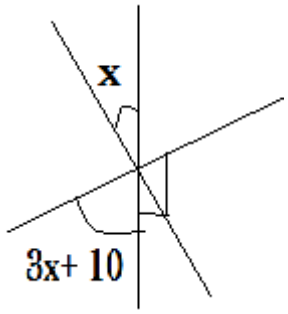
SUMMATIVE ASSESSMENT – I, 2013 MATHEMATICS IX Class[128X4PW]

SECTION-A

1. Find the value of $(14641)^{0.25}$ [1]

2.Find the value of $(x-y)3 + (y-z)3 + (z-x)3$ [1]

3. In fig. find the value of x [1]



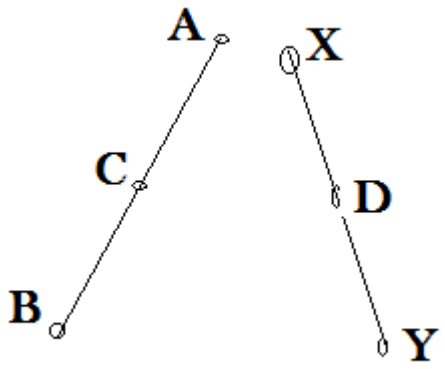
4. What will be mirror image of (-3,-4) [1]

SECTION-B

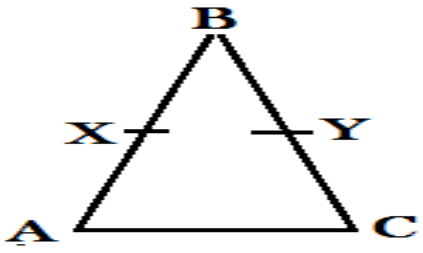
5. If z = 0.064 then find the value of $(1/z)^{1/3}$ [2] [2]

6. without actual calculation find the value of $(100)3 – (60)3 – (40)3$ [2]

7. In fig AC=XD . C and D are midpoint of AB and XY respectively. Using Euclid's axiom show that AB = XY [2]

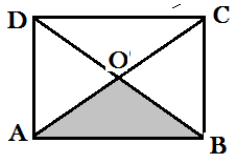


8. In fig, AB = BC and BX = CY . Show that AX = CY State the Euclid's axiom used. [2]



9. Find the co –ordinates of the vertices of the square ABCD (Side =a) ,taking AB and AD as axes . [2]

10. In given fig. ABCD is rectangle where AB= 8 cm and BC = 6 cm and the diagonal bisect at O.Find the area of shaded reason by heron formula.[2]



SECTION-C [3 marks each]

11. Solve it $(\sqrt{5}+\sqrt{2})^2 - (\sqrt{8}-\sqrt{3})^2$

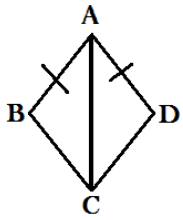
12. Rationalize denominator:

$(4\sqrt{3} + 5\sqrt{2})/(4\sqrt{3} + 3\sqrt{2})$

13. Factorize: $(x-y)^2 - 7(x^2 - y^2) + 12(x+y)^2$

14.For what value of m , is the $p(x) = 3x^3 + 2mx^2 + 3x + 6$ is exactly divisible by (x+2) ? Hence factorize the polynomial.

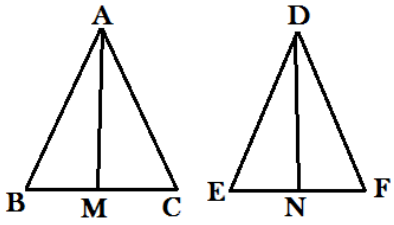
15. In fig. ABCD; AB = AD and AC is the bisector of <A . Show that $\Delta ABC \cong \Delta ADC$ and BC = DC



16.If a transversal intersect two parallel lines ,then prove that bisectors of the alternate interior angle are parallel.

17. if bisectors of the pairs of alternate angle formed by a transversal with two given lines are parallel, prove that the given lines are parallel.

18. In fig, AB = DE ; BC = EF and median Am = DN . Prove that Δ ABC $\cong \Delta$DEF



19. Find the area of triangle whose side are 5 cm ,12cm and 13 cm., Also find the shortest altitude.

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20.The three sides of triangle are 26cm, 28cm and 30cm. Find the height corresponding to longest side.

SECTION – D

21. Simplify $\sqrt{2}/(\sqrt{5}+\sqrt{3})$ and $\sqrt{28}+\sqrt{98}+\sqrt{147}$.

22. Show that $\frac{1}{1+x^{a-b}} + \frac{1}{1+x^{b-a}} = 1$

23. Factorize: $(m+2n)^2 + 101(m+2n) + 100$

24. Simplify: $(a+b)^3 + (a-b)^3 + 6a(a^2 - b^2)$

25. if a + b+ c = 9 and ab + bc + ac = 40 Find a2 + b2 + c2

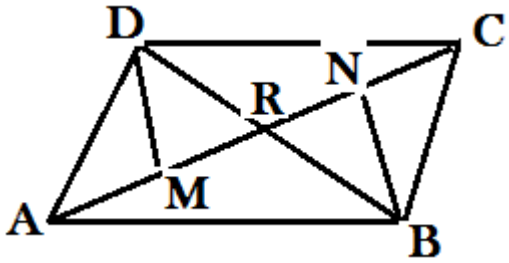
26. $simplify$: $\frac{(a^2-b^2)^3+(b^2-c^2)^3+(c^2-a^2)^3}{(a-b)^3+(b^2-c^2)^3+(c^2-a^2)^3}$

27. In triangle ABC , BD amd CD are internal bisector of <B and <C then, prove that 180+ <A = 2< BDC

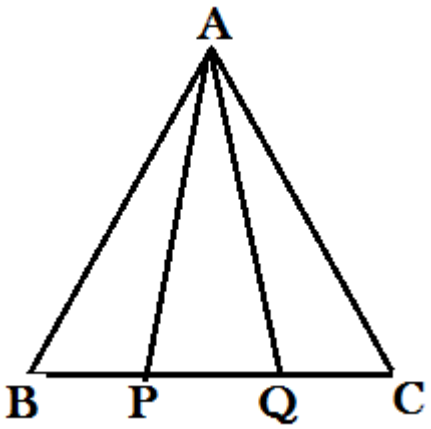
28.Digonal of quadrilateral PQRS meet at O prove that PQ + QR + RS + SP = PR + QS

29. O is point in the interior of Δ ABC, prove that OP + OQ + OR > 1/2 (PQ+QR+PR)

30. In fig. BM and DN are both perpendicular to AC and BM =DN . Prove that AC bisect BC



31. In fig. P and Q are point on BC such that BQ = CP and AP = AQ . Show that AB=AC



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