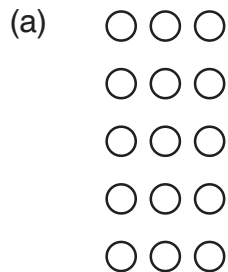
C



D

62. Which of the following figures represent the given statement?

$3 \times 5$



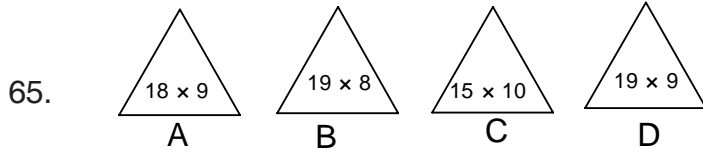
(c) both a and b

(d) none of these

63. If the following mangoes are divided among four children equally, how many mangoes will be left behind?



64. How many sides are there in four pentagons?



If triangles A, B, C and D are arranged in increasing order of their values, which triangle will be in the first position?

### ANSWERS

- |               |                                           |                      |
|---------------|-------------------------------------------|----------------------|
| 1. 50         | 23. b                                     | 45. Rs 288           |
| 2. 91         | 24. Rs 150                                | 46. 361 beds         |
| 3. 10000      | 25. 3149                                  | 47. 441 chocolates   |
| 4. 800        | 26. c                                     | 48. Rs 300           |
| 5. 3          | 27. 4                                     | 49. 80 packets       |
| 6. 50         | 28. 12                                    | 50. 24 cars          |
| 7. 70         | 29. 100                                   | 51. 48 trees         |
| 8. >          | 30. Rs 80                                 | 52. 2 toffees        |
| 9. <          | 31. Rs 250                                | 53. 4 pages          |
| 10. =         | 32. Rs 5000                               | 54. A                |
| 11. >         | 33. $a = 23, b = 26, c = 24$              | 55. B                |
| 12. =         | 34. $\odot = 34, \Delta = 37, \star = 31$ | 56. A, B, C          |
| 13. 750       | 35. 25 times                              | 57. a                |
| 14. 150200    | 36. 750 balloons                          | 58. $\times, \times$ |
| 15. 10055     | 37. 480 flowers                           | 59. $\div, \times$   |
| 16. 24        | 38. 288 fire crackers                     | 60. +                |
| 17. 71        | 39. Rs 22,500                             | 61. B                |
| 18. 3311      | 40. Rs 1,320                              | 62. c                |
| 19. 1110      | 41. 76                                    | 63. 3                |
| 20. 143 trees | 42. 144 bananas                           | 64. 20               |
| 21. 280 books | 43. Rs 759                                | 65. C                |
| 22. 19        | 44. 2 litre                               |                      |

## Chapter - 3

### ROMAN NUMBERS

#### FACTS AT A GLANCE :



1. Romans used symbols to denote a number. These symbols are :

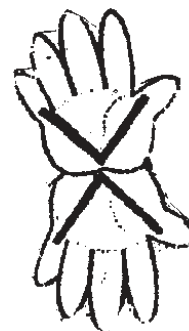
Roman Numerals	I	V	X	L	C	D	M
Indo-Arabic / Hindu - Arabic Numerals	1	5	10	50	100	500	1000

These seven symbols are used to express different numbers.



( Five in Roman  
Numerals )

- ♦ Romans used to count on fingers.
- ♦ I, II and III are different numbers of fingers held up.
- ♦ Five fingers make the whole hand. Also, the little finger and the thumb make a V. So, 5 is written as V.
- ♦ If both hands are joined, we get  $5 + 5 = 10$ . And, two V's make X. So,  $10 = X$ .



( Ten in Roman  
Numerals )

2. **Rules for expressing numbers using Roman Numerals :**

- Roman numerals have no place value.
- Roman numerals are repeated to form a number.
- Repetition of these numerals means addition.
- A roman numeral in a number cannot be repeated more than three times in a row. For example :  
 $X X X$  is valid but  $X X X X$  is not.
- M (1000) can be repeated more than three times.
- Symbols V (5), L (50) and D (500) are never repeated.
- When a smaller numeral is on the right of a greater numeral, we add the two numerals.

$VI = 5 + 1 = 6$
$XV = 10 + 5 = 15$
$LX = 50 + 10 = 60$

(h) When a smaller numeral is on the left of a greater numeral, we subtract the smaller one from the greater one.

$IV = 5 - 1 = 5$
$XL = 50 - 10 = 40$
$XC = 100 - 10 = 90$

- ♦ Subtract only a single letter from a single numeral. Use VIII for 8, not IIX; 19 is XIX not IXX
- ♦ Only I (1) can be subtracted from V(5) and X(10).
- ♦ Only X(10) can be subtracted from L(50) and C(100).
- ♦ Only C(100) can be subtracted from D(500) and M(1000)

3 **(i) To convert a number given in Indo-Arabic numerals into Roman numerals, convert one digit at a time and proceed as follows :**

$$\begin{aligned} \text{For example : } \quad 1999 &= 1000 + 900 + 90 + 9 \\ &= \quad M \quad + \text{CM} \quad + \text{XC} + \text{IX} \\ &= \text{MCMXCIX} \end{aligned}$$

4. **To convert a series of Roman Numerals into Indo-Arabic number :**

- ♦ For example :  
$$\begin{array}{ccccccc} M & M & C & D & X & L & \\ & & & & & & \\ & & & & & & \\ & & & & & & \end{array} = (1000 + 1000 + 500 + 50) - 100 - 10$$
  
$$\begin{array}{ccccccc} & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \end{array} \begin{array}{ccccccc} & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \end{array}$$
  
(C and X preceding higher value numerals = 2550 – 110  
D and L respectively) = 2440

- ♦ A line above a Roman numeral (an overbar) means “multiply by 1000.” For example :

$$\begin{array}{ccc} \overline{V} & 5 & 1000 \quad 5000 \\ \overline{XXV} & 25 & 1000 \quad 25000 \end{array}$$

*The Roman numeral I does not take an overbar since the value 1000 is already represented by M.*

## QUESTIONS

- Tell the Indo-Arabic numbers for each of the following Roman Numerals :  
(a) XVII                      (b) VI  
(c) XXXV                      (d) LX
- Which is greater : IV or X ?
- Which is less : XI or IX ?
- Compare XXX and (XL – X) and tell the relation between the two numbers.
- Solve and tell the answer in Indo-Arabic numerals :  
(a) IV + VI                      (b) L – XX  
(c) V × V                      (d) XX ÷ II
- What will be the result (in Roman Numerals) if VIII is subtracted from XXIV ?
- How is the sum of V and IV expressed in Roman numerals?
- Convert CDIX in Indo-Arabic numerals.
- What is the Indo-Arabic number for DCXLVI ?
- Choose the correct numeral from the following numerals given in pairs :  
(a) IIII or IV                      (b) IXL or LXI
- How can 14 be expressed in Roman Numerals : as XIV or IXV ?
- Tell the Roman Numerals for the following Indo-Arabic numerals :  
(a) 590                      (b) 876  
(c) 979                      (d) 1347
- What Roman numeral should be subtracted from C to get LX ?
- What Roman numeral should be added to XX to get L?
- How can the difference of XLV and L be expressed in Roman numerals?
- What is the sum of CCCLX and CXL in Roman numerals?
- By what Roman numeral should X be multiplied to get the product XL?
- What will be the quotient if XXX is divided by X ?
- To get V as quotient, by which Roman numeral should we divide XC ?

20. Simplify :
- (a)  $X \div II + V$
- (b)  $L \div V + V \div IV$
21. Convert into Indo-Arabic numbers :
- $\overline{V}DCXCV$
22. Convert 5605 into Roman numerals.
23. How can the difference of XXXII and XVI be expressed in Roman numerals?
24. What will be the result of  $27 \times 3 - 20$  in Roman numerals?
25. In Roman numerals, what is the sum of LXIV and XXVI ?

## ANSWERS

- |                                |                       |
|--------------------------------|-----------------------|
| 1. (a) 17 (b) 6 (c) 35 (d) 60  | 13. XL                |
| 2. X                           | 14. XXX               |
| 3. IX                          | 15. V                 |
| 4. Both are equal              | 16. D                 |
| 5. (a) 10 (b) 30 (c) 25 (d) 10 | 17. IV                |
| 6. XVI                         | 18. III               |
| 7. IX                          | 19. XVIII             |
| 8. 409                         | 20. (a) XXV (b) XXX   |
| 9. 646                         | 21. 5695              |
| 10. (a) IV (b) LXI             | 22. $\overline{V}DCV$ |
| 11. XIV                        | 23. XVI               |
| 12. (a) DXC (b) DCCCLXXVI      | 24. LXI               |
| (c) CMLXXIX (d) MCCCXLVII      | 25. XC                |

## Chapter - 4

### ESTIMATION

*(Refer to the chapter # 1 of the NCERT book for class-V)*



#### FACTS AT A GLANCE :

- Estimation** means NOT to give the exact value or number of things but the 'approximate' value or number of things.
  - ◆ This approximate value is the nearest multiple of 10 or 100 or 1000, etc.
  - ◆ This is known as the **Rounding off the Numbers** to the nearest ten or hundred or thousand, etc.
- To round off the given number to the nearest ten :** Observe the digit at units place.

If it is less than 5	If it is equal to or more than 5
For example  $\begin{array}{ccc} \underline{2} & \underline{7} & \underline{3} \\ \downarrow & \downarrow & \downarrow \\ 27 & & 0 \end{array}$ So, 273 can be rounded off to 270	For example :  $\begin{array}{ccc} \underline{3} & \underline{7} & \underline{8} \\ \downarrow & \downarrow & \downarrow \\ 3 & 8 & 0 \end{array}$ (increased by 1) So, 378 can be rounded off to 380.

- To round off the given number to the nearest hundred :** Observe the digit at tens place.

If it is less than 5	If it is equal to or more than 5
For example  $\begin{array}{ccc} \underline{4} & \underline{3} & \underline{7} \\ \downarrow & \downarrow & \downarrow \\ 4 & 0 & 0 \end{array}$ So, 437 can be rounded off to 400	For example :  $\begin{array}{ccc} \underline{2} & \underline{6} & \underline{5} & \underline{1} \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 2 & 7 & 0 & 0 \end{array}$ (increased by 1) So, 2651 can be rounded off to 2700

4. **To round off the given number to the nearest thousand :** Observe the digit at hundreds place.

If it is less than 5	If it is equal to or more than 5
<p>For example</p> $\begin{array}{cccc} \underline{2} & \underline{2} & 3 & 5 \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 2 & 0 & 0 & 0 \end{array}$ <p>So, 2235 can be rounded off to 2000</p>	<p>For example :</p> $\begin{array}{cccc} 0 & \underline{6} & 8 & 5 \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 0 & 0 & 0 \end{array}$ <p>(increased by 1)</p> <p>So, 685 can be rounded off to 1000.</p>

5. **To round off the given number to the nearest ten thousand :** Observe the digit at thousands place.

If it is less than 5	If it is equal to or more than 5
<p>For example</p> $\begin{array}{ccccc} \underline{1} & \underline{4} & 2 & 1 & 7 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 0 & 0 & 0 & 0 \end{array}$ <p>So, 14217 can be rounded off to 10000.</p>	<p>For example :</p> $\begin{array}{ccccc} 1 & \underline{6} & 5 & 1 & 3 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 2 & 0 & 0 & 0 & 0 \end{array}$ <p>So, 16513 can be rounded off to 20000.</p>

## QUESTIONS

- Round off the following numbers to the nearest ten :  
 (i) 34            (ii) 69            (iii) 926            (iv) 2863
- Round off the following numbers to the nearest hundred :  
 (i) 650            (ii) 8453            (iii) 349



3. Which is the better approximation for 26816 :  
26800 or 26820 ?
4. Round off the following numbers to the nearest thousand :  
(i) 9567      (ii) 17019
5. The cost price of an airconditioner is Rs. 25079. What will be its estimated value if the cost price is rounded off to the nearest thousand ?
6. Salary of a worker at Metro station is Rs. 5174 per month. What is his approximate salary if rounded off to the nearest hundred ?
7. Round off the following numbers to the nearest ten thousand:  
(i) 14627      (ii) 36917
8. Tina lives in a rented flat in New Delhi. She pays Rs. 48517 as rent per year. How much money does she pay as rent if rounded off to the nearest ten thousands?
9. What will be the nearest thousand for 4278 ?
10. Number of runs scored by a cricketer in the last ten years is 20963. Round off his score to the nearest hundred.
11. Total number of students in a school is 3456. What is the approximate number of students in hundreds?
12. A shark is 18 m long. What will be its approximate length if rounded off to the nearest ten?
13. My height is 162 cm and my sister's height is 135 cm. What is the sum of our heights if the height of each is rounded off to the nearest ten?
14. Sumit weighs 107 kg and Sanjay weighs 82 kg. What is the difference of their weights if the weight of each is rounded off to the nearest hundred?
15. Count of bacteria in a culture is 4278. Round off their number to the nearest thousand.
16. Round off the population of a town to the nearest thousand if its actual population is 69919. Also tell the approximate population if the actual number is rounded off to the nearest ten thousand.
17. An employee of the Education Department earns Rs. 28863 per month. Round off his salary to the nearest thousand.

18. What will be the right approximation for 12652 :
- (a) 12650 or 12660 (if rounded off to the nearest ten)?
- (b) 12600 or 12700 (if rounded off to the nearest hundred)?
- (c) 1300 or 12000 (if rounded off to the nearest thousand)?
- (d) 10000 or 20000 (if rounded off to the nearest ten thousand) ?
- From the above four, which type of rounding off can give the best or the closest approximation?
19. Neera drinks 190 ml of milk everyday. How much milk does she drink in a week? Round off your answer to the nearest hundred.
20. Neera drinks 190 ml of milk everyday. Round off the quantity of milk she drinks to the nearest hundred and now find how much milk does she drink in a week?
- (Observe the difference in the answers of Q 19 and Q 20. Does the rounding off of the final answer give better estimation or is it better to round off in the beginning?)*

## ANSWERS

- |               |             |                                  |
|---------------|-------------|----------------------------------|
| 1. (i) 30     | (ii) 70     | 11. 3500                         |
| (iii) 930     | (iv) 2860   | 12. 20 m                         |
| 2. (i) 700    | (ii) 8500   | 13. 300 cm                       |
| (iii) 300     |             | 14. 0 kg                         |
| 3. 26820      |             | 15. 4000                         |
| 4. (i) 10000  | (ii) 17000  | 16. 70,000 ; 70,000              |
| 5. Rs. 25,000 |             | 17. Rs. 29,000                   |
| 6. Rs. 5,200  |             | 18. (a) 12650 (b) 12700          |
| 7. (i) 10,000 | (ii) 40,000 | (c) 13000 (d) 10000              |
| 8. Rs. 50,000 |             | Rounding off to the nearest ten. |
| 9. 4000       |             | 19. 1330 ml ; 1300 ml            |
| 10. 21000     |             | 20. 200 ml ; 1400 ml             |

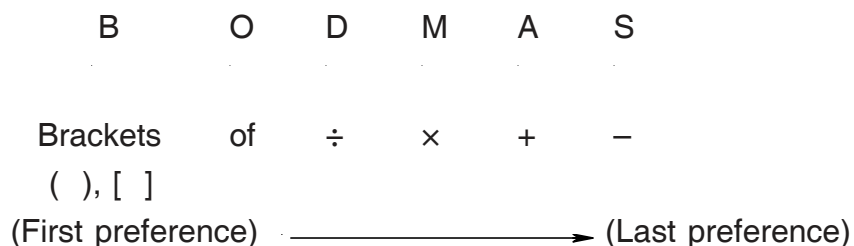
## Chapter - 5

### DODGING TABLES AND SIMPLIFICATION



#### FACTS AT A GLANCE :

1. In simplifying an expression containing more than one operation, the order of performing various operations must be maintained in the following manner :



#### For example :

- (a)  $25 - 10 \div 5 + 4 \times 2$   
=  $25 - 2 + 8$  (Performed  $\div$  and  $\times$ )  
=  $33 - 2$  (Performed  $+$ )  
=  $31$  (Performed  $-$ )
- (b)  $(56 - 36) \div 4 \times 2 + 7$   
=  $20 \div 4 \times 2 + 7$  (Solved Brackets)  
=  $5 \times 2 + 7$  (Performed  $\div$ )  
=  $10 + 7$  (Performed  $\times$ )  
=  $17$  (Performed  $+$ )

## QUESTIONS

1.  $13 \times 5 \times 10 = \underline{\hspace{2cm}}$
2.  $19 \times \underline{\hspace{2cm}} = 171$
3.  $39 \div \underline{\hspace{2cm}} = 3$
4.  $130 \times \underline{\hspace{2cm}} = 26000$
5.  $\underline{\hspace{2cm}} \div 157 = 0$
6.  $5000 \div 100 = \underline{\hspace{2cm}}$
7.  $67 \times 1000 = \underline{\hspace{2cm}} \times 100$
8.  $450 \times \underline{\hspace{2cm}} = 4500$
9.  $15 \times 20 = \underline{\hspace{2cm}} \times 10$
10.  $50 \times 50 = 100 \times \underline{\hspace{2cm}}$
11.  $\underline{\hspace{2cm}} \times 10 = 390$
12.  $80 \times 10 = 20 \times \underline{\hspace{2cm}}$
13.  $\underline{\hspace{2cm}} \times 6 = 96$
14.  $\underline{\hspace{2cm}} \times 3 = 9 \times 10$
15.  $\underline{\hspace{2cm}} \times 4 = 12 \times 20$
16.  $42 \times 100 = 300 \times \underline{\hspace{2cm}}$
17.  $\underline{\hspace{2cm}} \times 6 = 66$
18.  $18 \times 7 \times 0 = \underline{\hspace{2cm}}$
19.  $250 \div 5 = \underline{\hspace{2cm}} \times 50$
20.  $40 \times 60 = \underline{\hspace{2cm}}$
21.  $1200 = \underline{\hspace{2cm}} \times 120$
22.  $\underline{\hspace{2cm}} \times 8 = 112$
23.  $8888 \div 88 = \underline{\hspace{2cm}}$
24.  $25 \times 35 = (25 \times 30) + (25 \times \underline{\hspace{2cm}})$
25.  $88 \times 12 = (88 \times 15) - (88 \times \underline{\hspace{2cm}})$
26.  $88 \times 19 = (88 \times \underline{\hspace{2cm}}) - 88$
27.  $6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 = \underline{\hspace{2cm}}$
28. If  $250 \times 15 = 3750$ , then,  $250 \times 14 = \underline{\hspace{2cm}}$
29. If  $250 \times 15 = 3750$ , then,  $250 \times 16 = \underline{\hspace{2cm}}$
30. If  $250 \times 15 = 3750$ , then,  $2500 \times 15 = \underline{\hspace{2cm}}$
31. If  $18952 \div 23 = 824$ , then,  $18952 \div 824 = \underline{\hspace{2cm}}$
32. 4 times 5 + 2 times 6 =  $\underline{\hspace{2cm}}$
33. 19 added 6 times =  $\underline{\hspace{2cm}}$

34. 12 added 3 times + 3 added 2 times = \_\_\_\_\_
35. One thousand  $\times$  one hundred = \_\_\_\_\_
36. 15 sets of 8 books = \_\_\_\_\_ books
37. 12 sets of 20 beads = \_\_\_\_\_ beads
38.  $35 - 16$  twos = \_\_\_\_\_
39. (i)  $45 - 20$  twos = \_\_\_\_\_ (ii)  $25 - 8$  threes = \_\_\_\_\_
40. 9 times 19 = \_\_\_\_\_
41. How many times will you add 17 to get 187?
42. What number should be added 8 times to get 104?
43. What number will you get if 6 threes are subtracted from 30?
44. How many times can we subtract 25 from 625?
45. What is the product of 7, 12, 0 and 5?
46.  $5 + (6 \times 10) =$  \_\_\_\_\_
47.  $4 + 11 \times 11 =$  \_\_\_\_\_
48.  $(16 \times 50) + 20 =$  \_\_\_\_\_
49.  $(16 \times 50) - (5 \times 160) =$  \_\_\_\_\_
50. \_\_\_\_\_  $\times (5 + 10) = 14 \times 5 + 14 \times 10$
51.  $(14 \times 20) - 279 =$  \_\_\_\_\_
52.  $(7000 \div 70) - 10 =$  \_\_\_\_\_
53.  $630 \div 63 \times 63 =$  \_\_\_\_\_
54.  $(60 \times 1) + (400 \div 10) - 60 =$  \_\_\_\_\_  $\times 2$
55.  $750 \div 75 - 9 =$  \_\_\_\_\_
56. 4 times  $17\frac{1}{4} =$  \_\_\_\_\_
57.  $12 \times 4 + 6 \div 2 =$  \_\_\_\_\_
58. Simplify :  $19 \times 9 + 16 \times 5 + 7 \times 7$
59. Solve :  $\frac{14}{5} - \frac{2}{5} \div \frac{1}{2}$
60. Simplify :  $8 \times 4 - 5 + 3$
61. Simplify :  $30 \div 6 + 10 - 2 \times 5$
62.  $16 \div 4 \times 5 - 9 =$  \_\_\_\_\_
63.  $14 + 9 \div 3 \times 2 =$  \_\_\_\_\_
64.  $52 \div 13 \times 10 + 5 - 10 =$  \_\_\_\_\_
65. Simplify :  $8 \times 9 \div 9 + 10 \div 5 \times 6$

## ANSWERS

- |     |      |     |              |     |     |
|-----|------|-----|--------------|-----|-----|
| 1.  | 650  | 23. | 101          | 45. | 0   |
| 2.  | 9    | 24. | 5            | 46. | 65  |
| 3.  | 13   | 25. | 3            | 47. | 125 |
| 4.  | 200  | 26. | 20           | 48. | 820 |
| 5.  | 0    | 27. | 48           | 49. | 0   |
| 6.  | 50   | 28. | 3500         | 50. | 14  |
| 7.  | 670  | 29. | 4000         | 51. | 1   |
| 8.  | 10   | 30. | 37500        | 52. | 90  |
| 9.  | 30   | 31. | 23           | 53. | 630 |
| 10. | 25   | 32. | 32           | 54. | 20  |
| 11. | 39   | 33. | 114          | 55. | 1   |
| 12. | 40   | 34. | 42           | 56. | 69  |
| 13. | 16   | 35. | 100000       | 57. | 51  |
| 14. | 30   | 36. | 120          | 58. | 300 |
| 15. | 60   | 37. | 240          | 59. | 2   |
| 16. | 14   | 38. | 3            | 60. | 30  |
| 17. | 11   | 39. | (i) 5 (ii) 1 | 61. | 5   |
| 18. | 0    | 40. | 171          | 62. | 11  |
| 19. | 1    | 41. | 11 times     | 63. | 20  |
| 20. | 2400 | 42. | 13           | 64. | 35  |
| 21. | 10   | 43. | 12           | 65. | 20  |
| 22. | 14   | 44. | 25           |     |     |

## Chapter - 6

### FACTORS AND MULTIPLES

(Refer to chapter # 6 of the NCERT book of class - V)



#### FACTS AT A GLANCE :

#### 1. **Factors :**

- ◆ A factor of a number is a number which divides the given number completely leaving no remainder.  
For example : 3 divides 9 completely leaving no remainder. So, 3 is a factor of 9.
- ◆ 1 is a factor of every number.
- ◆ Every number, except 1, has at least two factors : 1 and the number itself.
- ◆ A number has limited number of factors.  
For example : The factors of 18 are 1, 2, 3, 6, 9 and 18.
- ◆ A factor of a number is either less than or equal to the number.

#### 2. **Multiples :**

- ◆ Multiples of a given number are those numbers which when divided by the given number leave no remainder.
- ◆ Multiple of a number is obtained by multiplying the number by another number.  
For example : Multiples of 2 are obtained by multiplying 2 with 1, 2, 3, 4 and so on.
- ◆ Every number is a multiple of itself.
- ◆ Every number is a multiple of 1.
- ◆ Every multiple of a number is either greater than or equal to the number.
- ◆ A number can have unlimited number of multiples.  
For example : The multiples of 7 are 7, 14, 21, 28, 35 . . . . . so on.

#### 3. **Classification of Factors and Multiples :** On the basis of divisibility, factors and multiples of numbers can be classified into various types :

- (a) Even Number :- A number exactly divisible by 2 is called an even number.  
For example : 2, 4, 96, 288 are all even numbers.
- (b) Odd Number :- A number which leaves remainder 1, when divided by 2 is called an odd number. For example : 1, 3, 73, 245 are all odd numbers.

(c) Prime Numbers :- Numbers which have exactly two factors, 1 and the number itself, are called prime numbers. For example : 2, 3, 7, 11 are prime numbers.

9 is not a prime number because it has three factors 1, 3, and 9

(d) Composite Numbers :- Numbers which have three or more factors are called composite numbers.

For example : 4, 6, 12 are composite numbers.

#### 4. **Tests of Divisibility :**

(a) Divisibility by 10 :- The number should have 0 (Zero) in its ones place. For example : 70, 1050 are divisible by 10.

(b) Divisibility by 5 :- The number should have either 0 or 5 in its ones place. For example : 20, 35 are divisible by 5.

(c) Divisibility by 2 :- The number should have 0, 2, 4, 6 or 8 in its ones place. For example : 124, 238 are divisible by 2.

(d) Divisibility by 3 :- The sum of the digits of the number must be a multiple of 3. For example : 765 is divisible by 3 as  $7 + 6 + 5 = 18$ , which is a multiple of 3.

(e) Divisibility by 9 :- The sum of the digits of the number must be a multiple of 9. For example : 26541 is divisible by 9, as the sum of its digits,  $2 + 6 + 5 + 4 + 1$  is 18 which is a multiple of 9.

5. **Prime Factors** : A factor of a given number is called a prime factor if it is a prime number. For example : 3 and 6 are the factors of 18. 3 is a prime factor but 6 is not a prime factor of 18.

6. **Prime Factorization** : A factorization in which every factor is prime is called prime factorization of the number. For example :  $18 = 2 \times 3 \times 3$ . Here 2, 3, 3 are the prime factors of 18 so  $2 \times 3 \times 3$  is called the prime factorization of 18.

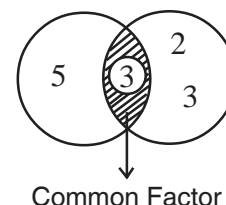
7. **Common Factors and Multiples** : By comparing the factors and multiples of two or more numbers, we can find the common factors and common multiples.

♦ Common factors of 15 and 18 :

Factors of 15 = 3, 5

Factors of 18 = 2, 3, 3

OR



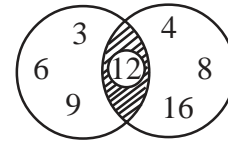
3 is the common factor of 15 and 18.



- ◆ Common Multiples of 3 and 4 :

Multiples of 3 = 3 , 6 , 9 , 12

Multiples of 4 = 4 , 8 , 12 , 16



12 is the common multiple of 3 and 4.

## QUESTIONS

- How many multiples of 17 are there upto 150?
- What is the greatest factor of 20?
- What are the prime factors of 56?
- How many prime numbers are there which are less than 30?
- How many composite numbers are there which are less than 20?
- How many prime numbers are between 60 and 80?
- Which is the greatest prime number which is less than 70?
- Which is the least prime number which is greater than 32?
- Tell any two pairs of prime numbers where the sum of each pair is also a prime number.
- Tell a pair of prime numbers where the difference of the prime numbers is 1.
- What is the fifth multiple of 9?
- What is the least factor of 65 other than 1?
- Find the difference between the smallest even number of four digits and the largest odd number of four digits.
- The second multiple of 19 when added to the third multiple of 14 makes \_\_\_\_\_.
- What is the product of the least multiples of 55 and 19?
- The greatest factor of 30 divided by 6 gives \_\_\_\_\_.
- What is the product of the greatest factor of 18 and the least factor of 15?
- Which least number should be added to 2342 to make it divisible by 3?
- Which least number should be added to 5272 to make it divisible by 5?
- What should be subtracted from 8369 to make it divisible by 10?
- Fill in the box other least possible digit so that the number is divisible by

3:5 12

22. Fill in the box the smallest digit to make it divisible by  
 9:15  4
23. What is the smallest common multiple of 3 and 4?
24. Find the greatest number that will exactly divide 12 and 15.
25. Mala has stickers of a certain number that she could arrange in rows of 4 or 6. What is the least number of stickers she has?
26. Find the smallest two digit number which when divided by 8 and 12 leaves no remainder.
27. What is the greatest common factor of 12, 15 and 18?
28. What is the greatest common factor of 45, 60 and 75?
29. Tell the multiples of 7 which are less than 30.
30. Two ropes 12 m and 18 m long are cut into small pieces of the same length. What can be the maximum length of each piece?

## ANSWERS

- |                                  |                   |
|----------------------------------|-------------------|
| 1. 8                             | 16. 5             |
| 2. 20                            | 17. 18            |
| 3. 2, 2, 2, 7                    | 18. 1             |
| 4. 10                            | 19. 3             |
| 5. 10                            | 20. 9             |
| 6. 5                             | 21. 1             |
| 7. 67                            | 22. 8             |
| 8. 37                            | 23. 12            |
| 9. 2 and 3, 2 and 5              | 24. 3             |
| (* There may be more such pairs) | 25. 12            |
| 10. 2 and 3                      | 26. 24            |
| 11. 45                           | 27. 3             |
| 12. 13                           | 28. 15            |
| 13. 8999                         | 29. 7, 14, 21, 28 |
| 14. 80                           | 30. 6 m           |
| 15. 1045                         |                   |

## Chapter - 7

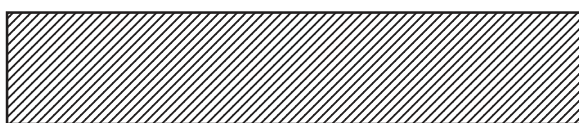
### FRACTIONS

(Refer to chapter # 1, 2, 4 and 5 of the NCERT book of class - V)

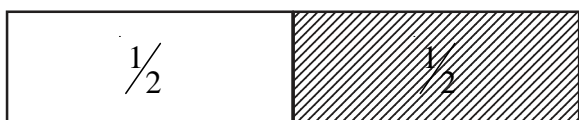


#### FACTS AT A GLANCE :

1. Whole thing is represented as 1.
2. A fraction indicates one or more equal parts of a whole.

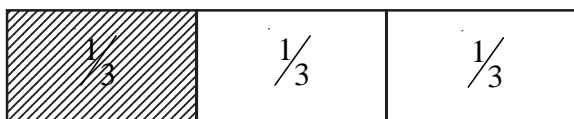


This is a whole. It is written as 1.



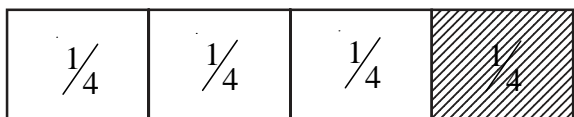
If we divide the whole into 2 equal parts. Each part is called *one-half*.

It is written as  $\frac{1}{2}$ .



If we divide the whole into 3 equal parts, each part is called *one-third*.

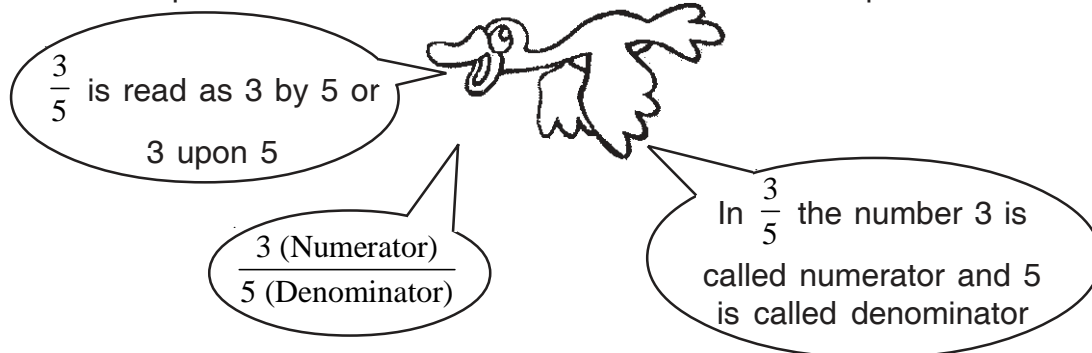
It is written as  $\frac{1}{3}$ .



If we divide the whole into 4 equal parts, each part is called *one-fourth*

or a *quarter*. It is written as  $\frac{1}{4}$

3. The numbers such as quarter, half, one-fifth, two-thirds are called **Fractional numbers** and their symbols  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{1}{5}$ ,  $\frac{2}{3}$  are called **Fractions**.  
A fraction has two parts - numerator and a denominator. For example :



4. The form  $16 \div 3$  can be written as  $\frac{16}{3}$ .
5. Every whole number can be written as a fraction by putting 1 in place of denominator. e.g. :  $7 = \frac{7}{1}$ ,  $16 = \frac{16}{1}$ .
6. Fractions with the same denominator are called **Like fractions**. For example :  $\frac{2}{7}$ ,  $\frac{6}{70}$ ,  $\frac{5}{7}$
7. Fractions with different denominators are called **Unlike fractions**. For example :  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{3}{8}$ ,  $\frac{5}{7}$
8. Fractions with numerator 1 are called **Unit fractions**. For example :  $\frac{1}{4}$ ,  $\frac{1}{7}$
9. A fraction whose numerator is smaller than its denominator is called a **Proper fraction**. For example :  $\frac{3}{4}$ ,  $\frac{7}{9}$ ,  $\frac{4}{12}$ .
10. A fraction whose numerator is equal to or greater than its denominator is called an **Improper fraction**. For example :  $\frac{11}{9}$ ,  $\frac{13}{7}$
11. Proper fraction  $< 1 <$  Improper fraction.
12. When an improper fraction is expressed as a combination of a whole number and a fraction, it is called a **Mixed Fraction** or a **Mixed Number**, For example :  $2\frac{3}{5}$  is a mixed fraction and can be expressed as

$$2 \quad + \quad \frac{3}{5}$$

(whole number)                      (a fraction)

- ◆ **To convert an improper fraction into a mixed fraction** divide numerator by the denominator. For example :  $\frac{18}{7} = 18 \div 7$

Now, express the result as                      *Quotient*                       $\frac{\text{Remainder}}{\text{Divisor}}$

i.e.  $2 + \frac{4}{7}$

$$\text{So, } \frac{18}{7} = 2 + \frac{4}{7} = 2\frac{4}{7}$$

- ◆ **Before changing an improper fraction to a mixed number, change it to its lowest terms.**

- ◆ **To convert a mixed fraction into an improper fraction** :  $2\frac{3}{5} = \frac{2 \times 5 + 3}{5} = \frac{13}{5}$

13. **Standard/ Lowest/ Simplest form of a fraction** is that form in which the numerator

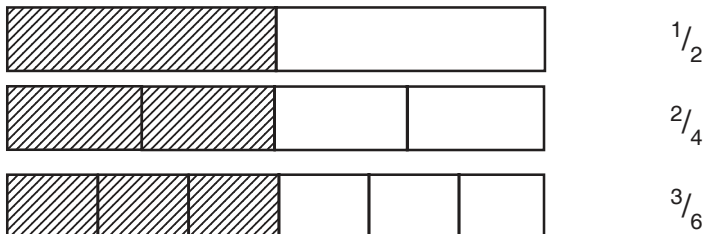
and denominator have no factor in common. For example :  $\frac{6}{13}, \frac{7}{9}, \frac{1}{8}$ .

- ◆ To convert the given fraction in its standard/ lowest/ simplest form, divide both numerator and denominator by the common factors one by one. For example :

$$\begin{aligned} \frac{72}{96} &= \frac{72 \div 12}{96 \div 12} \\ &= \frac{6}{8} \\ &= \frac{6 \div 2}{8 \div 2} = \frac{3}{4} \end{aligned}$$

14. **Equivalent Fractions** : Two or more fractions which represent the same part of the whole are called equivalent fractions.

For example :  $\frac{1}{2}, \frac{2}{4}, \frac{3}{6}$  are equivalent fraction.



15. **Comparison of two fractions** :

- (i) If the given fractions have like denominator and unlike numerator, compare the two numerators. Greater numerator implies greater fraction. e.g. :

$$\frac{2}{7}, \frac{5}{7} \quad \frac{5}{7} \text{ is greater than } \frac{2}{7}$$

- (ii) If the given fractions have like numerator and unlike denominator, compare the two denominators. Smaller denominator implies greater fraction. e.g. :

$$\frac{7}{9}, \frac{7}{11} \quad \frac{7}{9} \text{ is greater than } \frac{7}{11}$$

- (iii) If the given fractions have unlike numerators and denominators, make either numerators or denominators like by multiplying with suitable numbers and then compare using one of the above mentioned methods.

For example :  $\frac{2}{3}$  and  $\frac{5}{7}$

$$\frac{2}{3} \quad \frac{2 \times 7}{3 \times 7} \quad \frac{14}{21}$$

and  $\frac{5}{7} \quad \frac{5 \times 3}{7 \times 3} \quad \frac{15}{21}$

Now,  $\frac{14}{21}$  and  $\frac{15}{21}$  can be compared using (i)

Therefore,  $\frac{15}{21} > \frac{14}{21}$

or  $\frac{5}{7} > \frac{2}{3}$

OR

$$\frac{2}{3} \quad \frac{2 \times 5}{3 \times 5} \quad \frac{10}{15}$$

and,  $\frac{5}{7} \quad \frac{5 \times 2}{7 \times 2} \quad \frac{10}{14}$

Now,  $\frac{10}{15}$  and  $\frac{10}{14}$  can be compared using (ii)

Therefore,  $\frac{10}{14} > \frac{10}{15}$

or  $\frac{5}{7} > \frac{2}{3}$



**We can add and subtract the unlike fractions by making their denominators same by multiplying with suitable numbers.**

16. To obtain the **reciprocal of a fraction**, interchange the numerator and denominator of

the fraction. e.g. : Reciprocal of  $\frac{7}{5}$  is  $\frac{5}{7}$

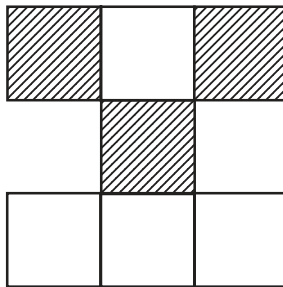
- ◆ If two fractions are such that their product is 1, then each is called the reciprocal of the other.
- ◆ 0 has no reciprocal.
- ◆ Reciprocal of 1 is 1.

## QUESTIONS

1. What is the fraction for  $9 \div 11$ ?
2. What fraction is not shaded in the given figure?



3. Tell the fraction which is represented by the shaded fraction.



4. Tell the fractions for the following fractional numbers :  
 (a) Half                      (b) Quarter                      (c) Three-fourths  
 (d) One- third                      (e) Two-fifths

5. Express  $\frac{9}{4}$  as a mixed fraction.

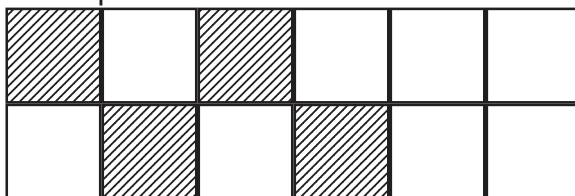
6. Reduce the given fractions to their simplest forms :

(a)  $\frac{21}{35}$                       (b)  $\frac{24}{64}$

7. Tell the fractions which are in the standard form :

(a)  $\frac{3}{7}$                       (b)  $\frac{20}{24}$                       (c)  $\frac{11}{12}$                       (d)  $\frac{7}{11}$

8. What is the simplest form of the fraction that is represented by the shaded portion?



9. From the fractions given below, pick out –

$\frac{9}{5}, \frac{21}{21}, \frac{1}{5}, \frac{16}{16}, 4\frac{5}{6}, \frac{11}{9}, 1\frac{3}{4}, \frac{3}{8}$

- (a) two proper fractions.
- (b) two improper fractions.
- (c) two mixed fractions.
- (d) two whole numbers written as fractions.

10. Which of the following fractions can be converted into mixed fractions?

$$\frac{4}{7}, \frac{2}{9}, \frac{9}{4}, \frac{8}{8}$$

11. Convert the following mixed fractions into improper fractions :

$$(a) 7\frac{2}{5} \qquad (b) 10\frac{7}{10}$$

12. Which of the following pairs are pairs of equivalent fractions?

$$(a) \frac{5}{8}, \frac{40}{64} \qquad (b) \frac{13}{15}, \frac{50}{60} \qquad (c) \frac{6}{7}, \frac{90}{105}$$

13. Convert  $\frac{5}{6}$  into a fraction having 36 as denominator.

14. Convert  $\frac{1}{3}$  into a fraction with numerator 3.

15. Convert  $\frac{7}{8}$  in the form of fraction having 49 as numerator.

16. Convert  $\frac{2}{5}$  in the form of fraction having 18 as numerator.

17. What number will be there in the blank?

$$(a) \frac{18}{45} = \frac{\quad}{5} \qquad (b) \frac{32}{\quad} = \frac{2}{3} \qquad (c) \frac{9}{14} = \frac{18}{\quad} \qquad (d) \frac{\quad}{8} = \frac{18}{48}$$

18. Find equivalent fractions among  $\frac{3}{5}, \frac{5}{10}, \frac{9}{15}, \frac{2}{15}$ .

19. Which pairs of fractions are equivalent?

$$(a) \frac{7}{17}, \frac{5}{11} \qquad (b) \frac{16}{9}, \frac{6}{8} \qquad (c) \frac{6}{13}, \frac{42}{91} \qquad (d) \frac{2}{9}, \frac{14}{63}$$

20. Pick the odd one out :

$$(a) \frac{3}{10}, \frac{6}{15}, \frac{9}{30}, \frac{12}{40}, \frac{15}{50} \qquad (b) \frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \frac{4}{8}, \frac{5}{9}$$



21. Which is greater :  $\frac{8}{12}$  or  $\frac{10}{12}$ ?
22. Which is the greatest out of :  
 $\frac{1}{6}, \frac{5}{6}, \frac{4}{6}, \frac{3}{6}$ ?
23. Which fraction is the smallest?  
 $\frac{1}{7}, \frac{2}{7}, \frac{3}{7}, \frac{4}{7}$
24. Find the smallest fraction out of :  
 $\frac{3}{6}, \frac{4}{6}, \frac{5}{12}, \frac{11}{12}$
25. Which is greater :  $\frac{4}{7}$  or  $\frac{7}{4}$ ?
26. Which of the fractions  $\frac{3}{4}, \frac{3}{5}, \frac{3}{6}, \frac{3}{7}$  is the greatest fraction?
27. Which is greater :  $\frac{1}{2}$  of 50 or  $\frac{1}{4}$  of 80?
28. What is the ascending order for the following fractions?  
 $\frac{6}{13}, \frac{10}{13}, \frac{8}{13}, \frac{3}{13}$
29. What is the descending order for the following fractions?  
 $\frac{7}{5}, \frac{3}{5}, \frac{2}{5}, \frac{5}{5}$
30. Find the sum of  $\frac{1}{6}$  and  $\frac{4}{6}$
31. Find :  $\frac{1}{4} + \frac{3}{4}$
32. Find :  $10\frac{1}{2} + 3\frac{1}{2}$ .
33.  $2\frac{1}{3} + \underline{\hspace{2cm}} = 2\frac{1}{3}$
34. Add  $\frac{1}{8}$  and  $\frac{1}{2}$ .

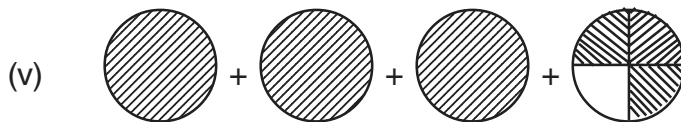
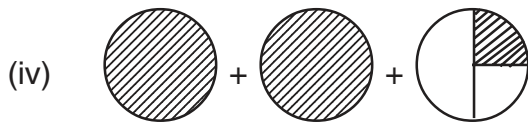
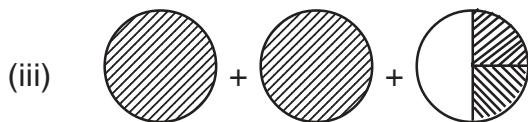
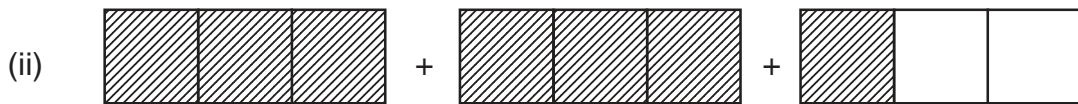
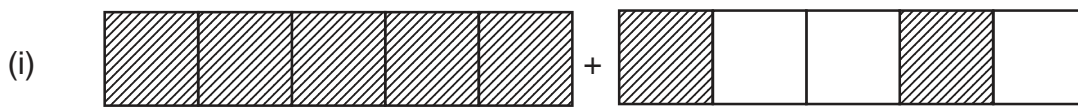
35. Find :  $\frac{1}{5} + \frac{1}{10}$

36. Find :  $\frac{2}{5} + \frac{3}{10}$

37. Solve :  $2\frac{3}{4} + 1\frac{2}{4}$

38. Find :  $1\frac{1}{5} + \frac{2}{5}$

39. What will be the mixed fraction for the following figures :-



40. Subtract  $\frac{3}{8}$  from  $\frac{7}{8}$

41. Find the difference of  $\frac{7}{9}$  and  $\frac{2}{9}$ .

42. Find :  $\frac{7}{10} - \frac{1}{2}$

43. Subtract  $\frac{6}{11}$  from 1.

44. Solve :  $1 - \frac{2}{5}$

45. What is the reciprocal of  $\frac{7}{8}$ ?
46. Find :  $\frac{9}{10} \times 5$
47. Multiply  $4\frac{1}{2}$  and 5. Give the answer in mixed fraction form.
48. Divide  $\frac{3}{5}$  by 6.
49. Divide 15 by  $2\frac{1}{2}$ .
50. How many  $\frac{1}{3}$  are there in 4?
51. Find  $\frac{5}{8}$  of 48.
52. Divide  $6\frac{1}{4}$  by  $2\frac{1}{2}$ .
53. Calculate :  $\frac{5}{17} \times \frac{2}{51}$
54. What is the reciprocal of  $\frac{3}{7}$ ?
55.  $\frac{7}{6} \times \underline{\hspace{1cm}} = 1$ .
56.  $\frac{7}{6} \times \frac{19}{\underline{\hspace{1cm}}} = \frac{\underline{\hspace{1cm}}}{54}$ .
57. What fraction is 3 times  $\frac{14}{5}$ ?
58.  $\frac{2}{5}$  of Rs. 250 is \_\_\_\_\_.
59. How many  $\frac{2}{6}$  are there in  $\frac{4}{6}$ ?
60. How many  $\frac{2}{5}$  are there in  $2\frac{2}{5}$ ?

61. How many  $\frac{3}{10}$  are there in  $1\frac{2}{10}$  ?
62. How many halves are there in 9 ?
63. How many quarters are there in 7 ?
64. Calculate :  $\frac{7}{19} - \frac{5}{19} - \frac{2}{19}$ .
65. Which is smaller :  $\frac{2}{5}$   $\frac{1}{2}$  or  $\frac{3}{2}$   $\frac{1}{5}$  ?
66. Find  $\frac{5}{8}$  of 64.
67. 60 paise is what part of a rupee?
68. 8 months is what part of a year?
69. What is half of a right angle?
70. What part is 200 g of a kilogram?
71. What is  $\frac{9}{15}$  of 30 ?
72. Calculate  $\frac{7}{8}$  of 136.
73. Find :  $\frac{1}{3} \frac{1}{3} \frac{1}{3}$
74. How much is  $\frac{6}{5} \frac{5}{36}$  ?
75. How many quarters are there in  $2\frac{3}{4}$  ?
76. How many halves are there in  $6\frac{1}{2}$  ?
77. How many three quarters are there in  $9\frac{3}{4}$  ?
78. —  $\frac{3}{7} \frac{15}{28}$
79.  $\frac{2}{9} \frac{14}{17} \frac{0}{6}$  —

80. What fraction should be multiplied by  $\frac{27}{73}$  to get 1?
81.  $\frac{1}{4} \frac{7}{4} - 2$  \_\_\_\_\_
82.  $\frac{13}{8} \frac{13}{8} \frac{8}{13}$  \_\_\_\_\_
83. (a) What fraction has the same denominator as  $\frac{3}{17}$  and numerator its 16 times?  
 (b) What fraction will you get when half of one is added to its reciprocal?
84. What is the measure of the angle which is one third of a right angle?
85. Subtract the sum of  $6\frac{2}{5}$  and  $5\frac{1}{5}$  from  $14\frac{4}{5}$ .
86.  $6\frac{1}{4} \quad 6\frac{1}{4} \quad 6\frac{1}{4} \quad 6\frac{1}{4}$  \_\_\_\_\_
87. \_\_\_\_\_  $\frac{3}{4} \quad \frac{3}{4} \quad \frac{1}{2}$
88.  $\frac{1}{4} \quad \frac{2}{3} \quad \frac{5}{6}$  \_\_\_\_\_  $\frac{2}{3} \quad \frac{5}{6}$
89.  $\frac{1}{3} \quad 1$  \_\_\_\_\_
90.  $6\frac{1}{2} \quad 0$  \_\_\_\_\_
91.  $\frac{5}{2}$  \_\_\_\_\_  $0$
92. (i)  $1\frac{5}{8}$  \_\_\_\_\_  $1\frac{5}{8}$  (ii)  $\frac{5}{6}$  \_\_\_\_\_  $\frac{5}{6} \quad \frac{7}{3}$
93. Complete the series :  $\frac{3}{4}, \frac{6}{8}, \frac{9}{12}, \frac{12}{16},$  \_\_\_\_\_, \_\_\_\_\_
94. Complete the following series :  
 (i)  $\frac{1}{8}, \frac{1}{9}, \frac{1}{10},$  \_\_\_\_\_, \_\_\_\_\_

(ii)  $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \text{---}, \text{---}$

95. A school has 8 periods in a day. The duration of each period is  $\frac{3}{4}$  hour. Find the total duration of 8 periods.
96. Kamini has  $6\frac{1}{2}$  m long ribbon. She cuts it into two equal pieces. What is the length of each piece of ribbon?
97. Sita needs some pieces of ribbon each of which should be  $\frac{3}{4}$  m long. How many such pieces can she get from a ribbon which is 24 m long?
98. A metre of cloth costs Rs. 40. Find the cost of  $2\frac{1}{2}$  m of cloth.
99. Amit takes half an hour to paint a table. How much time will he take to paint 17 such tables?
100. Rashmi has  $\frac{3}{4}$  kg of toffees. She wants to distribute them equally among 3 of her friends. How much toffees will each of her friend get ?
101. Shiela bought  $9\frac{1}{5}$  m of khadi cloth at the rate of Rs. 10 per metre. How much money did Shiela require to pay?
102. A kilogram of mangoes costs Rs. 48. Find the cost of  $2\frac{1}{2}$  kg of mangoes.
103. A girl spends  $\frac{1}{2}$  of her money in a store. Then she goes to another store and spends  $\frac{1}{2}$  of what was left with her. After that she has Rs. 24. With how many rupees did she start ?
104. If a collection has 160 objects, how many objects are there in one-fourth of the collection?
105. A kilogram of potatoes costs Rs. 9. Find the cost of  $3\frac{1}{2}$  kg of potatoes.
106. Reeta had a saree. She cut it into some pieces each of which was  $\frac{1}{4}$  of the saree. How many such pieces did she get from the saree?

107. I read  $\frac{2}{7}$  of a book in one day and  $\frac{3}{7}$  on the next day. What portion of the book did I read in two days?
108. Shyam finished  $\frac{5}{11}$  of the work in one day and  $\frac{3}{11}$  of the work next day. How much work did he finish in two days?
109. 360 students appeared for a general knowledge test.  $\frac{3}{4}$  of them passed. How many students failed?
110. A rope is 12 m long.  $\frac{3}{4}$  of the total length is used for making a swing. How many metres of rope is left ?
111. A man's salary is Rs. 13000. In the month of March, he spends  $\frac{4}{13}$  of it on food,  $\frac{5}{13}$  on children's education and  $\frac{2}{13}$  on clothes and other items. Find the remaining amount.
112. What should be added to  $\frac{3}{4}$  of a cake to get a full cake?
113. Lalit had 10 toys and he gave  $\frac{1}{5}$  of the toys to his sister. Find the number of toys left with him?
114. Ramu has a chocolate. He gives  $\frac{1}{3}$  of it to Mohan and  $\frac{1}{3}$  to Sohan. What part of chocolate is left with him?
115. The product of two numbers is  $\frac{6}{5}$ . If one of them is  $\frac{4}{5}$ , find the other number.
116. What should be added to  $\frac{2}{5}$  to get  $\frac{13}{5}$ ?
117. The product of  $\frac{2}{9}$  and a number is 4. What is the number?
118. How much is 11 times  $\frac{1}{4}$ ?

119. What should be added to  $\frac{3}{7}$  to make it one?
120. In 500 litres of a mixture,  $\frac{1}{5}$  is water and  $\frac{1}{4}$  of the mixture is milk. Find the quantity of milk and water in the mixture.
121. A fruit seller bought 12 dozens of oranges. One third of the oranges were rotten. How many oranges were fresh?
122. A man is 48 years old. His son is half of his father's age. What is the age of the son?
123. How many hours are there in  $\frac{1}{4}$  of a day?
124. What fraction of April month is equivalent to 15 days?
125. The length of a rope is 4m. If it is cut into 4 equal small pieces, what will be the length of each piece?
126. In a 100m race, Usha took  $18\frac{3}{5}$  seconds and Pushpa took  $14\frac{3}{10}$  seconds. Who won the race?
127. Rohit gets Rs. 200 from his father as pocket-money every month. He spends one quarter of the amount in school canteen and same amount for stationery items. How much money does he save every month?
128. Sangeeta has two ribbons, one  $2\frac{1}{4}$  m long and the other  $3\frac{1}{4}$  m long. How much ribbon does she have in all?
129. Ram scored 27 goals for his team in a tournament. In the second tournament, he could score only  $\frac{6}{9}$  of the goals he scored in the first. How many goals did he score this time?
130.  $\frac{1}{7}$  of my money is Rs. 35. How much money do I have?
131.  $\frac{1}{10}$  of a class of 50 boys are absent. How many boys are present ?
132. How many one-ninths are there in  $1\frac{7}{9}$  ?
133. How many one-elevenths are there in  $3\frac{6}{11}$  ?



134.  $\frac{1}{4}$  of a number is 24. What is the number?

135. Solve :  $14\frac{2}{7}$     $16\frac{4}{7}$     $11\frac{3}{7}$

136. Simplify :  $\frac{4}{5} - \frac{4}{15}$     $\frac{8}{15} - \frac{2}{15}$     $\frac{1}{15}$

137. What number will be there in the blank?

$$\frac{5}{6} - \frac{1}{6} = \frac{\quad}{6} + 3$$

138. Which number will come in place of ?

$$\frac{1}{7} + \frac{2}{7} + \frac{\text{input}}{7} = 1\frac{3}{7}$$

139. Simplify :  $\frac{1}{4} \times 64 \times \frac{1}{3} \times 78$

140. Solve :  $\frac{1}{18} \times 324 \times \frac{1}{8} \times 136$

## ANSWERS

- |                                   |                                      |                                                               |
|-----------------------------------|--------------------------------------|---------------------------------------------------------------|
| 1. $\frac{9}{11}$                 | (d) $\frac{21}{21}, \frac{16}{16}$   | 22. $\frac{5}{6}$                                             |
| 2. $\frac{3}{4}$                  | 10. $\frac{9}{4}$                    | 23. $\frac{1}{7}$                                             |
| 3. $\frac{3}{7}$                  | 11. (a) $\frac{37}{5}$               | 24. $\frac{5}{12}$                                            |
| 4. (a) $\frac{1}{2}$              | (b) $\frac{107}{10}$                 | 25. $\frac{7}{4}$                                             |
| (b) $\frac{1}{4}$                 | 12. a and c                          | 26. $\frac{3}{4}$                                             |
| (c) $\frac{3}{4}$                 | 13. $\frac{30}{36}$                  | 27. $\frac{1}{2}$ of 50                                       |
| (d) $\frac{1}{3}$                 | 14. $\frac{3}{9}$                    | 28. $\frac{3}{13}, \frac{6}{13}, \frac{8}{13}, \frac{10}{13}$ |
| (e) $\frac{2}{5}$                 | 15. $\frac{49}{56}$                  | 29. $\frac{7}{5}, \frac{5}{5}, \frac{3}{5}, \frac{2}{5}$      |
| 5. $2\frac{1}{4}$                 | 16. $\frac{18}{45}$                  | 30. $\frac{5}{6}$                                             |
| 6. (a) $\frac{3}{5}$              | 17. (a) 2                            | 31. 1                                                         |
| (b) $\frac{3}{8}$                 | (b) 48                               | 32. 14                                                        |
| 7. a, c, d                        | (c) 28                               | 33. 0                                                         |
| 8. $\frac{1}{3}$                  | (d) 3                                | 34. $\frac{5}{8}$                                             |
| 9. (a) $\frac{1}{5}, \frac{3}{8}$ | 18. $\frac{3}{5}$ and $\frac{9}{15}$ | 35. $\frac{3}{10}$                                            |
| (b) $\frac{9}{5}, \frac{11}{9}$   | 19. c and d                          | 36. $\frac{7}{10}$                                            |
| (c) $4\frac{5}{6}, 1\frac{3}{4}$  | 20. (a) $\frac{6}{15}$               | 37. $3\frac{5}{4}$ or $4\frac{1}{4}$                          |
|                                   | (b) $\frac{5}{9}$                    |                                                               |
|                                   | 21. $\frac{10}{12}$                  |                                                               |

38.  $1\frac{3}{5}$

39. (i)  $1\frac{2}{5}$

(ii)  $2\frac{1}{3}$

(iii)  $2\frac{1}{2}$

(iv)  $2\frac{1}{4}$

(v)  $3\frac{3}{4}$

40.  $\frac{1}{2}$

41.  $\frac{5}{9}$

42.  $\frac{2}{10}$

43.  $\frac{5}{11}$

44.  $\frac{3}{5}$

45.  $\frac{8}{7}$

46.  $\frac{9}{2}$

47.  $22\frac{1}{2}$

48.  $\frac{1}{10}$

49. 6

50. 12

51. 30

52.  $\frac{5}{2}$

53.  $\frac{15}{2}$

54.  $\frac{7}{3}$

55.  $\frac{7}{6}$

56.  $\frac{7}{6}$     $\frac{19}{9}$     $\frac{133}{54}$

57.  $\frac{42}{5}$

58. Rs. 100

59. 2

60. 6

61. 4

62. 18

63. 28

64.  $\frac{4}{19}$

65.  $\frac{2}{5}$     $\frac{1}{2}$

66. 40

67.  $\frac{3}{5}$

68.  $\frac{2}{3}$

69.  $45^\circ$

70.  $\frac{1}{5}$

71. 18

72. 119

73.  $\frac{1}{27}$

74.  $\frac{1}{6}$

75. 11

76. 13

77. 13

78.  $\frac{5}{4}$

79. 0

80.  $\frac{73}{27}$

81. 0

82.  $\frac{13}{8}$

83. (a)  $\frac{48}{17}$

(b)  $2\frac{1}{2}$

84.  $30^\circ$

85.  $3\frac{1}{5}$

86. 25

87.  $\frac{1}{2}$

88.  $\frac{1}{4}$

89.  $\frac{1}{3}$

90. 0

91. 0

92. (i) 1

- (ii)  $\frac{3}{7}$
93.  $\frac{15}{20}, \frac{18}{24}$
94. (i)  $\frac{1}{11}, \frac{1}{12}$   
(ii)  $\frac{5}{6}, \frac{6}{7}$
95. 6 hours
96.  $3\frac{1}{4}$  m
97. 32 pieces
98. Rs. 100
99. 8 hours 30 minutes
100. 250 g
101. Rs. 92
102. Rs. 120
103. Rs. 96
104. 40
105. Rs. 31.50
106. 4
107.  $\frac{4}{7}$
108.  $\frac{8}{11}$
109. 90
110. 3 m
111. Rs. 2000
112.  $\frac{1}{4}$  of cake
113. 8
114.  $\frac{1}{3}$
115. 2
116.  $\frac{11}{5}$
117. 18
118.  $\frac{11}{4}$
119.  $\frac{4}{7}$
120. 100 l, 125 l
121. 8 dozens
122. 24 years
123. 6 hours
124.  $\frac{1}{2}$
125. 1 m
126. Pushpa
127. Rs. 100
128.  $5\frac{1}{2}$  m
129. 24 goals
130. Rs. 245
131. 45
132. 16
133. 41
134. 96
135.  $42\frac{2}{7}$
136. 1
137. 12
138. 7
139. 42
140. 35

## Chapter - 8

### DECIMALS



(Refer to chapter # 10 of the NCERT book of class - V)

#### **FACTS AT A GLANCE :**

- The fractions in which the denominator is 10 or 100 or 10000 are called **Decimals / Decimal fractions**.

e.g.  $\frac{7}{10}, \frac{9}{100}$                       0.7, 0.09

Decimal fractions                      Decimals

- When we change the decimal fraction into its decimal form, the number of digits after the decimal (point) is equal to the number of zeros in the denominator of the fraction.

e.g.  $\frac{7}{100}$                       0.07

(Two zeros in denominator)                      (two digits after decimal point)

- The digits after the decimal point are always read one by one, For example 0.653 is read as 'point six five three' or 'decimal six five three'

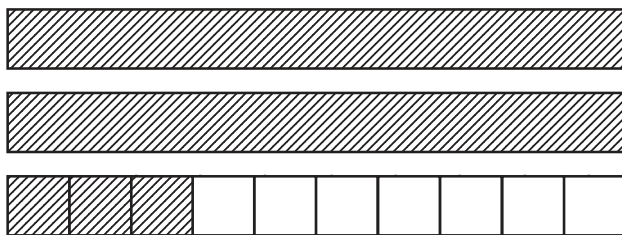
- Mixed Decimals** : A mixed decimal is a combination of a whole number and a decimal number. For example  $5.05$                       5                      .05

(mixed decimal)                      Whole Number                      Decimal Number

- Decimal Places** : In a decimal number, the number of digits after the decimal (point) is known as the number of *decimal places*.

Ones	Decimal	Tenths	Hundredths	Thousandths	Decimal Number
7	.	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$	7.111
2	.	$\frac{3}{10}$	–	–	$2\frac{3}{10}$ or 2.3

6. Representing 2.3 or  $2\frac{3}{10}$ :



7. **Equivalent Decimals** : Any number of zeros to the extreme right of the ‘decimal part’ do not change the value of the decimal, For example 0.97, 0.970, 0.9700 are *equivalent decimals*.

8. **Like Decimals** : Decimals having the same number of decimal places are called *like decimals*.

Decimal Numbers	Whole Number	Decimal	Tenths	Hundredths
0.72	0	.	7	2
0.07	0	.	0	7
1.30	1	.	3	0

So, 0.72, 0.07 and 1.30 are like decimals as each one has two places of decimals.

9. **Unlike Decimals** :- Decimals having different number of decimal places are called *unlike decimals*.

Decimal Number	Whole Number	Decimal	Tenths	Hundredths	Thousandths
1.7	1	.	7	–	–
0.80	0	.	8	0	–
3.245	3	.	2	4	5

So, 1.7, 0.80 and 3.245 are unlike decimals as each one has different number of decimal places.

10. We can change the unlike decimals into like decimals by adding zero/zeros to the decimal part, thus making the decimal places equal.

e.g.

1.7	1.700
0.80	0.800
3.245	3.245

11. **Multiplying decimals with 10, 100 and 1000** : We should move the decimal to the right as there are number of zeros.

e.g.  $1.732 \times 10 = 17.32$  (10 has one zero so the decimal moves/jumps one digit to the right side)

$1.732 \times 100 = 173.2$

12. **Dividing decimals by 10, 100 and 1000** : We should move the decimal to the left as there are number of zeros.

e.g.,  $845.4 \div 100 = 8.454$  (100 has two zeros so the decimal moves/ jumps two digit to the left side)

## QUESTIONS

1. What is the decimal representation of  $\frac{7}{10}$ ?
2. What is the decimal form of  $\frac{205}{100}$ ?
3. What is the whole number part in 41.234?
4. What is the fractional form of 0.125?
5. Express as fractions in their lowest terms :  
(a) 0.05      (b) 0.02
6. Express as decimals : (a)  $\frac{25}{4}$       (b)  $3\frac{2}{5}$
7. Convert  $\frac{13}{5}$  into decimals.
8. In the decimal form, three thousandths will be represented as \_\_\_\_\_.

9. Give the decimal form for  $2 \frac{7}{10} \frac{9}{100} \frac{3}{1000}$ .
10. In decimal form,  $\frac{1}{25}$  is represented as \_\_\_\_\_.
11. Which is the smallest number : 0.011, 1.001, 0.101. 0.110 ?
12. Complete the series : 0.9642, 9.642, 96.42, \_\_\_\_, \_\_\_\_.
13. Convert these decimals into fraction :  
(a) 3.75      (b) 0.125
14. Arrange in ascending order :  
5.6, 1.09, 2.43, 0.83, 2.02
15. Arrange in descending order :  
70.04, 14.40, 0.69, 5.06, 23.89
16. Which is greater : (a) 1.08 or 1.10 ?      (b) 0.4 or 0.04 ?
17. Which decimal number is greater : 1.245 or 12.45 ?
18. Which decimal number is smaller : 2.001 or 2.100 ?
19. Is 0.9 equivalent to 0.09 ?
20. Place value of 5 in 130.05 is \_\_\_\_\_.
21. What is the decimal form of 5 cm 5 mm ?
22. What is the decimal form of 25 rupees and 50 paise ?
23.  $10.01 + 1.001 =$  \_\_\_\_\_.
24. Find the value of : (a)  $7.7 + 0.7$  (b)  $10 - 9.99$
25. Find the value of  $4 \frac{1}{25} \frac{1}{1000}$
26. What is the decimal form of 3 tenths + 3 hundredths ?
27. Find the sum of 0.75 and 1.1.
28. How much money is left out of 10 rupees note if I paid Rs. 5.25 for potatoes?
29.  $27.25 - 27 \frac{\quad}{100}$
30. What should be added to 24.75 to get 50?
31. Find the sum of 30.01 and 15.45.
32. Find the sum of 0.25 and 0.15.
33. What is  $6.59 + 3.3$ ?
34. What is  $4 \frac{1}{25} \frac{7}{100}$ ?



**What number will be there in the blank ? (Q 35 to 45)**

35.  $0.73 + \underline{\hspace{2cm}} = 30$
36.  $2.4 \frac{6}{10} \underline{\hspace{2cm}}$
37.  $0.40 - 0.30 + 0.2 = \underline{\hspace{2cm}}$ .
38.  $3 + 45.3 + 10 = \underline{\hspace{2cm}}$ .
39. If  $23 \times 23 = 529$ , then  $0.23 \times 2.3$  is  $\underline{\hspace{2cm}}$ .
40.  $4.632 \times 10 = \underline{\hspace{2cm}}$ .
41.  $57.5 \times 100 = \underline{\hspace{2cm}}$ .
42.  $75 \text{ g} = \underline{\hspace{2cm}} \text{ kg}$ .
43.  $\underline{\hspace{2cm}} \times 100 = 463$
44.  $\underline{\hspace{2cm}} \times 20 = 64$
45.  $\underline{\hspace{2cm}} \times 10 = 49.2$ .
46. Multiply 1.7 by 4.
47. What is  
(a)  $2.45 \times 10$  ?    (b)  $7.28 \times 100$  ?    (c)  $0.7 \times 0.4$  ?    (d)  $6.66 - 6.56$  ?
48. What is the product of 0.07 and 0.0003 ?
49. How many times is 35.68 of 3.568 ?
50. Find the product of 1.5 and 7.
51. What is 1.8 added 8 times ?
52. Find  $0.13 \times 0.2$ .
53. Rice is sold at Rs. 9.80 per kg. Find the cost of 5 kg of rice.
54. Raja had to pay Rs. 1.50 per day as token money. How much money did he pay for 30 days?
55. Find the quotients : (a)  $32.5 \div 10$  (b)  $3.25 \div 10$
56. Simplify : (a)  $0.005 \div 10$  (b)  $0.29 \div 10$
57. A 25 m long cloth is divided into 10 equal parts. How long is each piece?
58. 3 pairs of socks cost Rs. 38.25. Find the cost of one pair of socks.
59. Find the value of  $3.39 \div 1000$
60. What is the quotient when 0.216 is divided by 0.006?
61.  $999.9 \div 100 = \underline{\hspace{2cm}}$
62.  $\underline{\hspace{2cm}} \div 10 = 0.06$
63.  $\underline{\hspace{2cm}} \div 100 = 8.96$

64.  $\frac{10}{0.5} = \frac{30}{\quad\quad\quad}$

65.  $\frac{864}{100} = 8.54 \quad \underline{\quad\quad}$

66. If 17 m of cloth costs Rs. 80.50, what is the cost of  $8\frac{1}{2}$  m of cloth?

67. Sonia purchased a dress for Rs. 100 and 50 paise. How much money does she have to pay if she buys 3 such dresses?

68. The length of a nail is one tenth of a hammer. If the hammer is 20 cm long, what is the length of the nail?

**Simplify : (Q 69 to 75)**

69.  $0.1 \times 75$

70.  $6.5 \times 100 + 1$

71.  $3 + 0.4 \times 10$

72.  $1 \quad 16.23 \quad 10$

73.  $15.8 - 0.07 \times 100$

74.  $16.2 - 1.3 \times 10$

75.  $20.5 - 0.05 \times 100$

## ANSWERS

1. 0.7
2. 2.05
3. 41
4.  $\frac{1}{8}$
5. (a)  $\frac{1}{20}$   
(b)  $\frac{1}{50}$
6. (a) 6.25  
(b) 3.4
7. 2.6
8. 0.003
9. 2.793
10. 0.04
11. 0.011
12. 964.2, 9642
13. (a)  $3\frac{3}{4}$   
(b)  $\frac{1}{8}$
14. 0.83, 1.09, 2.02, 2.43, 5.6
15. 70.4, 23.89, 14.40, 5.06, 0.69
16. (a) 1.10  
(b) 0.4
17. 12.45
18. 2.001
19. No,  $\left(\frac{9}{10} > \frac{9}{100}\right)$
20.  $\frac{5}{100}$ , 5 hundredths
21. 5.5 cm
22. Rs. 25.50
23. 11.011
24. (a) 8.4 (b) 0.01
25. 4.041
26. 0.33
27. 1.85
28. Rs. 4.75
29. 25
30. 25.25
31. 45.55
32. 0.4
33. 9.89
34. 4.11
35. 29.27
36. 3
37. 0.3 or 0.30
38. 58.3
39. 0.529
40. 46.32
41. 5750
42. 0.075 kg
43. 4.63
44. 3.2
45. 4.92
46. 6.8
47. (a) 24.5 (b) 728  
(c) 0.28 (d) 0.1
48. 0.000021
49. 10 times
50. 10.5
51. 14.4
52. 0.026
53. Rs. 49
54. Rs. 45
55. (a) 3.25 (b) 0.325
56. (a) 0.0005 (b) 0.029
57. 2.5 m
58. Rs. 12.75
59. 0.00039
60. 36
61. 9.999
62. 0.6
63. 896
64. 1.5
65. 0.1
66. Rs. 40. 25
67. Rs. 301.50
68. 2 cm
69. 7.5
70. 651
71. 7
72. 2.623
73. 8.8
74. 3.2
75. 15.5

## Chapter - 9

### CONVERSIONS

(Refer to chapter # 1, 4, 6, 8 and 10 of the NCERT book of class - V)



#### FACTS AT A GLANCE :

#### 1. Time Related Conversions :

1 hour	=	60 minutes
1 minute	=	$\frac{1}{60}$ hour
1 second	=	$\frac{1}{60}$ minute
1 day	=	24 hours
1 week	=	7 days
1 year	=	52 weeks
1 year	=	12 months
1 year	=	365 days
1 leap year	=	366 days

#### 2. Length Related Conversion :

1 metre	=	100 centimetre or 100 cm
1 cm	=	$\frac{1}{100}$ metre
1 kilometre	=	1000 metre
1 metre	=	$\frac{1}{1000}$ km
1 foot	=	30 centimetres (approximately)

#### 3. Mass Related Conversions :

1 kilogram	=	1000 gram
1 gram	=	$\frac{1}{1000}$ kg

#### 4. Capacity Related conversions :

1 litre	=	1000 millilitre
1 ml	=	$\frac{1}{1000}$ litre

#### 5. Other Conversions :

1 dozen	=	12 objects
1 score	=	20 objects

## QUESTIONS

1. How many seconds are there in 5 minutes?
2. Convert 2 minutes 15 seconds into seconds.
3. How many minutes are there in 7 hours?
4. Convert 4 hours and 15 minutes into minutes.
5. Convert 1 hour into seconds.
6. How many hours are there in 180 minutes?
7. Convert 75 minutes into hours and minutes.
8. Add :
  - (a) 12 min. 15 sec. and 6 min. 50 sec.
  - (b) 2 hours 30 min. and 3 hours 30 min.
9. Which is greater :  
2 hours 20 minutes *or* 50 minutes + 80 min?
10. How many months are there in  $1\frac{1}{2}$  year ?
11. Convert 65 months into years and months.
12. How many weeks are there in two years?
13. How many cms are there in 6 m?
14. Change 3 m 5 cm into cm.
15. Change 5 feet 20 cm into cm.
16. Change 5 km 25 m into metres.
17. How many metres are there in 2.825 km?
18. Add : 12 km 20 m *and* 7 km 80 m.
19. Which is greater :  
1 m 40 cm + 60 cm *or* 2.6 m ?
20. Convert 240 cm into feet.
21. Convert 40000 m into km.
22. Convert 4771 cm into metres and cm.
23. Your school is 2.5 km from your house. Express this distance in metres.
24. Ritu's father bought 3 pieces of cloth. Their lengths are 3 m 40 cm, 5 m 85 cm and 7 m 15 cm. Find the total length of 3 pieces.
25. 5 m 70 cm cloth is used to make a dress. How much cloth will be used to make three such dresses?

26. How many grams are there in 2.5 kg?
27. Change 7 kg 70 g into grams.
28. Convert 1310 g into kg.
29. What should be added to 600 g to make it 2 kg?
30. Which is greater :  
7.2 kg *or* 7 kg + 100 g + 100 g?
31. A bag can hold 5.9 kg of grain. Amit poured 3.7 kg 100 g of grain in it. How much more grain can be poured into the bag?
32. Convert 8 kg 100 g into grams.
33. Add : 6.3 kg and 3240 g.
34. How many grams are there in 93.5 kg?
35. How many grams are there in  $\frac{3}{4}$  kg?
36. Add :  $1\frac{1}{2}$  kg     $3\frac{1}{4}$  kg    250g
37. Convert 8 litres 200 ml into ml.
38. Convert 4 litres and 1050 ml into ml.
39. 207 ml is equal to how many litres?
40. How many ml are there in 0.019 litre?
41. Which is greater :  
8 litre 200 ml + 700 ml *or* 8.5 litre?
42. How many ml are there in 10 litre?
43. 750 ml is how much less than 1 litre?
44. Which is more :  
8 litres 39 ml *or* 8009 ml?
45. A bucket has 4 litre 50 ml of water. How many ml of water does the bucket have?
46. Which container has the maximum capacity?  
(a) 5 litres    (b) 3 litres 900 ml    (c) 10000 ml
47. How many pens shall I have if I buy  $3\frac{1}{2}$  scores of pens?
48. A man purchased  $2\frac{3}{4}$  dozen oranges. How many oranges did he purchase?
49. How many days shall February have in the year 2012?
50. What will be the number of days in 2009 if I take away months having 30 days?

## ANSWERS

1. 300 sec
2. 135 sec
3. 420 min
4. 255 min
5. 3600 sec
6. 3 hours
7. 1 hour 15 min
8. (a) 19 min 5 sec (b) 6 hrs
9. 2 hours 20 min
10. 18 months
11. 5 years and 5 months
12. 104 weeks
13. 600 cm
14. 305 cm
15. 170 cm
16. 5025 metre
17. 2825 metre
18. 19 km 100 m
19. 2.6 m
20. 8 feet
21. 40 km
22. 47 m 71 cm
23. 2500 m
24. 16 m 40 cm
25. 17 m 10 cm
26. 2500 g
27. 7070 g
28. 1.31 kg
29. 1 kg 400 g
30. These are equal
31. 2.1 kg
32. 8100 g
33. 9.540 kg
34. 93500 g
35. 750 g
36. 5 kg
37. 8200 ml
38. 5050 ml
39. 0.207 litre
40. 19 ml
41. 8 l 200 ml + 700 ml
42. 10000 ml
43. 250 ml
44. 8 litres 39 ml
45. 4050 ml
46. (c)
47. 70 pens
48. 33 oranges
49. 29 days
50. 245 days

## Chapter - 10

### MONEY



(Refer to chapter # 1, 4 and 10 of the NCERT book of class - V)

#### FACTS AT A GLANCE :

1. Indian currency is 'Rupee'.

$$\begin{aligned} 1 \text{ Re} &= 100 \text{ paise} \\ \text{or } 1 \text{ paise} &= \frac{1}{100} \text{ Re} = 0.01 \text{ Re} \end{aligned}$$

2. **Decimal notation of money :** Rupees are written on the left of the decimal and paise on the right side of the decimal

Paise is always written as a two-digit number.

e.g.

$$\begin{aligned} \text{Rs } 89 &= \text{Rs. } 89.00 \\ \text{Rs } 89 \text{ and } 5 \text{ paise} &= \text{Rs } 89.05 \\ \text{Rs } 89 \text{ and } 50 \text{ paise} &= \text{Rs } 89.50 \end{aligned}$$

3. **Conversions :**

- \* To change paise into rupees, count from right to left and put a decimal after two digits.

$$\begin{aligned} \text{Paise } 400 &= \text{Rs } 4.00 \\ \text{Paise } 40 &= \text{Rs } 0.40 \end{aligned}$$

- \* To change rupees into paise, multiply the given amount (in Rs) by 100.

$$\begin{aligned} \text{Re } 1 &= 100 \text{ paise} \\ \text{Rs } 15 &= 15 \times 100 = 1500 \text{ paise} \\ \text{Rs } 15.25 &= 15.25 \times 100 = 1525 \text{ paise} \end{aligned}$$



## QUESTIONS

- Convert the following amounts into decimal form :  
(a) Rupees 25 Paise 30    (b) Rupees 85 Paise 8  
(c) Rupees 919                      (d) Rupees 834 Paise 9
- Convert the following paise into rupees :  
(a) Paise 400                      (b) Paise 5  
(c) Paise 890                      (d) Paise 908
- Convert the given rupees into paise :  
(a) Rs. 808.80                      (b) Rs. 92.45                      (c) Rs. 85  
(d) Rs. 821.05                      (e) Rupees 17 Paise 5                      (f) Rupees 739 Paise 8
- A pencil costs Rs. 2 Paise 35 and an eraser costs Re. 1 paise 75. Which costs more and by how much?
- Tina received Rs. 307.50 from her father. Amit received Rs. 310.25 from his mother. Who received more money and by how much?
- Kunal bought a book costing Rs. 7.50. He gave Rs. 20 to the shopkeeper. How much money did he get back?
- If a ball costs Rs. 5.50, what will be the cost of 10 such balls?
- If a lamp costs Rs. 15.75, what will be the cost of 3 such lamps?
- Aakash purchased a pen for Rs. 3.50, pencils for Rs. 7.50 and a sharpener for Rs. 2. How much money is spent by Aakash?
- Richa had Rs. 100. She bought a toy for Rs. 15, a story book for Rs. 18.25 and a greeting card for Rs. 10.75. How much money is now left with Richa?
- Ria bought a pencil for Rs. 3.20, a sharpener for Rs. 1.80 and a note-book for Rs. 6.75. What is the total amount she has to pay to the shopkeeper?
- Esha purchased biscuits for Rs. 16.35, bread for Rs. 10.75 and buns for Rs. 3.65 from a confectionery shop. She gave a 50-rupee note to the shopkeeper. What amount did she get back?
- How many 10 paise coins are there in Rs. 7?
- How many 50 paise coins make Rs. 19.50?
- How many 25 paise coins make Rs. 12.50?
- How much money does Nita have if she has 25 coins of 10 paise?
- The cost of a clip is 25 paise. How many clips can be bought for Rs. 7?
- How many 50-rupee notes can be there in Rs. 3256?
- $15 \text{ (Rs.2)} + 16 \text{ (50P)} + 12 \text{ (25P)} = \text{Rs. } \underline{\hspace{2cm}}$
- $24 \text{ (25P)} + 14 \text{ (50P)} + 8 \text{ (Rs.2)} = \text{Rs. } \underline{\hspace{2cm}}$

## ANSWERS

- |    |                     |     |           |
|----|---------------------|-----|-----------|
| 1. | (i) Rs. 25.30       | 6.  | Rs. 12.50 |
|    | (ii) Rs. 85.08      | 7.  | Rs. 55    |
|    | (iii) Rs. 919.00    | 8.  | Rs. 47.25 |
|    | (iv) Rs. 834.09     | 9.  | Rs. 13    |
| 2. | (i) Rs. 4.00        | 10. | Rs. 56    |
|    | (ii) Rs. 0.05       | 11. | Rs. 11.75 |
|    | (iii) Rs. 8.90      | 12. | Rs. 19.25 |
|    | (iv) Rs. 9.08       | 13. | 70        |
| 3. | (i) Paise 80880     | 14. | 39        |
|    | (ii) Paise 9245     | 15. | 50        |
|    | (iii) Paise 8500    | 16. | Rs. 2.50  |
|    | (iv) Paise 82105    | 17. | 28 clips  |
|    | (v) Paise 1705      | 18. | 65 notes  |
|    | (vi) Paise 73908    | 19. | Rs. 41    |
| 4. | Pencil, By paise 60 | 20. | Rs. 29    |
| 5. | Amit, By Rs. 2.75   |     |           |

## Chapter - 11

### TIME

(Refer to chapter # 1, 2, and 4 of the NCERT book of class - V)



#### FACTS AT A GLANCE :

1. **24 - Hour clock :**

- ♦ A day is divided into 24 hours numbered from 00:00 to 23:00
- ♦ 00:00 hours can be replaced by 24:00

2. **12 - Hour clock :**

A day is divided into two periods of 12 hours each.

a.m.	p.m.
Ante Meridiem	Post Meridiem
♦ 12 midnight to 12 noon	♦ 12 Noon to 12 midnight
♦ Before 12 noon	♦ After 12 noon

3. **Comparison of two clocks :**

Time of Day	Mid Night					Mid Day Noon				Mid Night
24 Hour clock	00:00	3:00	6:00	9:00	11:59	12:00	15:00	18:00	21:00	00:00
12 - Hour clock	12:00 <i>a.m.</i>	3:00 <i>a.m.</i>	6:00 <i>a.m.</i>	9:00 <i>a.m.</i>	11:59 <i>a.m.</i>	12:00 <i>p.m.</i>	3:00 <i>p.m.</i>	6:00 <i>p.m.</i>	9:00 <i>p.m.</i>	12:00 <i>a.m.</i>
	<i>a.m.</i>					<i>p.m.</i>				<i>a.m.</i>

- ♦ We prefer “ 12 midnight” and “12 noon” as “12 a.m.” and “12 p.m.” can cause confusion.

4. **Reading Time :**



10 min. to 5



5 min. past 4



Quarter to 10



Quarter past 4



Half past 9

## QUESTIONS

1. Tell the time using 24-hour clock time :  
(i) 12 noon    (ii) 9:30 a.m.    (iii) 12 midnight    (iv) 3:40 p.m.    (v) 9:30 p.m.
2. Tell the time using a.m. or p.m. :  
(i) 11:20 before noon  
(ii) 25 minutes past seven in the morning  
(iii) 1 o' clock in the afternoon  
(iv) Quarter to eight in the morning  
(v) Half past nine in the morning  
(vi) 12 Noon
3. Fill in the blanks :  
(i) The number of days between May 31 and June 30 is \_\_\_\_\_  
(ii) The time 5 hours after 6:30 p.m. is \_\_\_\_\_  
(iii) 1930 hours = \_\_\_\_\_ a.m./p.m.  
(iv) The interval between 10:20 a.m. and 2:20 p.m. is \_\_\_\_\_  
(v) A quarter of an hour = \_\_\_\_\_ minutes  
(vi) One and a quarter hour = \_\_\_\_\_ minutes  
(vii) Half past 4 to quarter past 5 = \_\_\_\_\_ minutes  
(viii) One and three quarters hour = \_\_\_\_\_ minutes  
(ix) 7:15 a.m. to 8:10 a.m. = \_\_\_\_\_ minutes  
(x) 10:25 p.m. to 11:05 p.m. = \_\_\_\_\_ minutes
4. How many days were there in February 1996?
5. Was 1990 a leap year?
6. In a year, April begins on Wednesday. Which other dates in this month will fall on Wednesday?
7. In a year, if 3rd July is Monday, which other dates in this month will fall on Monday?
8. Neha began doing her Maths homework at 7:15 p.m. She finished it at 7:50 p.m. How long did she take to finish the home work?
9. Ram gets up at 7:00 a.m. He takes 45 minutes to get ready to go to school. At what time does he get ready for the school?
10. The news start at 9:45 p.m. and last for 10 minutes. At what time do the news finish?
11. A school starts at 7:45 a.m. and finishes at 1:30 p.m. How many hours and minutes

does the school work every day?

12. A teacher gives 25 minutes test on Maths. If the test starts at 8:35 a.m., at what time does it end?
13. The Shatabadi Express starts everyday at 7:05 a.m. from New Delhi and reaches Amritsar at 1:30 p.m. How long does it take to reach Amritsar?
14. A T.V. programme lasts 35 minutes. If it starts at 9:50 p.m. at what time does it end?
15. Rajdhani Express reaches Allahabad at 00:20 hours. On Monday it reached Allahabad 1 hour 50 minutes late. At what time (in a.m./ p.m.) did it reach there?
16. A train reaches Howrah at 22:15 hours. Today it reached 45 minutes before time. At what time (in a.m./ p.m.) did the train reach Howrah?
17. How much time has passed from 4:45 p.m. to 8:15 p.m.?
18. What is the time 4 hours 15 minutes after 9:30 a.m.?
19. What is the date 15 days after October 25?
20. What is the date 24 days before December 14?
21. Which hand of the clock moves faster : minute or hour hand?
22. Which hand of the clock completes one round in 60 minutes?
23. At what time does the two hands of a clock form right angle?
24. This year Diwali is on November 5. If today is July 21, after how many days, shall we celebrate Diwali?
25. How many times does the hour-hand go around the clock face in one day?
26. Madhuri went out at 3:30 p.m. and returned at 6:05 p.m. For how much time did she stay out?
27. If one page of a book can be read in 10 minutes, find the time required to read 20 such pages.
28. Ram covers some distance in 1 hour 5 minutes. Shyam covers the same distance in 70 minutes. Who walks faster?
29. The length of a journey by bus is 2 hours 45 minutes. If I board the bus at 11:15 a.m., at what time will I reach my destination?
30. Duration of a function was 5 hours 15 minutes. If the function finished at 6:45 p.m., at what time (in a.m./p.m.) did it start?

## ANSWERS

1. (i) 12:00 hours  
(ii) 9:30 hours  
(iii) 24:00 hours or 00:00 hours  
(iv) 15:40 hours  
(v) 21:30 hours
2. (i) 11:20 a.m.  
(ii) 07:25 a.m.  
(iii) 1:00 p.m.  
(iv) 07:45 a.m.  
(v) 9:30 a.m.  
(vi) 12:00 p.m.
3. (i) 29 days  
(ii) 11:30 p.m.  
(iii) 7:30 p.m.  
(iv) 4 hours  
(v) 15  
(vi) 75  
(vii) 45  
(viii) 105  
(ix) 55  
(x) 40
4. 29 days
5. No
6. 8, 15, 22, 29
7. 10, 17, 24, 31
8. 35 minutes
9. 7:45 a.m.
10. 9:55 p.m.
11. 5 hours 45 minutes
12. 9:00 a.m.
13. 6 hours 25 minutes
14. 10:25 p.m.
15. 2:10 p.m.
16. 9:30 p.m.
17. 3½ hours
18. 1:45 p.m.
19. November 9
20. November 20
21. Minute hand
22. Hour hand
23. At 3 o' clock and at 9 o' clock
24. 106 days
25. Two times
26. 2 hours 35 minutes
27. 3 hours 20 minutes
28. Ram
29. 2:00 p.m.
30. 1:30 p.m.

## Chapter - 12

### SPEED

*(Refer to chapter # 1 of the NCERT book of class - V)*



#### FACTS AT A GLANCE :

1. If a man walks 6 km in 1 hour, it is said that his **Rate of walking** or **speed** is 6 km per hour.
2. His 'speed' 6 km per hour remains the same even if he walks 12 km in 2 hours or 3 km in 30 minutes.
3. Thus, speed is the distance covered in a unit time i.e., 1 second or 1 hour or 1 minute.

#### QUESTIONS

1. What is the speed of the truck that covers 110 kilometres in 2 hours?
2. Gaurav walks 6 km in one hour. What distance would he cover in  $3\frac{1}{2}$  hours?
3. Jatin walks 2 km in  $\frac{1}{2}$  hour. What is his speed?
4. A man walks 4 km in an hour. How long will he take to walk a distance of 10 km?
5. In what time will a train cover a distance of 320 km if it covers 80 km in an hour?
6. A man walks 2 km in 20 minutes. What is his speed in km per hour?
7. The speed of a car is 60 km per hour. How much distance will it cover in 2 hours?
8. A car travels 20 km in one hour. What is the time taken to cover a distance of 160 km?
9. The distance from Singapore to Kuala Lumpur is 396 km. A motorist takes 6 hours to reach Kuala Lumpur from Singapore. What is the distance covered in one hour?
10. Ashish runs at the speed of 8 km per hour. How much time will he take to cover 4 km?
11. A car covers 100 km in 2 hours. What is its speed?
12. What is the distance covered in a minute if a cyclist covers 3000 m in 15 minutes?
13. A car moves at a speed of 60 km per hour. How much time will it take to travel 20 km?
14. During a journey, a car covers 40 km per hour. If the time taken is  $2\frac{1}{2}$  hours, what is the length of the journey?
15. Sudha jogs  $2\frac{1}{2}$  km in 15 minutes. What is her speed?

16. The distance between two towns is 400 km. A car takes 4 hours to travel from one town to the other. What is the speed of the car?
17. A man walks at a speed of 5 km per hour. Find the time taken to walk 15 km?
18. The speed of a train is 60 km per hour. How much distance will it cover in  $3\frac{1}{2}$  hours?
19. A bus travels at a speed of 60 km per hour from 6 a.m. to 7:30 a.m. How many kilometres does it travel?
20. The speed of a car is 45 km per hour. How much distance will it cover in 20 minutes?

## ANSWERS

- |                                       |                     |
|---------------------------------------|---------------------|
| 1. 55 km per hour                     | 11. 50 km per hour  |
| 2. 21 km                              | 12. 200 metre       |
| 3. 4 km per hour                      | 13. 20 minutes      |
| 4. 2 hours 30 minutes                 | 14. 100 km          |
| 5. 4 hours                            | 15. 10 km per hour  |
| 6. 6 km per hour                      | 16. 100 km per hour |
| 7. 120 km                             | 17. 3 hours         |
| 8. 8 hours                            | 18. 210 km          |
| 9. 66 km                              | 19. 90 km           |
| 10. $\frac{1}{2}$ hour or 30 minutes. | 20. 15 km           |



## Chapter - 13

### GEOMETRICAL FIGURES

(Refer to chapter # 2 and 4 of the NCERT book of class - V)

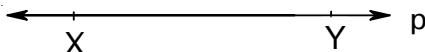


#### FACTS AT A GLANCE :

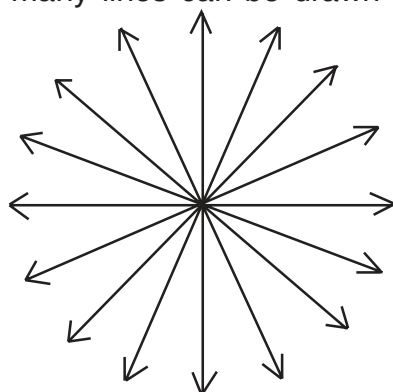
1. **Point :**

A point has no length, breadth and thickness. It has no shape and no size. A point can be represented as :

.P

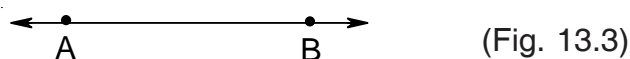
2. **Line :**  (Fig. 13.1)

- ♦ A line has no end points.
- ♦ A line can be extended indefinitely in both the directions.
- ♦ Line drawn in fig. 13.1 can be denoted as  $\overleftrightarrow{XY}$  or simply as 'line p'.
- ♦ Infinitely many lines can be drawn through one given point.



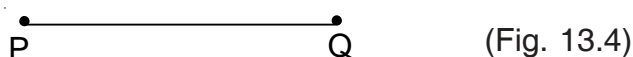
(Fig 13.2)

- ♦ Only one line can be drawn through two given points.



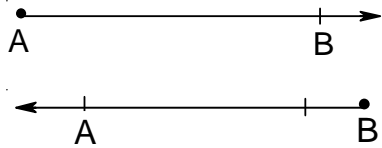
3. **Line - segment :**

- ♦ A line-segment is a part of a line.
- ♦ A line-segment has two end-points.



- ♦ There is only one line-segment joining two given points, say P and Q. It is denoted by  $\overline{PQ}$

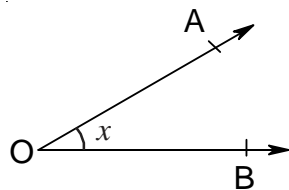
4. **Ray :**



(Fig 13.5)

- ◆ A line - segment extended endlessly in one direction is called a ray.
- ◆ A ray has one end point (or initial point)
- ◆  $\overrightarrow{AB}$  represents ray AB and  $\overrightarrow{BA}$  represents ray BA.
- ◆ Ray AB and Ray BA are two different rays. It is clearly apparent in Fig. 13.5

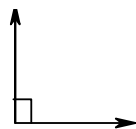
5. **Angle :**



(Fig. 13.6)

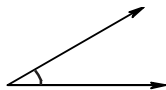
- ◆ An angle is made by two rays with the same initial point. (See fig. 13.6). Rays OA and OB have the same initial point O.
- ◆ Initial point O, is called the **vertex** and  $\overrightarrow{OA}$ ,  $\overrightarrow{OB}$  are the **Arms** of the angle.
- ◆ Angle in fig. 13.6 can be named as  $\angle AOB$  or  $\angle BOA$  or  $\angle x$ .
- ◆ Angles are measured in degrees ' ° '

(a) **Right Angle :** An angle of measure  $90^\circ$ .



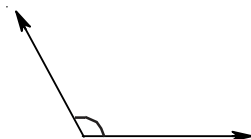
(Fig. 13.7)

(b) **Acute Angle :** An angle which measures more than  $0^\circ$  but less than  $90^\circ$ .



(Fig. 13.8)

(c) **Obtuse Angle :** An angle which measures more than  $90^\circ$  but less than  $180^\circ$ .



(Fig. 13.9)

(d) **Straight Angle :**

- ◆ An angle of measure  $180^\circ$

- ♦ A straight line is a straight angle.



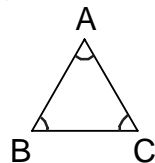
(Fig. 13.10)

- (e) A complete turn around a point is equal to  $360^\circ$ . So, (fig. 13.11) angle made by  $\overline{OA}$  can be considered as angle of  $360^\circ$ .



(Fig. 13.11)

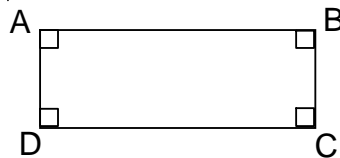
6. **Complementary Angles** : Two angles sum of whose measures is  $90^\circ$  are called complementary angles. For example :  $30^\circ$  and  $60^\circ$  make a pair of complementary angles.
7. **Supplementary Angles** : Two angles sum of whose measures is  $180^\circ$  are called supplementary angles. For example :  $130^\circ$  and  $50^\circ$  make a pair of supplementary angles.
8. **Triangle** : A simple closed figure bounded by three line-segments is called a triangle.



(Fig. 13.12)

- ♦ Triangle in fig. 13.12 is named as  $ABC$  or  $BAC$  or  $ACB$ .
- ♦ Triangle has three vertices or angles : A, B and C.
- ♦ It has three sides : AB or BA, BC or CB and AC or CA.
- ♦ Sum of all the three angles of a triangle is  $180^\circ$ .

9. **Rectangle** : A rectangle can be formed by making a closed figure using four line-segments.

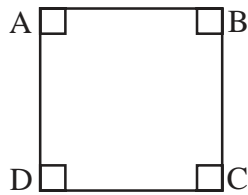


(Fig. 13.13)

In a rectangle –

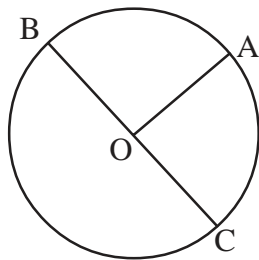
- ♦ Opposite sides are equal i.e.  $AB = DC$  and  $AD = BC$ .
- ♦ Each angle measures  $90^\circ$ .
- ♦ Sum of all the four angles of a rectangle is  $360^\circ$ .

10. **Square** : Square is a special type of rectangle in which all the four sides are equal, i.e.,  $AB = BC = CD = DA$



(Fig. 13.14)

11. **Circle** : Circle is a closed loop as shown in Fig. 13.15.

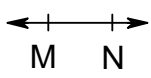


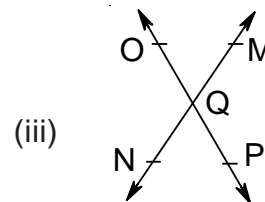
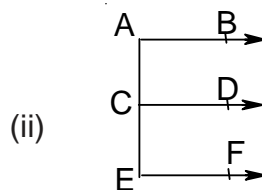
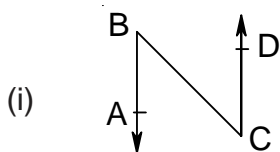
(Fig. 13.15)

- ◆ Distance between the centre O of a circle and any point on the circle is called its **radius** OA, OB and OC are radii.
- ◆ A line - segment passing through the centre and having its end-points on the circle is called the **diameter**. BC is a diameter.
- ◆ Diameter =  $2 \times$  Radius

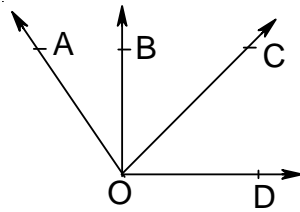
$$\text{Or, Radius} = \frac{1}{2} \times \text{Diameter.}$$

## QUESTIONS

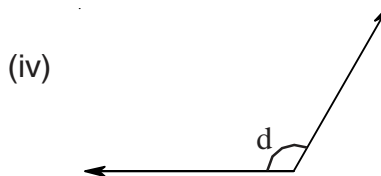
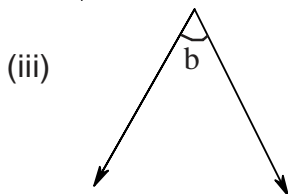
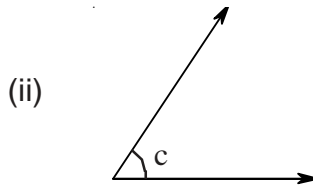
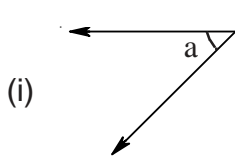
1. What does  denote?
2. How is ray RS written symbolically?  
 (i)  $\overline{RS}$       (ii)  $\overrightarrow{RS}$       (iii)  $\overleftrightarrow{RS}$       (iv) RS
3. Identify and name the line-segments and rays in the following figures :



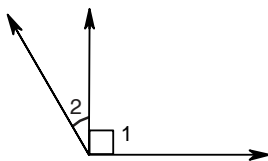
4. How many angles are formed in the given figure?



5. Identify the following pairs of angles as supplementary or complementary angles :-  
(i)  $20^\circ$ ,  $70^\circ$  (ii)  $110^\circ$ ,  $70^\circ$
6. What is the complementary angle of  $50^\circ$ ?
7. An angle measures  $45^\circ$ . What should be the measure of its supplementary angle?
8. Identify the acute angles :

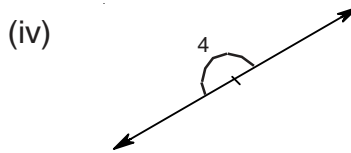
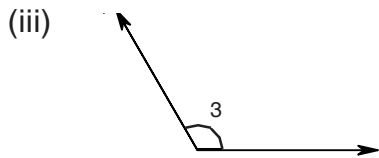
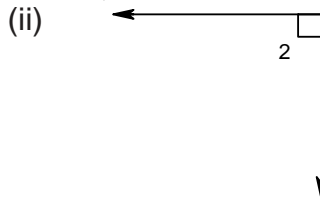
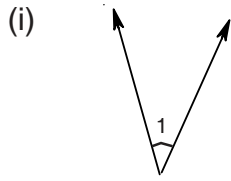


9. In the following figure,

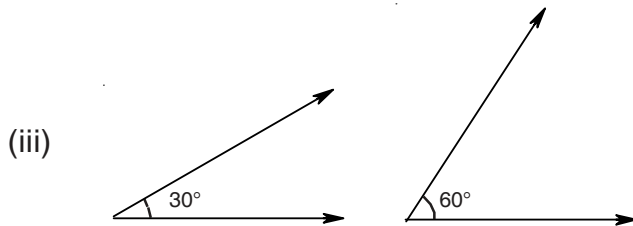
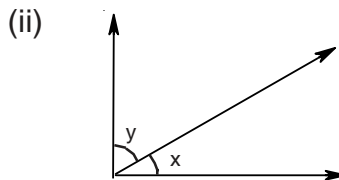
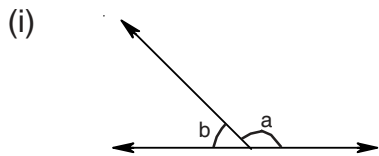


- (i) What type of angle is  $\angle 1$   
(ii) What type of angle is  $\angle 2$ ?  
(iii) What type of angle will you get if both  $\angle 1$  and  $\angle 2$  are added?

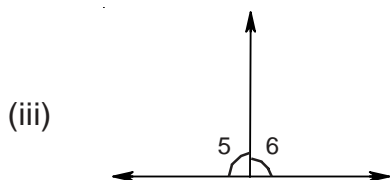
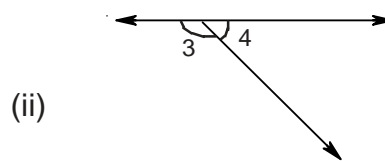
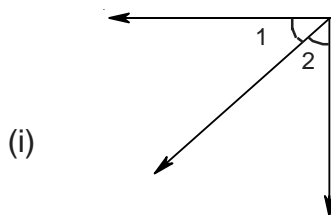
10. Name the type of angle in the following figures :



11. Which of the following figures shows complementary angles?

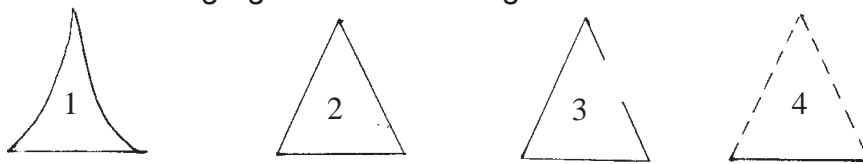


12. Categorise as complementary or supplementary angles :-



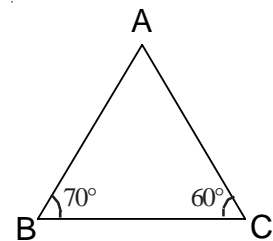
13. At 6 o'clock what is the measure of the angle between the minute and the hour hands of a clock?
14. At 9 o'clock, what is the measure of the angle between the minute and the hour hands of a clock?
15. What is the measure of an angle at the corner of a room?
16. Name the type of angle formed by the minute and hour hands of a clock when it is :  
 (a) five minutes past two?      (b) ten minutes to three?  
 (c) ten minutes past nine?      (d) five minutes to nine?

17. Which of the following figure are not triangles?

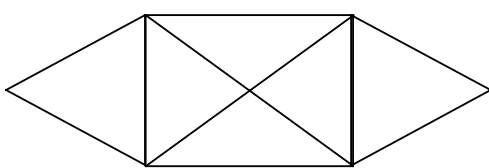


18. Is it possible to draw a triangle with three angles measuring  $60^\circ$ ,  $80^\circ$ ,  $40^\circ$ ?

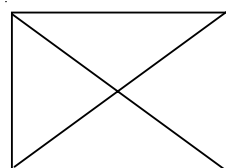
19. Find the measure of the third angle in the given figure.



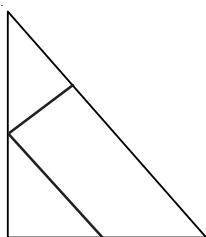
20. Find the number of triangles in each of the following figures :



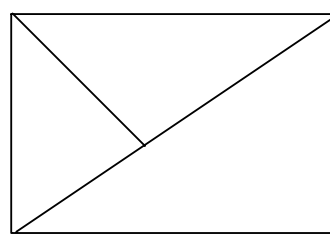
(i)



(ii)

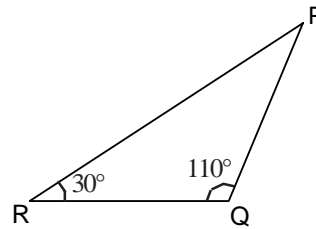


(iii)



(iv)

Q. 21 Calculate the measure of angle P in the given figure.



22. (a) What figure is obtained if a square sheet is folded into half from the middle?  
 (b) What figure is obtained if a square sheet is folded into half using the opposite corners?
23. Is every square a rectangle too?
24. If the radius of a circle is 5 cm, what will be its diameter?
25. If the diameter of a circle is 14 cm, what will be its radius?

### ANSWERS

- |                                                                                |                                                                          |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 1. Line MN                                                                     | 11. (ii), (iii)                                                          |
| 2. (ii)                                                                        | 12. Complementary angles : (i)<br>Supplementary angles : (ii), (iii)     |
| 3. (i) Line-segments : BC.<br>Rays : BA, CD                                    | 13. $180^\circ$                                                          |
| (ii) Line segments : AC, CE, AE<br>Rays : AB, CD, EF                           | 14. $90^\circ$                                                           |
| (iii) Line-segments : Nil<br>Rays : QO, QM, QN, QP                             | 15. $90^\circ$                                                           |
| 4. Six                                                                         | 16. (a) Acute angle (b) Obtuse angle<br>(c) Obtuse angle (d) Acute angle |
| 5. (i) Complementary angles<br>(ii) Supplementary angles                       | 17. 1, 3, 4                                                              |
| 6. $40^\circ$                                                                  | 18. Yes                                                                  |
| 7. $135^\circ$                                                                 | 19. $50^\circ$                                                           |
| 8. (i), (ii), (iii)                                                            | 20. (i) 10 (ii) 8 (iii) 3 (iv) 4                                         |
| 9. (i) Right angle (ii) Acute angle<br>(iii) Obtuse angle                      | 21. $40^\circ$                                                           |
| 10. (i) Acute angle (ii) Right angle<br>(iii) Obtuse angle (iv) Straight angle | 22. (a) Rectangle (b) Triangle                                           |
|                                                                                | 23. Yes                                                                  |
|                                                                                | 24. 10cm                                                                 |
|                                                                                | 25. 7cm                                                                  |



## Chapter - 14

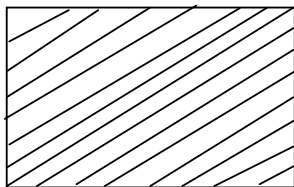
### PERIMETER AND AREA



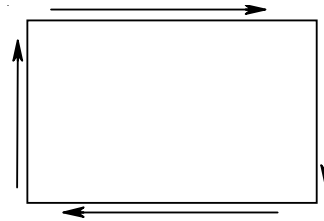
(Refer to chapter # 3, 11 of the NCERT book of class - V)

#### FACTS AT A GLANCE :

1. **Area** is the amount of surface while **Perimeter** is the boundary that encloses area.



**Area**

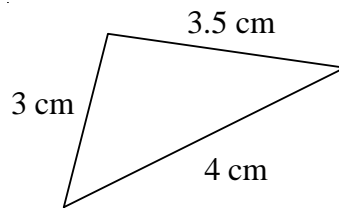


**Perimeter**

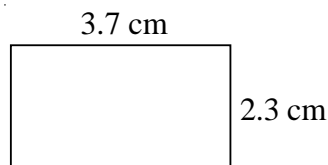
2. (Perimeter of a figure which is founded by line-segments) = (Sum of all its sides)
- ◆ Perimeter is measured in the same units as that of length i.e. cm, m, km.
  - ◆ Perimeter of a rectangle = Sum of its 4 sides  
 $= 2 \times \text{length} + 2 \times \text{breadth}$   
 $= 2 (\text{length} + \text{breadth})$
  - ◆ Perimeter of a square =  $4 \times (\text{length of a side})$
3. Area is commonly measured in square units. For example : sq cm, sq m, sq km. (Also written as  $\text{cm}^2$ ,  $\text{m}^2$ ,  $\text{km}^2$ ).
- ◆ Area of a rectangle = Product of its length and breadth  
 $= \text{length} \times \text{breadth}$
  - ◆ Area of a square = Side  $\times$  Side

## QUESTIONS

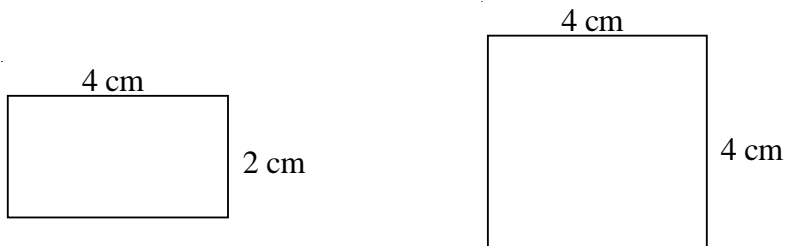
- In which of the following situations, the concept of perimeter is involved :  
(a) Carpeting of room? (b) Fencing of plot?
- A triangle has sides 6 cm, 8 cm, and 10 cm. What is the perimeter of the triangle?
- Find the perimeter of a square whose one side is 4 cm long.
- Find the perimeter of the rectangle whose sides are 5 cm and 2 cm.
- Find the perimeter of the given triangle :



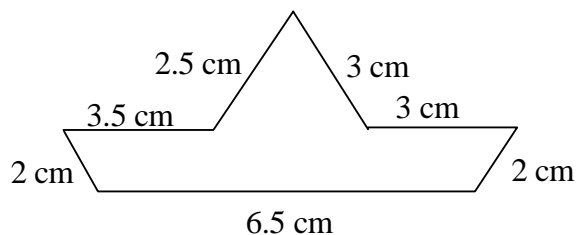
- Find the perimeter of the rectangle given below :



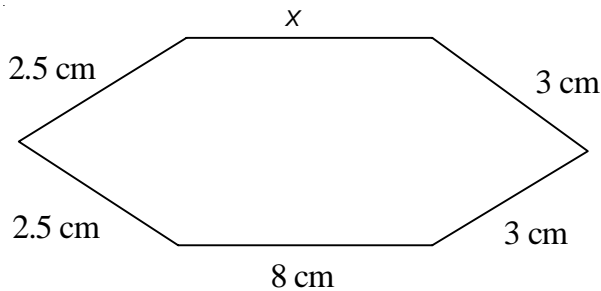
- Which of the following figures has greater perimeter?



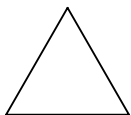
- What is the perimeter of a triangle whose all sides are 4.5 cm long?
- Find the perimeter of the figure given below :



10. The perimeter of the given figure is 26 cm. Find the length of  $x$ .



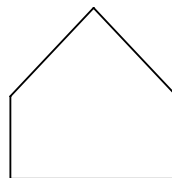
11. A farm house is 43 m long and 27 m wide. How many meters of wire is required for fencing the farm house twice?
12. The side of a square park is 40 m. What distance is covered by a boy if he goes round it twice?
13. The perimeter of a square is 12 cm. Find the side of the square.
14. A man covers 36 m while going round a square plot. What is the length of the side of the plot?
15. Find the breadth of the rectangle whose perimeter is 36 cm and length is 10 cm.
16. The perimeter of a rectangle is 16 cm. If its breadth is 3 cm, find the length of the rectangle.
17. Find the cost of fencing a square park of side 150 m at the rate of Rs. 6 per metre.
18. In the following figures which covers the greatest surface of the plane?



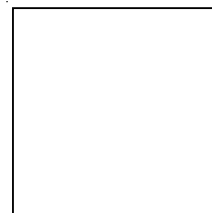
(a)



(b)

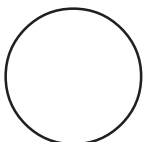


(c)



(d)

19. Which figure has the greatest area?



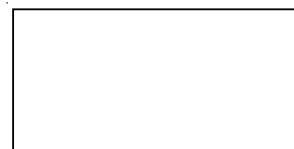
(a)



(b)

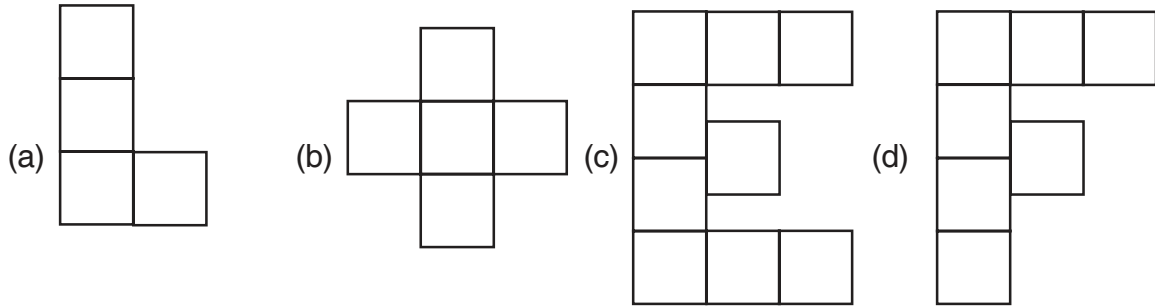


(c)



(d)

20. Which figure has the greatest area if each small square represents 1 sq.cm.



21. Which figure has greater area?

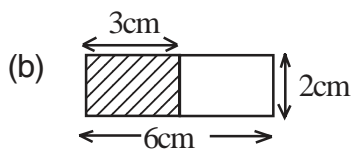
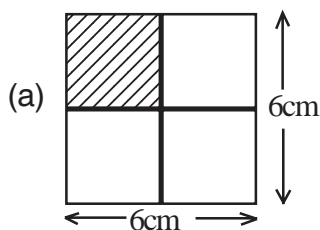


22. Find the area of the tile which is 25 cm long and 12 cm wide.  
 23. Find the area of the square whose one side is 2.5 cm long.  
 24. A rectangular park has length 50 m and breadth 20 m. Find its area.  
 25. The area of a square is 16 sq. cm. Find the length of a side.  
 26. The area of a rectangle is 650 sq. cm. If its breadth is 13 cm, find its length.  
 27. Find the length of the rectangle which has area 88 cm<sup>2</sup> and breadth 8 cm.  
 28. If the area of the top of a table is 250 sq cm and its length is 25 cm, find the width of the table.  
 29. Which playground is bigger in area:  
 (a) 12 m long and 5 m wide ?  
 (b) 12 m long and 6 m wide ?  
 30. A rectangular park is 10 m long and 4 m wide. A square has each side 6 m long. Which has greater area?

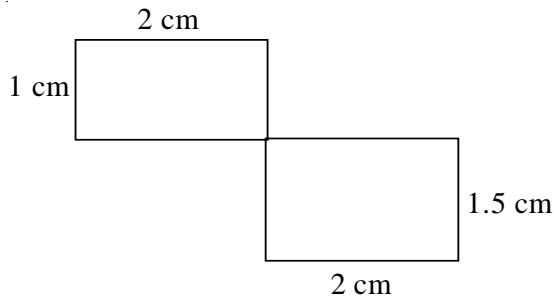
31. Find the area of the shaded portion.



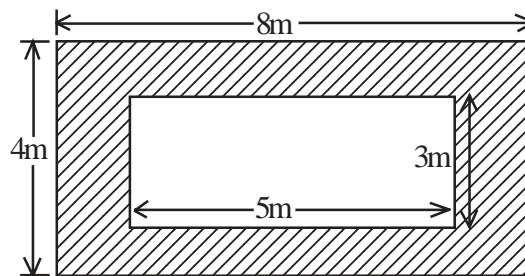
32. Find the area of shaded portion in the figures given below :-



33. Find the area of the given figure :



34. How many cards of length 12 cm and breadth 5 cm can be made out of a sheet having area 300 sq. cm.?
35. The side of a square tile is 15 cm. How many such tiles would be required to cover the floor of a square bathroom of side 150 cm?
36. Find the area of carpet that fully covers a rectangular room whose length and breadth are 14 m and 12 m respectively.
37. In the figure shown :



- (a) What is the area of the larger rectangle?
- (b) What is the area of the smaller rectangle?
- (c) What is the area of the shaded portion?
38. A floor is 5 m long and 4 m wide. A square carpet of side 3m is laid on the floor. Find the area of the floor that is not carpeted.
39. The area of a square is 16 sq. cm. Find its perimeter.
40. The area of a square of side 16 cm is the same as that of a rectangle of length 64 cm. What is the breadth of the rectangle?
41. Perimeter of a rectangle is 120 m. If its length is 40 m, find the area.
42. The length of a rectangular park is thrice its breadth. If the breadth is 10 m, find the perimeter of the park.
43. The area of a square and a rectangle is same. If the length and the breadth of the rectangle are 16 cm and 9 cm, what is the perimeter of the square?
44. The area of the floor of a room is 45 sq.m. If the length is 9 m, find the perimeter of the floor.
45. A man covers 88 m while going round a square park twice. What is the length of a side of the park?

## ANSWERS

1. (b)
2. 24 cm
3. 16 cm
4. 14 cm
5. 10.5 cm
6. 12 cm
7. (b)
8. 13.5 cm
9. 22.5 cm
10. 7 cm
11. 280 cm
12. 320 m
13. 3 cm
14. 9 cm
15. 8 cm
16. 5 cm
17. Rs. 3600
18. (d)
19. (d)
20. (c)
21. (b)
22.  $300 \text{ cm}^2$
23.  $6.25 \text{ cm}^2$
24.  $1000 \text{ m}^2$
25. 4 cm
26. 50 cm
27. 11 cm
28. 10 cm
29. (b)
30. Rectangular park
31.  $36 \text{ cm}^2$
32. (a)  $9 \text{ cm}^2$   
(b)  $6 \text{ cm}^2$
33.  $5 \text{ cm}^2$
34. 5 cards
35. 100 Tiles
36.  $168 \text{ m}^2$
37. (a)  $32 \text{ m}^2$   
(b)  $15 \text{ m}^2$   
(c)  $17 \text{ m}^2$
38.  $11 \text{ m}^2$
39. 16 cm
40. 4 cm
41.  $800 \text{ m}^2$
42. 80 m
43. 48 cm
44. 28 m
45. 11 m

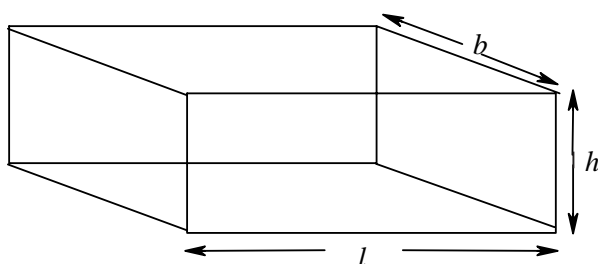
## Chapter - 15

### VOLUME

(Refer to chapter # 9 and 14 of the NCERT book of class - V)



#### FACTS AT A GLANCE :



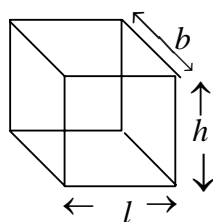
(Fig. 15. 1)

1. **Cuboid :**

- ◆ Figure made by using six faces as shown above is called a cuboid.
- ◆ The length, breadth and height of a cuboid are called its three dimensions.
- ◆ Faces of a cuboid may be rectangles/ squares.

2. **Cube :**

- ◆ A cuboid whose length, breadth and height are equal is called a cube.
- ◆ All the faces of a cube are squares.

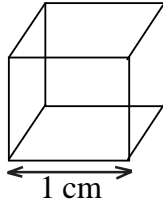


(Fig. 15.2)

3. Figures having three dimensions are called ***solids or 3-dimensional objects***. The space occupied by these objects is called their ***Volume or Capacity***.
4. Volume is measured in cubic units ( $\text{cm}^3$ ,  $\text{m}^3$ )
- ◆ Volume of cuboid = length  $\times$  breadth  $\times$  height
  - ◆ Volume of cube = length  $\times$  length  $\times$  length ( $\because l = b = h$ )

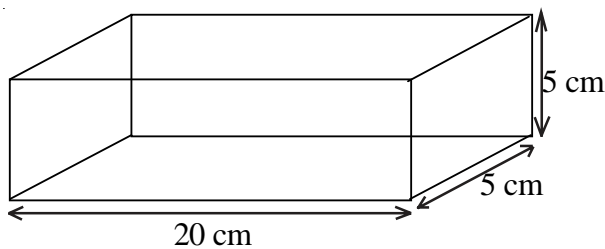
## QUESTIONS

1. Find the volume of the cube given in fig. 15.3



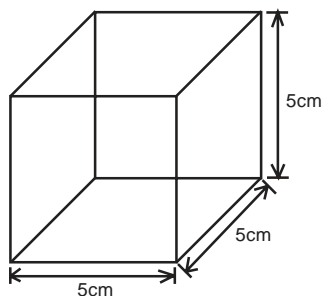
(Fig. 15.3)

2. Find the volume of the figure given below :



(Fig. 15.4)

3. Find the volume of the solid shown in fig. 15.5



(Fig. 15.5)

4. What is the volume of the cube of side 1 cm?
5. What is the capacity of the cube whose edge is 0.5 m?
6. A wooden block is of length 16 cm, breadth 10 cm, and height 5 cm. Find its volume.
7. Find the volume of a cuboid whose length is 4 m, breadth is 12 m and height is 1 m.
8. The side of a cube is 6 cm. Find its volume.
9. A box is 10 cm in length, 6 cm in breadth and 4 cm in height. Find the volume of the box.



10. A soap cake measures 7 cm in length, 5 cm in breadth and 2 cm in height. What is the volume of the soap cake?
11. A chalk box is 10 cm long, 4 cm wide and 3 cm high. Find the volume of the chalk box.
12. A chocolate box is a cube of side 10 cm. If the volume of one chocolate is  $8 \text{ cm}^3$ , how many chocolates are there in the box?
13. Length, breadth and height of a paper-weight are 8 cm, 6 cm and 2 cm respectively. Find how much space will be acquired by two such paper-weights?
14. A cuboid is 6 cm long, 4 cm broad and 5 cm high. A cube has an edge of 6 cm. Which one has the greater volume?
15. The capacity of a tin is  $12000 \text{ cm}^3$ . Its length, breadth and height are 20 cm, 20 cm and 30 cm respectively. It contains oil upto the height of 10 cm. How much more oil can be poured into it?

## ANSWERS

- |                        |                         |
|------------------------|-------------------------|
| 1. $1 \text{ cm}^3$    | 9. $240 \text{ cm}^3$   |
| 2. $500 \text{ cm}^3$  | 10. $70 \text{ cm}^3$   |
| 3. $125 \text{ cm}^3$  | 11. $120 \text{ cm}^3$  |
| 4. $1 \text{ cm}^3$    | 12. 125 chocolates      |
| 5. $0.125 \text{ m}^3$ | 13. $192 \text{ cm}^3$  |
| 6. $800 \text{ cm}^3$  | 14. Cube                |
| 7. $8 \text{ m}^3$     | 15. $8000 \text{ cm}^3$ |
| 8. $216 \text{ cm}^3$  |                         |

## Chapter - 16

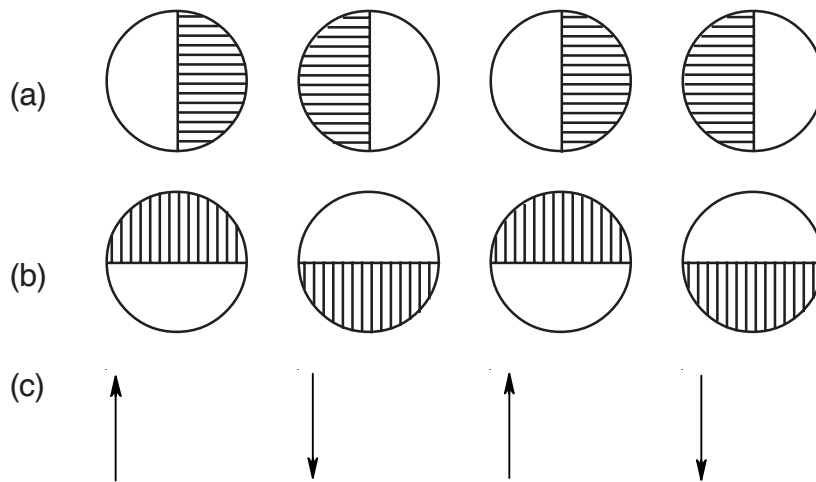
### PATTERNS



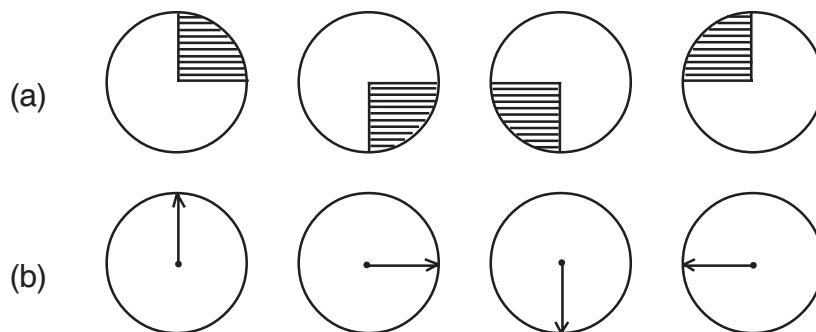
(Refer to chapter # 5 and 7 of the NCERT book of class - V)

#### FACTS AT A GLANCE :

1. An object and its mirror image are symmetrical.
2. Half Turn ( $\frac{1}{2}$  turn) : Examples



3. One-Fourth Turn ( $\frac{1}{4}$  Turn) : Examples :



## QUESTIONS

1. Which of the following alphabets have mirror image same as the alphabet itself ?  
A, E, N, P, T, U
2. Which digits from 1 to 9 have the mirror image same as the digit itself ?
3. What will NOON read on half a turn?

4. What will  look like after  $\frac{1}{4}$  a turn?





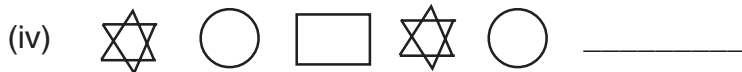
(a)

or



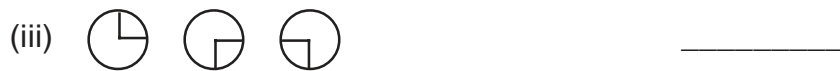
(b)

5. After how many  $\frac{1}{4}$  turns will  look like  ?
6. After how many half turns shall we get the object in the same position as it was in the beginning?
7. How many  $\frac{1}{6}$  turns will be needed to bring the object back to its initial position?
8. Complete the following series of geometrical patterns :



9. What will be the next figure in the following series?





10. How would you show the pattern, 233 233 233, using letters?

- (a) as AB?
- (b) as ABB?
- (c) as ABC?

11. What will be the next number in the given series of numeric patterns?

- (i) 555, 666, 777, \_\_\_\_\_
- (ii) 6321, 6421, 6521, \_\_\_\_\_
- (iii) 121, 232, 343, \_\_\_\_\_
- (iv) 101, 11011, 1110111, \_\_\_\_\_
- (v) 45, 455, 4555, \_\_\_\_\_

12. Observe the pattern and complete the series :

- (i) 39, 47, 55, \_\_\_\_\_
- (ii) 6, 9, 12, \_\_\_\_\_

13. What number should be put in the blank to complete the series?

- (i) 629, 627, 625, \_\_\_\_\_
- (ii) 856, 851, 846, \_\_\_\_\_

14. Complete the following series of fractions :












(a)  $\frac{5}{5}, \frac{6}{5}, \frac{7}{5},$  \_\_\_\_\_

(b)  $\frac{3}{4}, \frac{4}{5}, \frac{5}{6},$  \_\_\_\_\_

15. Carry forward the pattern :

- (i) 1, 2, 4, 8, \_\_\_\_\_
- (ii) 2, 6, 18, \_\_\_\_\_

## ANSWERS

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. A, T, U</p> <p>2. 1 and 8</p> <p>3. NOON</p> <p>4. a</p> <p>5. Two</p> <p>6. Two</p> <p>7. Six</p>                                                                                                                                                                                                                                                                                                                                                           | <p>10. b</p> <p>11. (i) 888<br/>(ii) 6621<br/>(iii) 454<br/>(iv) 111101111<br/>(v) 45555</p> <p>12. (i) 63<br/>(ii) 15</p> <p>13. (i) 623<br/>(ii) 841</p> <p>14. (i) <math>\frac{8}{5}</math><br/>(ii) <math>\frac{6}{7}</math></p> <p>15. (i) 16<br/>(ii) 54</p>                                                                                                                                                                                                                                                                                                    |
| <p>8. (i)  (ii)  (iii) </p> <p>(iv)  (v) </p> | <p>9. (i)  (ii)  (iii) </p> <p>(iv)  (v)  (vi) </p> |

## Chapter - 17

### BOXES AND SKETCHES



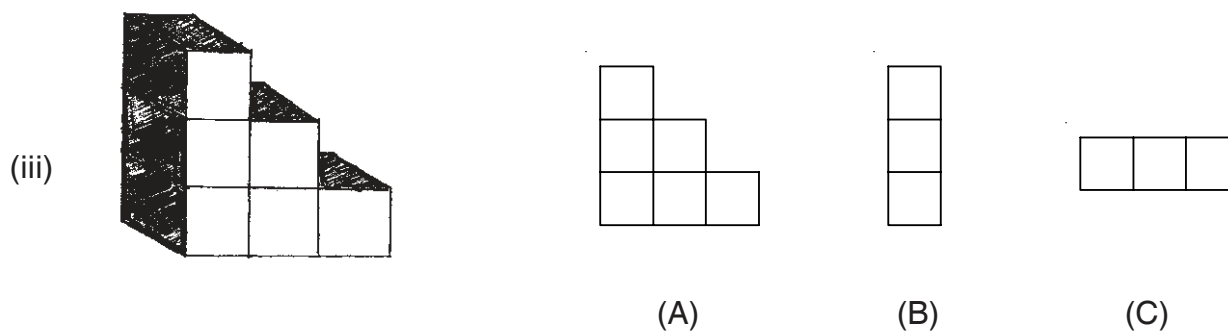
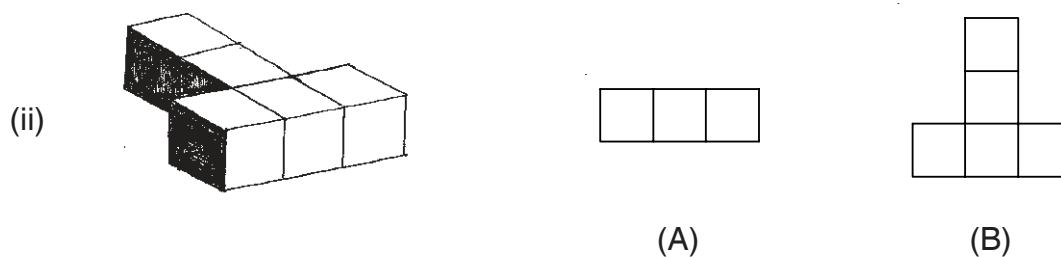
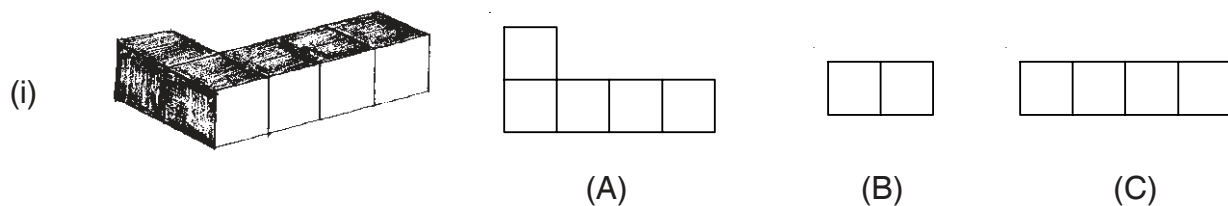
(Refer to chapter # 9 of the NCERT book of class - V)

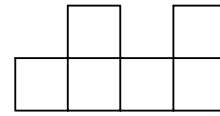
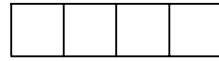
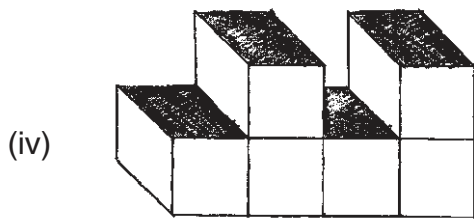
#### FACTS AT A GLANCE :

1. A minimum of three views are needed to describe any solid or three – dimensional object.
2. Using the side, front and top views, one can draw or build a solid object.

#### QUESTIONS

1. For each of the following solid figures, some two-dimensional views are given. Categorise the given views as 'Top view', 'Front view', 'Right Hand side view' or 'Left Hand side view' :

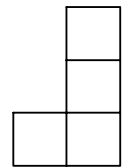
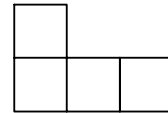
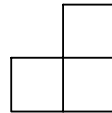
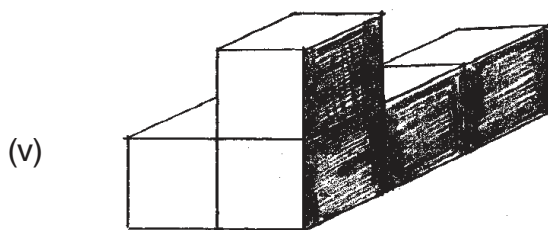




(A)

(B)

(C)



(A)

(B)

(C)

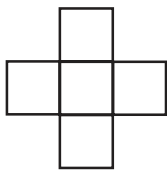
2. (a) (b) (c) (d)

Which of the above figures could be a face of a cube?

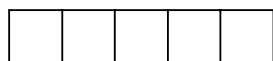
3. How many faces does a cube have?
4. Are all the faces of a cube identical?
5. How many faces does a cuboid have?
6. Are all the faces of a cuboid identical?
7. Which of the following figures could be a face of a cuboid?

- (a) (b) (c) (d)

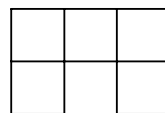
8. Which of the following can be used to make an open box?



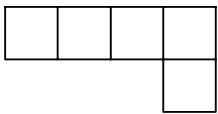
(a)



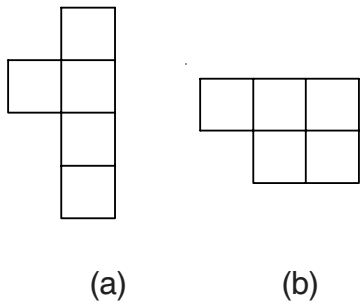
(b)



(c)

9. Can  be folded to form an open box?

10. To form an open box, which one of the following can be used?



## ANSWERS

- |    |                                                                       |  |                               |
|----|-----------------------------------------------------------------------|--|-------------------------------|
| 1. | (i) A = Top view<br>B = Left Hand side view<br>C = Front view         |  | 2. b<br>3. Six<br>4. Yes      |
|    | (ii) A = Front/ Left Hand side view<br>B = Top view<br>C = Top view   |  | 5. Six<br>6. No<br>7. b and c |
|    | (iii) A = Front view<br>B = Left Hand side view<br>C = Top view       |  | 8. a<br>9. Yes                |
|    | (iv) A = Top view<br>B = Front view<br>C = Left/ Right Hand side view |  | 10. a                         |
|    | (v) A = Front view<br>B = Right Hand side view<br>C = Top view        |  |                               |



## Chapter - 18

### SMART CHARTS







(Refer to chapter # 12 of the NCERT book of class - V)

#### FACTS AT A GLANCE :

Information given in the form of numbers (Data) can be represented diagrammatically in different forms :






(a) **Tally marks** are used as shown below :

Number of objects/ persons	Tally marks
1	I
2	II or 
3	III or 
4	IIII or 
5	IIII or 

- (b) **Pictographs** : Pictures or symbols are used to represent specific number of items.
- (c) **Bar graphs** : Data is represented through horizontal bars or vertical columns. The length or height of column gives the idea about quantity. These can show more than one set of data so comparison is easy.
- (d) **Pie chart or chapati chart** : These are used for comparing different parts of a bigger quantity. By looking at the area covered, we can easily tell which quantity is bigger.
- (e) **Line graph** : It represents data collected over a long period of time.





## QUESTIONS

1. Look at the tally marks regarding favourite snack of children in a class.

Ice-cream		□					
Apple		□					
Sandwich		□	□				
Burger		□	□	□			
Waffer		□	□				

- (a) Which is the most popular snack and how many children like it?
- (b) How many children like ice-cream?
- (c) How many children are there in the class?

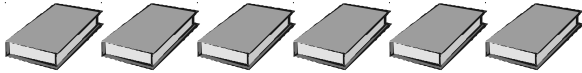
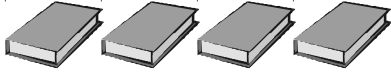
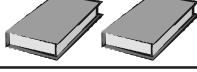
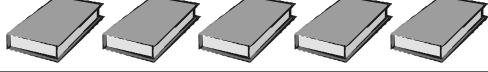
2. Study the given pictograph :

School 1	
School 2	
School 3	
School 4	

 = 100 children

- (a) Which school has the greatest number of children?
- (b) How many children in all are there in four schools?
- (c) What is the difference in number of children studying in school 1 and school 2 ?
- (d) If 10 children are transferred from school 2 to school 3. Tell the remaining number of children in school 2 ?




3. A school library has different subject books shown in the given pictograph.

Hindi	
English	
Maths	
Science	

 represent 50 books

- (a) What is the total number of books in the library?
- (b) How many more Hindi books are there in the library as compared to Maths books?

4. Look at the pictograph representing number of boys and girls in three classes.

Class I	
Class II	
Class III	

 = 5 Boys,  = 5 Girls

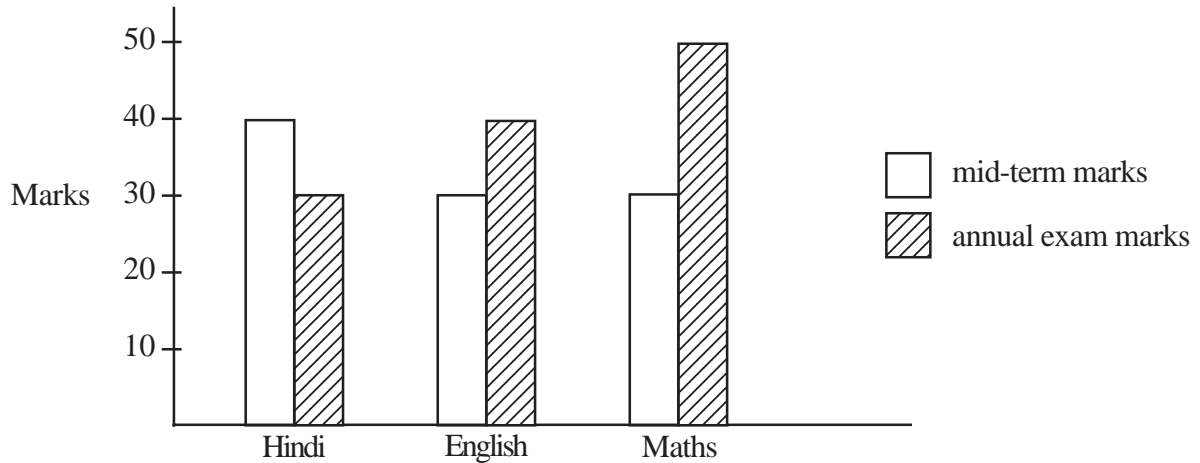
- (a) How many girls and boys are there in class II?
- (b) Which class has more girls than boys?
- (c) What is the difference in the number of girls and boys in class III?
- (d) How many total students are there in three classes?

5. The following bar graph shows the weight (in kg) of some fruits sold in a day by a fruit seller :



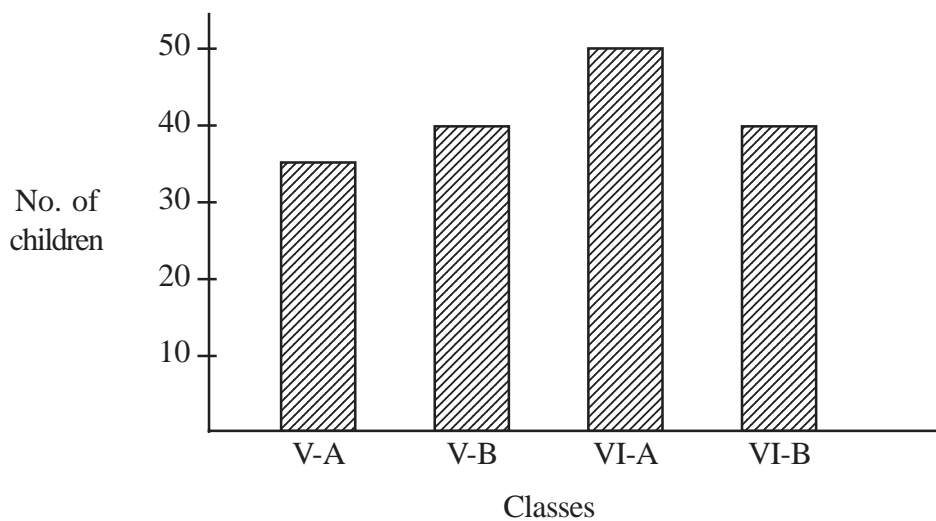
- (a) How much quantity of mangoes and oranges are sold in a day?
- (b) How much more mangoes are sold as compared to papaya?
- (c) If the sale continues in the same pattern, how much quantity of apples will be sold in 4 days?

6. Study the following bar graph which shows marks of Reema in 3 subjects in her midterm and annual exams where maximum marks were 50 :



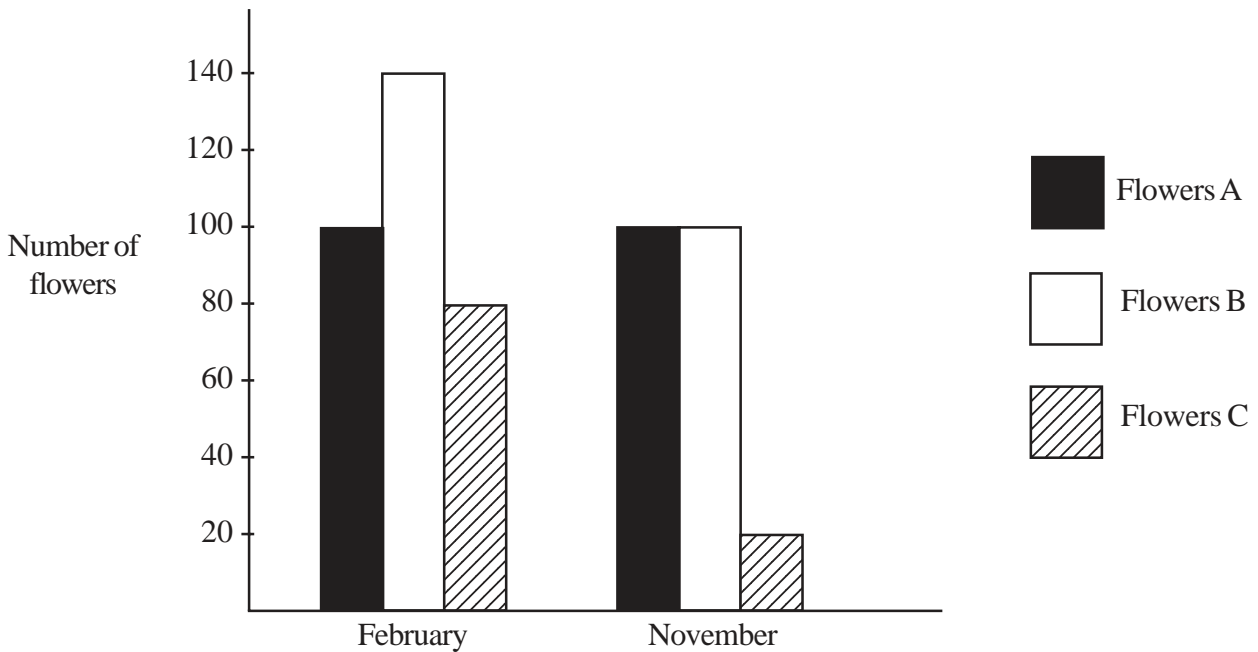
- (a) What is the increase in Reema's maths score?
- (b) What is her total score in annual exams?
- (c) How much has she improved in her total score since mid term exam?

7. Following bar graph represents number of students in different sections of V and VI classes in a school



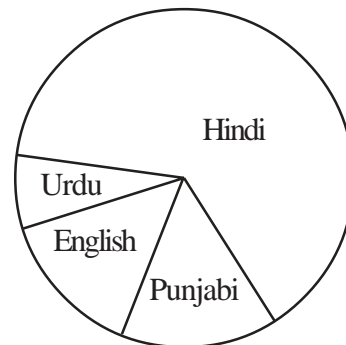
- (a) How many students in all are studying in class V?  
 (b) Which class has the greatest number of students?  
 (c) If students of the classes V and VI plan their picnic together, how many students will go on picnic?

8. The sale of different types of flowers in two months of a year is shown in the following bar graph :-



- (a) How many flowers in all were sold in February?  
 (b) How many more flowers B were sold in February than in November?

9. Look at the chapati chart showing the first language of students in a particular class :



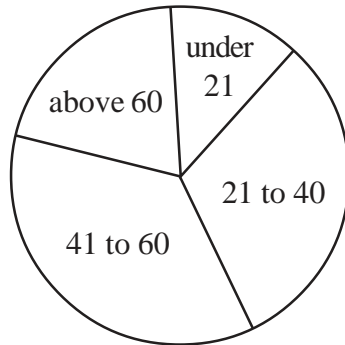
(a) Approximately what fraction of students have English as their first language?

- (i) Quarter  $\left(\frac{1}{4}\right)$     (ii) More than a quarter    (iii) Less than a quarter

(b) What fraction of students have Hindi as their first language?

- (i) More than half    (ii) Half    (iii) Less than half

10. The following pie chart shows the age of voters in a local election :



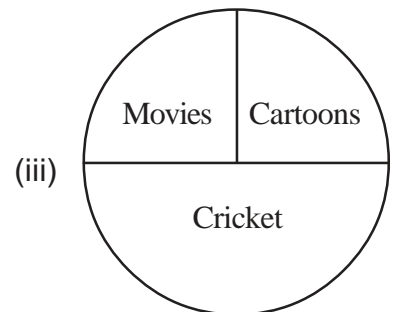
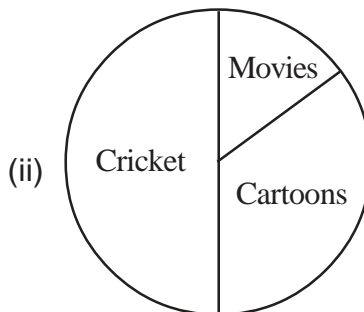
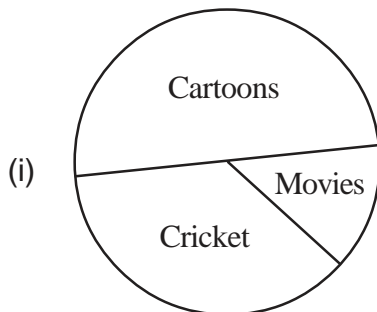
(a) What type of angle is formed for the age group 21 to 40?

(b) What fraction of voters were under 21 years of age :

- (i) Half    (ii) Quarter    (iii) Less than a quarter

11. In an interview, 25 students out of 100 mentioned “red” as their favourite colour. What is the angle in the piechart for this group?

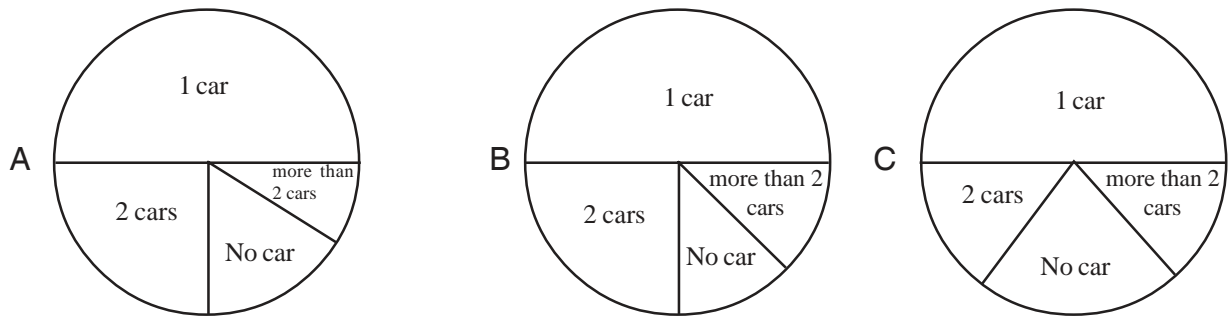
12. A class has 40 students. Half of students enjoy watching cricket. Half of remaining students enjoy watching movies and rest of the students like to see cartoons. Which of the following pie charts represents the above information suitably?



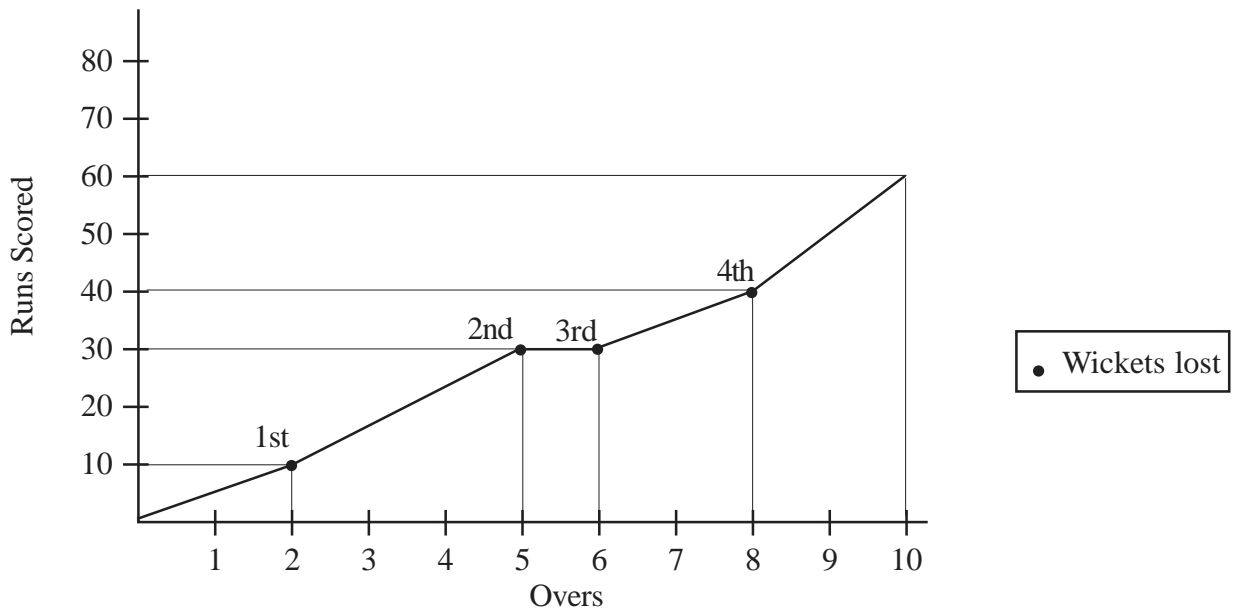
13. Following table shows the result of a survey conducted on 100 families for the number of cars they have :

Number of cars	Number of families
0 (No car)	20
1 car	50
2 cars	25
more than 2 cars	5

Which pie chart represents the given data?



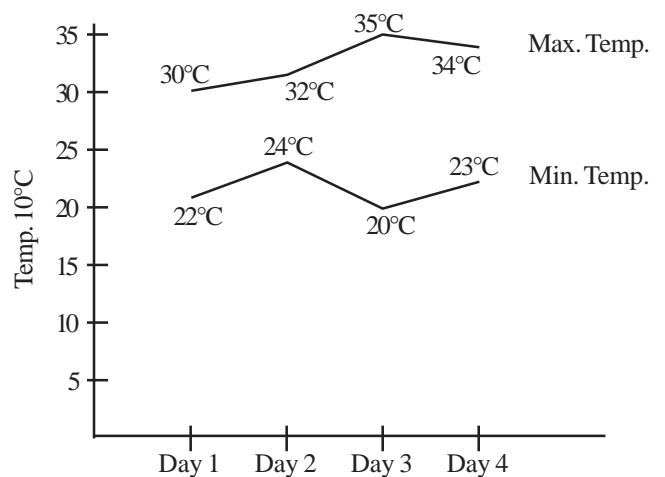
14. Look at the graph showing the runs scored and wickets lost by a team in a 20-20 cricket match in the first 10 overs.



- (a) How many runs were scored by the team in the first two overs?  
 (b) What was the team's score before the loss of 2nd wicket?  
 (c) In which over no run was scored?

15. The given graph shows the maximum and minimum temperatures for four days of a week in the month of March.

- (a) On which day was the difference between the maximum and minimum temperatures the most? Also tell the difference.  
 (b) How much is the rise in maximum temperature from Day 1 to Day 3?



## ANSWERS

1. (a) Burger, 15 children  
(b) 7 children  
(c) 45 children
2. (a) School 4  
(b) 2200 children  
(c) 300 children  
(d) 590 children
3. (a) 850 books  
(b) 200 more
4. (a) 10 boys 25 girls  
(b) class II  
(c) 10 boys more  
(d) 105 students
5. (a) 50 kg  
(b) 20 kg more  
(c) 100 kg
6. (a) 20 more  
(b) 120 out of 150  
(c) 20 more
7. (a) 75 students  
(b) VI A  
(c) 165 students
8. (a) 320 flowers  
(b) 40 flowers more
9. (a) iii = Less than quarter  
(b) i = more than half
10. (a) Obtuse angle  
(b) iii
11.  $90^\circ$
12. iii
13. A
14. (a) 10 runs  
(b) 30 runs  
(c) 6th overs
15. (a) Day 3,  $15^\circ$  C  
(b)  $5^\circ$ C



## Chapter - 19

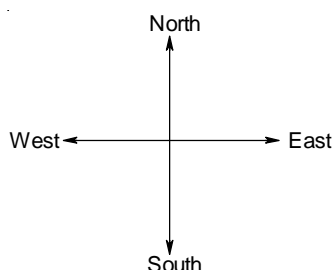
### DIRECTIONS



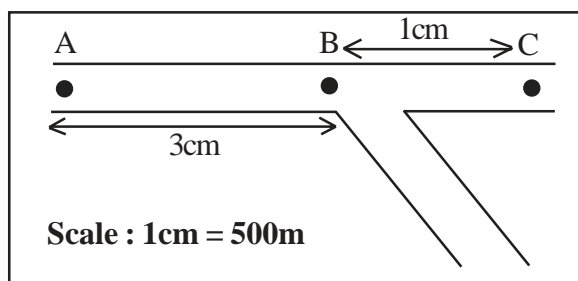
(Refer to chapter # 8 of the NCERT book for class - V)

#### FACTS AT A GLANCE :

- There are four main directions – East, West, South and North which are represented in a map as :



- Actual distance between any two locations on land can be calculated with the help of **scale** given on map. For example :



Now

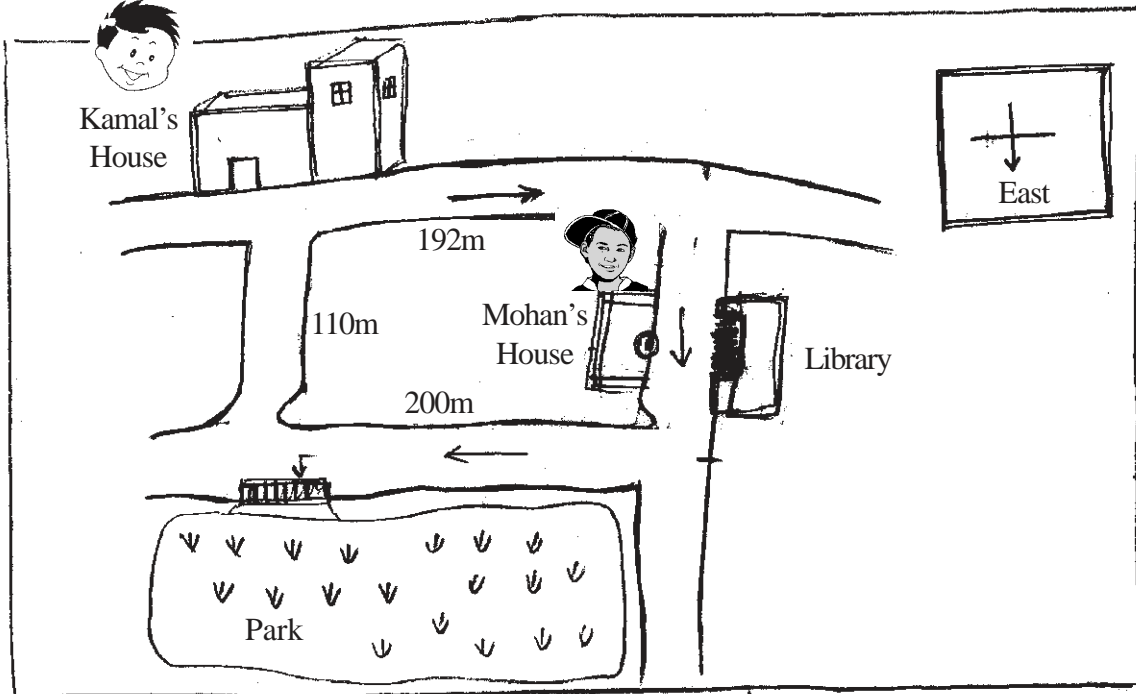
	Distance between them on map	Actual distance
A and B	3 cm	$3 \times 500 = 1500$ m
B and C	1 cm	$1 \times 500 = 500$ m
A and C	4 cm	$4 \times 500 = 2000$ m

- Any picture can be magnified or reduced by taking grids of different square size.

Change in length of square of grid	Change in size	Change in area
2 times (double)	2 times	4 times
4 times	4 times	16 times
half or $\frac{1}{2}$	half or $\frac{1}{2}$	$\frac{1}{4}$ times

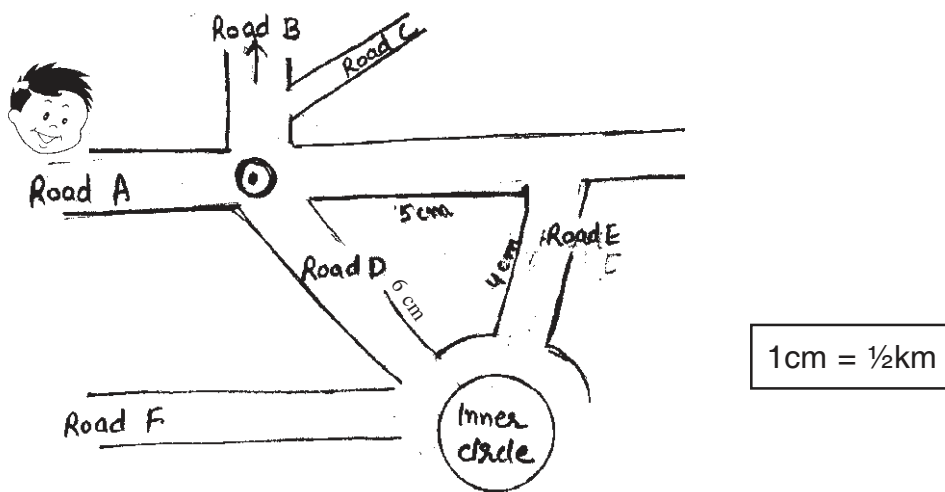
## QUESTIONS

See the given map and answer the questions (1 to 4) :

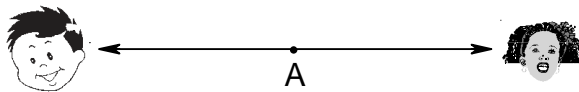


1. Kamal cycles from his house to the library and then to the park. How much distance does he travel?
2. How much is the shortest distance between Kamal's house and park?
3. Mohan's house is opposite to library. If Kamal goes to Mohan's house using road near park, how many left turns will he take?
4. The entrance of Kamal's house is towards east. In which direction is the entrance of Mohan's house?

Look at the following map of roads and answer the questions (5 to 8) :

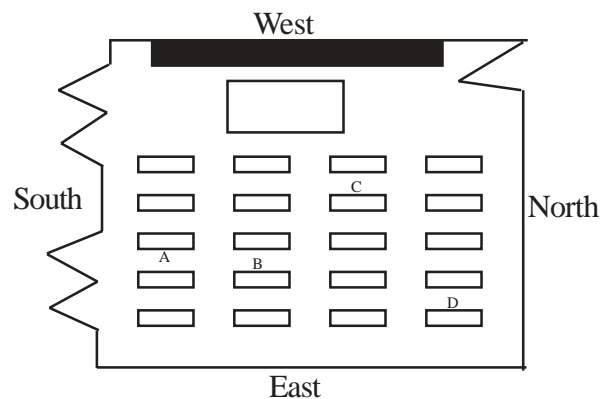


5. Which roads on this map appear to never meet ?
6. What type of angle is formed between Road A and Road B?
7. Aqib wants to reach inner circle. He took Road D from the point marked as . How much distance in km will he travel to reach the inner circle?
8. Sheela started from the same point and took Road E to reach the inner circle. How much extra distance in km will she travel to reach the inner circle in comparison to Aqib?
9. The scale on Karan's map is 2 cm = 1 km. The distance from his house to his school on the map is 12 cm. What is the distance in km from Karan's house to his school?
10. Rohan is walking around a square park. He started his walk facing north. After taking two turns at the corners of park, he will be walking facing \_\_\_\_\_.
11. A picture was magnified from a grid of  $\frac{1}{2}$  cm squares to a grid of 2 cm squares. How much will be the increase in the area of picture?
12. Harsh and Dilpreet started moving in the opposite directions from the point A. After travelling 75 m on either side both stopped. Then Harsh started moving towards Dilpreet. How much distance will Harsh travel to meet Dilpreet?

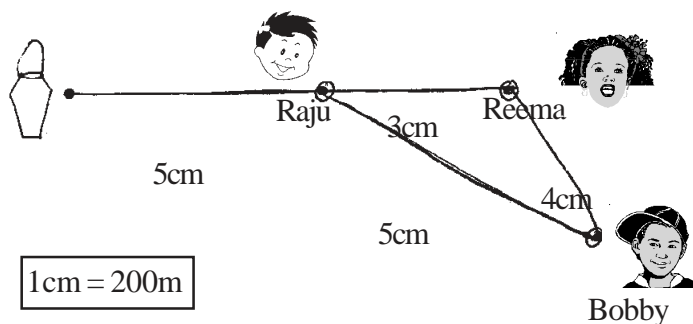


13. Look at the map of the classroom. Which of the following statements is not correct?

- (a) A is in south of B
- (b) C is in west of B
- (c) C is in east of A
- (d) B is in east of A



- 14.



A milkman delivers milk everyday to the homes of 3 children – first to Raju's, then to Reema's and at last to Bobby's. How much distance in metres does he travel everyday starting from his home to Bobby's home?

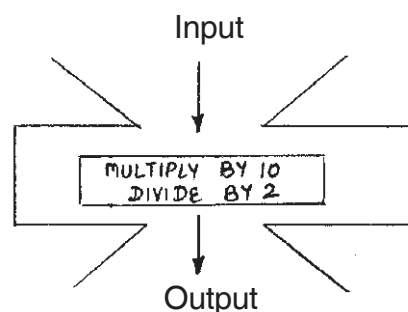
15. Reema does not want milk on a day. How much distance in metres does he have to travel from his home to Bobby's house?

## ANSWERS

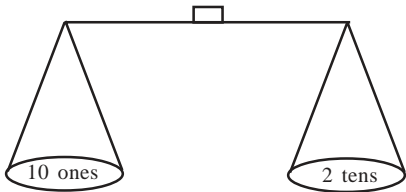
1. 502 m
2. 110 m
3. 2
4. North
5. Roads A and F
6. Right angle
7. 3 km
8. 1.5 km
9. 6 km
10. South
11. 16 times
12. 150 m
13. c
14. 2400 m
15. 2000 m

**MISCELLANEOUS EXERCISE - I**  
**(CHAPTER # 1 TO 8)**

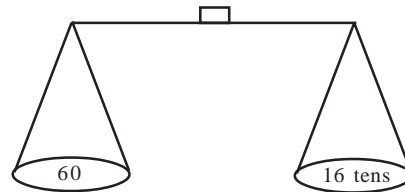
1. Simplify :  $\frac{16}{5} - \frac{15}{7} + \frac{3}{14}$
2. Solve :  $\frac{9}{14} - \frac{3}{14} - \frac{5}{7} + \frac{13}{14} - \frac{6}{7} + \frac{1}{14}$
3.  $24976 \times \underline{\hspace{2cm}} = 2497600$
4. 20 times 12 = 10 less than  $\underline{\hspace{2cm}}$
5. 15 sets of 7 means  $\underline{\hspace{2cm}}$
6. Which is greater :  $13 \times 12$  or  $12 \times 15$ ?
7. Find the sum of all factors of 35.
8. A boy has two pieces of a chocolate :  $\frac{1}{4}$  of the chocolate and  $\frac{2}{3}$  of the chocolate. Which piece is bigger?
9. Raju had Rs. 50 and spent  $\frac{1}{2}$  of the money. Rahul had Rs. 90 and spent  $\frac{1}{3}$  of the money. Who spent more?
10.  $\frac{1}{2}$  of  $x$  is 50. What is the value of  $x$ ?
11. The drawing below is an input–output machine :  
What will be the output if the input is 5?
12. Simplify :  $8 \times 9 \div +10 \div 5 \times 6$
13. Which is the greatest five digit number that is divisible by 10?



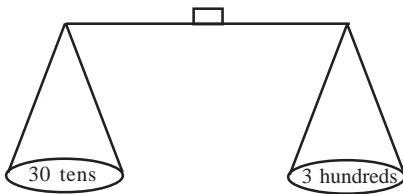
14. 4 lakhs + 2 lakhs = \_\_\_\_\_ thousands
15. 30 hundreds + 7 hundreds = \_\_\_\_\_ tens
16. Which of the following scales is correctly balanced?



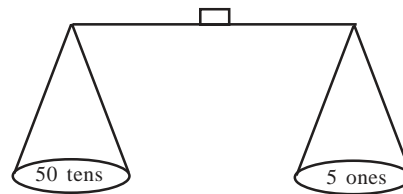
(a)



(b)



(c)



(d)

17. If  $29 + 46 = 75$  then what is the value of  $129 + 246$ ?
18.  $250 \quad 56 \quad 250 \quad 50 \quad 250 \quad \underline{\hspace{1cm}}$
19.  $30 \quad 32 \quad 30 \quad 40 - 30 \quad \underline{\hspace{1cm}}$
20.  $560 \quad \underline{\hspace{1cm}} \quad 1,12,000$
21. What is the value of  $16 \times 7 \times 18 \times 0$ ?
22. Find :  $120 \times 120$
23. Which is the greatest fraction out of  $\frac{7}{9}, \frac{6}{14}, \frac{5}{13}, \frac{2}{4}$ ?

24. I had 25 flowers. I gave  $\frac{1}{5}$  of it to Sunita. How many flowers were left with me?
25. Which is more :  $6\frac{7}{6}$  or  $5\frac{1}{8}$ ?
26. If  $\Delta + 15 = 54$ , find the numbers for  $\Delta$  and  $\square$ .
27. What should be added to LXX to get XCVI ?
28. By which Roman numeral should L be multiplied to get the product C?
29. Simplify : C - L X + V
30. How can 8703 be expressed in Roman numerals?
31. A fridge costs Rs. 14627. What is its approximate cost if the price is rounded off to the nearest hundred ?
32. In a video game, Ram scored 58510 points. What will be Ram's score if the points are rounded off to the nearest ten thousand?
33. Simplify :  $5 \times 5 + 6$
34. Simplify :  $(10 + 50) \div 6$
35. 20 added 8 times =  $16 \times$  \_\_\_\_\_
36. Which is smaller :  $340 - 14$  or  $305 + 40$ ?
37. There are 72 toffees in a box. Distribute them among 12 children. How many toffees will each child get?
38. Solve :  $0.9 - 0.81$
39. Simplify :  $113 + 13.1 + 1.133$
40. Subtract 12.07 from 13.7
41. The number 100 less than 3057 is \_\_\_\_\_.
42. The number 92 more than 1208 is \_\_\_\_\_.

43. Counting by ones, what will be the number next to 99999.
44. How many 3-digit numbers can be formed using the digits 4, 0, 9?
45. How many 4-digit numbers can be formed using the digits 5, 6, 0, 3?
46. How many one-fourths will make a half ?
47. How many  $\frac{1}{9}$  will make  $\frac{1}{3}$ ?
48. How many  $\frac{1}{8}$  are there in  $\frac{1}{2}$ ?
49. What part of a rupee is 20 paise?
50. How many multiples does 16 have between 70 and 100 ?
51. Tell the decimal form for  $70+1+\frac{8}{1000}$
52. What will the sum be if the second multiple of 19 is added to the third multiple of 14?
53. Compare XI and VI + V
54. What is the Hindu-Arabic numeral for MDCLXIX ?
55. How many times digit 1 appears when you write 1 to 100?
56. What is the sum of the greatest even number of three digits and the smallest odd number of two digits?
57. Which is greater : 8.1 or 8.01?
58. Solve :  $7\frac{1}{2} - 3\frac{1}{4}$  (Hint :  $\frac{1}{2} - \frac{1}{4} = \frac{3}{4}$ )
59. If  $\square - \triangle = 7$
- and  $\triangle \times \square = 144$ , find the numbers for  $\triangle$  and  $\square$  ?



60. Solve :  $7 - 2\frac{1}{4}$
61. What should be added to  $5\frac{1}{4}$  to get 8?
62. What is  $\frac{5}{22} - \frac{2}{22} + \frac{3}{11} - \frac{3}{22} + \frac{6}{22}$ ?
63. If 23 m cloth costs Rs. 2470.50. What is the cost of  $11\frac{1}{2}$  m of cloth?
64. How many one-fifths are there in  $7\frac{1}{5}$ ?
65. How many sixteenths are there in  $2\frac{3}{4}$ ?
66. What should be added to 2442 to make it divisible by 8?
67. What is the greatest common factor of 26, 52 and 65?
68. Calculate :  $\frac{9}{18} - \frac{2}{18} + \frac{6}{18}$
69. If  $30 \times 54 = 1620$ , what will  $31 \times 54$  be?
70. How many sixes are there in 54?
71. How many wheel do 12 tricycles have?
72. Take away 5 threes from 185.
73.  $12000 = \underline{\hspace{2cm}} \times 120$
74. Tell the equivalent fraction for  $\frac{5}{8}$  which has 32 as denominator.
75. Simplify :  $78 - 13 + 6$

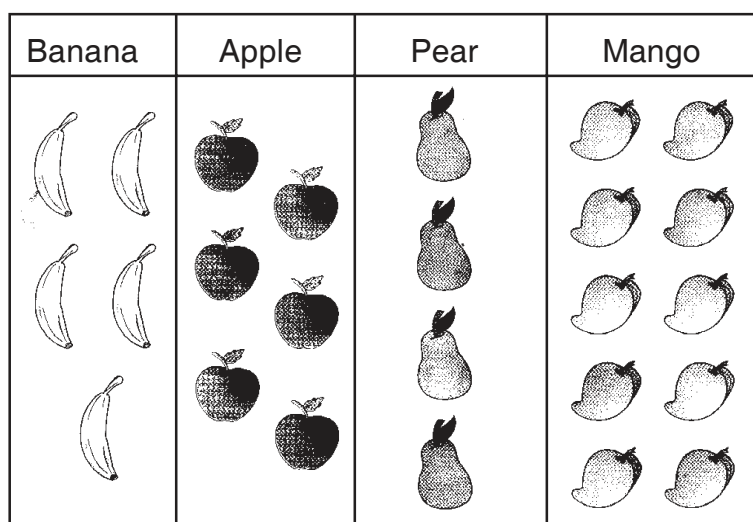
## ANSWERS

1. 41
2. 2
3. 50
4. 250
5. 105
6.  $12 \times 15$
7. 48
8.  $\frac{2}{3}$  of a chocolate
9. Rahul
10. 100
11. 25
12. 20
13. 99990
14. 600
15. 370
16. C
17. 375
18. 6
19. 8
20. 200
21. 0
22. 14400
23.  $\frac{7}{9}$
24. 20
25.  $6\frac{7}{6}$
26.  $\Delta = 6, \square = 9$
27. XXVI
28. II
29. V
30.  $\overline{\text{VIIDCCIII}}$
31. Rs. 14,600
32. 60000
33. 31
34. 10
35. 10
36.  $340 - 14$
37. 6
38. 0.09
39. 127.233
40. 1.63
41. 2957
42. 1300
43. 100000
44. 4
45. 18
46. 2
47. 3
48. 4
49.  $\frac{1}{5}$
50. 2
51. 71.008
52. 80
53. Both are equal
54. 1669
55. 20
56. 1097
57. 8.1
58.  $10\frac{3}{4}$
59.  $\Delta = 9, \square = 16$
60.  $4\frac{3}{4}$
61.  $2\frac{3}{4}$
62. 1
63. Rs. 1235.25
64. 36
65. 44
66. 6
67. 13
68.  $\frac{13}{18}$
69. 1674
70. 9
71. 36 wheels
72. 170
73. 100
74.  $\frac{20}{32}$
75. 12

## MISCELLANEOUS EXERCISE - II

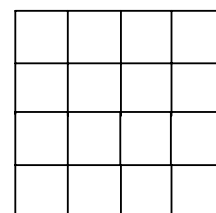
### (CHAPTER # 9 TO 19)

1. Ram takes 20 minutes to cover a certain distance while Shyam takes 360 seconds. Who walks faster?
2. Two cyclists are moving towards West. First cyclist stops after covering a distance of 8 km. How much distance should the second cyclist cover in the same direction to be 75 km away from the first cyclist?
3. Study the pictograph given below and answer the given questions :

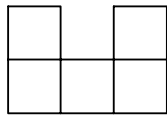
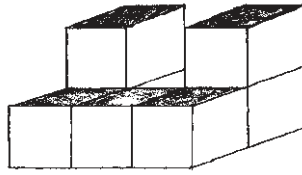


**1 picture = 10 fruits**

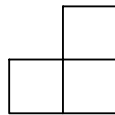
- (a) How many apples are there?
- (b) How many mangoes are there?
- (c) Which fruit is the least in number?
- (d) Which fruit is the most in number?
- (e) Which fruit is more in number : banana *or* apple?
- (f) Which fruit is less in number : pear *or* banana?
4. A room is 3 m long, 2.5 m wide and 4 m high. Find the volume of air in it.
5. Ria saved 5 paise on each day in August. How much money did she save in the month of August?
6. It is 2:15 p.m. What was the time three and a half hour ago?
7.  $(50 \text{ paise} \times 8) + \text{Rs. } 3 = \underline{\hspace{2cm}}$  paise.
8. The perimeter of a square is 10 cm. How long is one side?
9. How many squares are there in the following figure?



10. Categories the given views as 'Top view', 'Front view', or 'Side view' of the given solid figure :



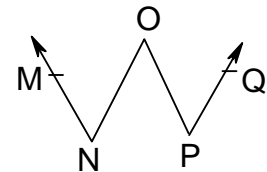
(A)



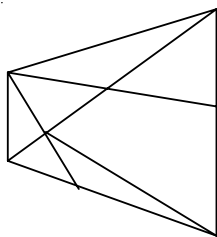
(B)

11. The speed of a car is 80 km per hour. How much distance will it cover in half an hour?
12. An almirah is 1m wide, 2 m high and 0.5 m deep from inside. Find its inner volume.
13. What will be the supplementary angle of  $30^\circ$ ?
14. Is it possible to make a triangle with the given three angles of measure  $80^\circ$ ,  $45^\circ$  and  $60^\circ$ ?

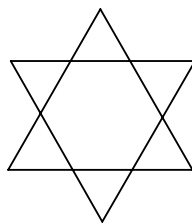
15. Identify the line-segments and rays in the following figure :



16. How many triangles are there in the following figures?

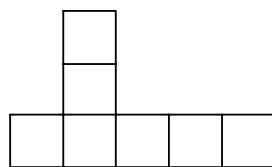
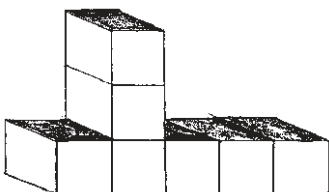


(a)

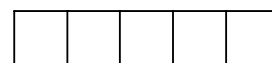


(b)

17. Categories the given views as 'Top', 'Front' and 'Side' views.



(A)



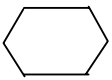
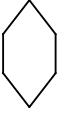
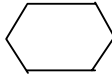


(B)



(C)

Maths-V (E)

18. 5 days more than 3 weeks = \_\_\_\_\_ days.
19. Two cyclists start from the same place. One goes towards North and covers 15 km. How much distance should the other cyclist cover towards South so that the distance between the two cyclists is now 45 km?
20. How many 20 - rupee notes can be there in Rs. 377?
21. How many 50 - rupee notes can be there in Rs. 2435?
22. How many 10 - rupee notes will Rajat get from bank in exchange of Rs. 2040?
23. Ajay saves Rs. 400 per month. How much money will he save at the end of one and half year?
24. How many sides are there in 10 squares?
25.  $\frac{2}{5}$  of Rs. 250 is \_\_\_\_\_.
26. If  stands for 30, then, what will  stand for?
27. The side of a square tile is 10 cm. How many tiles can be fixed on one side of a wall which is 300 cm long and 200 cm high?
28. The distance between two cities is 320 km. The train takes 5 hours to cover this distance. What is the speed of the train?
29. The distance between my home and my school is 4 km. I walk at the speed of 3 km per hour. How much time do I take to reach my school from my home?
30. A car travels at a speed of 60 km per hour from 6 a.m. to 7:30 a.m. How many kilometres does it travel?
31. Which geometrical figure can be used to show the faces of a cube?
32. Will SWIMS read the same on half a turn?
33. What will  look like after  $\frac{1}{4}$  a turn :
-  (a)  (a)
34. After how many  $\frac{1}{4}$  turns shall we get the object in the same position as it was in the starting?
35. Which is the missing part of 91891 \_\_\_\_\_ 8918?  
 (a) 111? (ii) 919? (iii) 891? (iv) 819?

36. What fractional turn is being done in the following series :



$\frac{1}{2}$  turn or  $\frac{1}{3}$  turn or  $\frac{1}{4}$  turn?

37. Find the volume of a solid each of whose sides is 5 cm.

38. The length and breadth of a rectangle are 9 cm and 6 cm respectively. If the rectangle is divided into three equal parts, what will be the area of the  $\frac{1}{3}$  part?

39. The volume of a cube is 8 cu. cm. What will be the volume if each side is doubled?

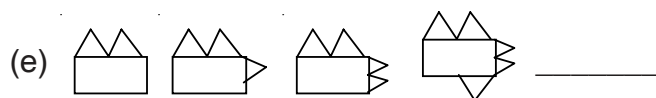
40. Complete the given series of patterns :

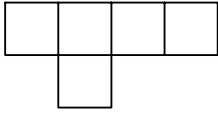
(a) 65, 347, 67, 348, 69, 349, \_\_\_\_\_, \_\_\_\_\_

(b) 1, 2, 4, 7, 11, \_\_\_\_\_

(c) 1, 2, 5, 10, 17, \_\_\_\_\_

(d) 1, 3, \_\_\_\_\_, 27, 81



41. Can  be used to make an open box?

42. How many seconds make 4 minutes?

43. If one kg rice costs Rs. 40, what is the cost of 500 g rice?

44. Add 3 feet 25 cm and 2 feet 20 cm.

45. How many hours are equivalent to 4800 minutes?

46. How many 40 cm long ribbons can you cut from a ribbon which is 6 m long?


47. Richa walked one quarter of a kilometre. How many metres did she walk?

48. Take 35 minutes away from one hour.

49. How many oranges shall I have if I buy  $4\frac{1}{2}$  dozen of oranges?

50. 20 scores + 12 dozens = \_\_\_\_\_

## ANSWERS

1. Shyam
2. 83 km
3. (a) 60      (b) 100      (c) Pear  
(d) Mango    (e) Apple      (f) Pear
4.  $30 \text{ m}^3$
5. Rs. 1.55
6. 10:45 a.m.
7. 700
8. 2.5 cm
9. 30
10. A = Front / Top view  
B = Right hand side view
11. 40 km
12.  $1 \text{ m}^3$
13.  $150^\circ$
14. No
15. Rays : NM, PQ  
Line-segments: ON, OP
16. (a) 13      (b) 8
17. A = Front view ; B = Top view  
C = Side view
18. 26
19. 30 km
20. 18 notes
21. 48 notes
22. 204 notes
23. Rs. 7200
24. 40
25. Rs. 100
26. 10
27. 600 tiles
28. 64 km per hour
29. 1 hour 20 minutes
30. 90 km
31. Square
32. Yes
33. a
34. 4
35. C
36.  $\frac{1}{3}$
37.  $125 \text{ cm}^3$
38.  $18 \text{ cm}^2$
39.  $64 \text{ cm}^3$
40. (a) 71, 350    (b) 16      (c) 26  
(d) 9      (e) 
41. Yes
42. 240 seconds
43. Rs. 20
44. 6 feet 15 cm
45. 80 hours
46. 15 ribbons
47. 250 m
48. 25 minutes
49. 54
50. 544