

Class7 Chapter Profit loss Test paper-1 Solved

1. By selling an article for Rs.144, A man loses $\frac{1}{7}$ of his outlay. If it is sold for Rs189 what is the gain or loss percent

1. CP = x
 SP = CP - loss
 $SP = x - \frac{1}{7}x$
 $144 = x - \frac{1}{7}x$
 $144 = \frac{6}{7}x$
 $144 = \frac{6x}{7}$
 $144 \times 7 = 6x$
 $1008 = 6x$
 $\frac{1008}{6} = x$
 $168 = x$
 Hence, SP = 189, CP = 168 and SP = 189
 $P = SP - CP$
 $= 189 - 168$
 $= 21$
 $P\% = \frac{21}{168} \times 100 = 12\frac{1}{2}\%$
 Hence, Gain % = $12\frac{1}{2}\%$ Ans

2. A tricycle is sold at a gain of 15% .Had it been sold for Rs 27 more, the profit would have been 20% find the cost price.

2. CP = x
 SP of 15% gain = $\frac{100 + 15}{100} \times CP$
 $= \frac{100 + 15}{100} \times x$
 $= \frac{115x}{100}$
 SP of 20% gain = $\frac{100 + 20}{100} \times x$
 $= \frac{120x}{100}$
 a/q
 $\frac{120x}{100} - \frac{115x}{100} = 27$
 $\frac{120x - 115x}{100} = 27$
 $\frac{5x}{100} = 27$
 $5x = 27 \times 100$
 $5x = 2700$
 $x = \frac{2700}{5}$
 $x = 540$ Ans

3. If manufacture gains 10%, the wholesale dealer 15%, and the retailer 25%. Then what is the production cost of a washing machine whose retail price Rs 3795.

3. SP of manufacture gain = $\frac{100 + 10}{100} \times 200$
 $= \frac{110 \times 200}{100} = 220$
 Wholesale gain = $\frac{100 + 15}{100} \times 220$
 $CP = \frac{117 \times 220}{100} = 2574$
 Retailer gain 25% = $\frac{100 + 25}{100} \times 2574$
 $CP = \frac{127.5 \times 2574}{100} = 3279.15$
 $\Rightarrow 3279.15 = 3795 \times \frac{100}{x}$
 $\Rightarrow x = \frac{3795 \times 100}{3279.15} = 1158.5$

4. Mr. Mehta purchased a video for Rs 18000 and a television for Rs 10500. On the video he lost 5% and on the television he gained 17% . Find his total gain or loss percent?

4. CP = 18000
 L = 5%
 SP of video = $\frac{95 \times 18000}{100} = 17100$
 CP = 10500
 G = 17%
 SP = $\frac{117 \times 10500}{100} = 12285$
 Total CP = 18000 + 10500 = 28500
 Total SP = 17100 + 12285 = 29385
 $P = SP - CP$
 $P = 29385 - 28500$
 $P = 885$
 $P\% = \frac{885}{28500} \times 100 = 3\%$ Ans

5. Three chairs are purchase for Rs 450 each. One of them is sold at a loss of 10% At what price should the other two be sold as to gain 20% on the whole transaction.

6. Perm buys equal quantities of two kinds of lemons at the rate of 6 for a

5. CP of chair = 450 . loss = 10%
 $SP = 90 \times 450 \times \frac{90}{100}$
 $SP = 405$

CP of two chair = 900 . 20% gain
 $SP = \frac{120 \times 900}{100}$
 $SP = 1080$

Hence, \therefore 1080 should the other two be sold.

rupee and 9 for a rupee. He mixes them together and sells the whole lot at 8 fore rupees. Find his gain or loss percent?

6. CP of 1st lemon = $\frac{1}{6}$
 CP of 2nd lemon = $\frac{1}{9}$
 CP of both lemon = $\frac{1}{6} + \frac{1}{9}$
 $\frac{3+2}{18} = \frac{5}{18}$

SP of 1st lemon = $\frac{1}{8}$
 SP of 2nd lemon = $\frac{1}{8} \times \frac{4}{4} = \frac{1}{4}$

$\frac{5}{18} > \frac{1}{4}$

Loss = CP - SP
 $= \frac{5}{18} - \frac{1}{4}$
 $= \frac{10-9}{36}$
 $= \frac{1}{36}$

Loss % = $\frac{1}{36} \times \frac{18}{5} \times 100 = 10\%$ Ans.

7. By selling a rickshaw for Rs. 2640, Ghanshyam loses 12%. For how much should he sell it to gain 12%?

7. SP of rickshaw = 2640
 $CP = \frac{100 \times SP}{88}$
 $CP = \frac{100 \times 2640}{88} = 3000$

$SP = \frac{112 \times CP}{100}$
 $SP = \frac{112 \times 3000}{100} = 3360$ Ans.

8. A electrician sells a room heater for Rs. 322 getting $\frac{1}{6}$ th of it cost price. Find his gain percent.

8. Let the CP = x
 $\frac{x}{6} + x = 322$
 $\frac{7x}{6} = 322$
 $x = \frac{322 \times 6}{7}$
 $x = 276$

CP = 276 . SP = 322
 $P = 322 - 276 = 46$

P% = $\frac{46}{276} \times 100 = 16\frac{2}{3}\%$ Ans.

9. A dealer bought 100 Cricket bats For Rs 40 each. He sells 20 of them at a gain of 5%. At what gain per cent must he sell the remainder So as to gain 20% on the whole?

9. CP = 40 x 100 = 800 .
 CP of 20 balls = 800 .
 $SP = \frac{105 \times 800}{100} = 840$

CP of 80 ball = 80 x 40 = 2400

CP of 100 balls = 4000
 $SP = 120 \times 40$
 $SP = 4800$
 Total = SP = 4800 + 960 = 5760
 Total = CP = 4000 + 800 = 4800
 $P = 960$
 $P\% = \frac{960}{4800} \times 100$
 $P\% = 20\%$ Ans.

10. A man sold two radios at Rs 924 each. On one he gain 20% and the other he loss 20%. How much does he gain or lose in the whole transaction. Also find the gain or loss percent in the whole transaction.

SP of one radio = 924
 $SP = 120 \times 924$
 $SP = 110880$
 $CP = 100 \times 924 = 92400$
 $CP = 92400$

SP of one radio = 924
 $CP = 100 \times 924 = 92400$
 $CP = 92400$
 Total CP = 1155 + 770 = 1925
 Total SP = 924 + 924 = 1848
 $J = CP - SP$
 $J = 1925 - 1848$
 $J = 77$
 Loss = 77
 $\text{Loss \%} = \frac{77}{1925} \times 100 = 4\%$ Ans.

11. The selling price of 12 pen is equal to the cost price of 15 pens. Find gain or loss %?

Let SP of 12 Pen = CP of 15 Pen = let. x.

Cost of 12 Pen = 21	Cost of 15 Pen = 25
" " " " = $\frac{1}{12}$	" " " " = $\frac{1}{15}$

 $P = SP - CP$
 $P = \frac{1}{12} - \frac{1}{15}$
 $P = \frac{5-4}{60}$
 $P = \frac{1}{60}$
 $P\% = \frac{1}{60} \times 100$
 $P\% = \frac{100}{60} = \frac{5}{3}$
 $P\% = 1\frac{2}{3} = 1.66\%$ Ans.

12. By selling 36 oranges a vendor losses equal to the selling price of 4 oranges. Find his loss %

Let cost of one orange = 21
 " " 36 " = 36.
 Loss = SP of 4 Orange = 4.
 $CP = SP + 1$
 $CP = 36 + 4$
 $CP = 40$
 $J\% = \frac{4}{40} \times 100 = 10\%$ Ans.

13. A shopkeeper brought toffee 6 for a rupee.
How many for a rupee must he sell to gain 20%?

13. Cost of 6 toffee = ₹ 1
 " " " " = $\frac{1}{6}$
 Gain = 20%
 $SP = \frac{100 + 20}{100} \times CP$
 $SP = \frac{100 + 20}{100} \times \frac{1}{6}$
 $SP = \frac{120}{100} \times \frac{1}{6} = \frac{12}{100} \times \frac{1}{6} = \frac{2}{100} = \frac{1}{50}$
 Ans

14. By selling 33 m of cloth, a draper loses an amount equal to the selling price of 3m of cloth.
Find his gain or loss per cent

14. Cost of 3 m cloth = ₹ 3
 " " 33 m " = ₹ 33
 Loss = SP of 3 m of cloth = ₹ 3
 $CP = SP + \text{Loss} = 33 + 3 = 36$
 $\% = \frac{3}{36} \times 100 = 8\frac{1}{3}$ Ans

15. An Amirah was bought for Rs 14360 and Rs 240 was spent on its transportation. At what price should it be sold to gain of 15%

$CP = Rs\ 14360 + Rs\ 240 = 14600$

Gain = 15%

$SP = \frac{CP(100+g)}{100} = \frac{14600 \times 115}{100} = Rs. 16790$