Aarambh Classes

Class IX

MATHS SAMPLE PAPER

TIME : 1 HOUR M.marks : 60

SECTION A (1 MARK )

Choose the correct answer from each of the following questions :

1. Which of the following is a rational number ?
2. (ii) (iii) (iv) 0.1010010001....
3. Which of the following is a polynomial ?
4. x- +2 (ii) +5 (iii) +3 (d) -4

3. if x+5 is a factor of p(x) = x-20x +5k ,then k = ?

(I) -5 (ii) 5 (iii) 3 (iv) -3

4. The graph of the line x =3 passes through the point :

(i) (0,3) (ii) 2,3 (iii) (3,2) (iv) none of these

5. x=5,y=2 ,is a solution of the linear equation :

(i) x+2y =7 (ii) 5x+2y=7 (iii) x+y =7 (d) 5x+y =7

6. The measure of an angle is five times its compliment .The angle measures

(i) 25 (ii) 35 (iii) 65 (iv)75

7. The bisectors of any two adjacent angles of a parallelogram intersect at :

(i) 30 (ii)45 (iii) 60 (iv) 90

8. The figure formed by joining the midpoints of the adjacent sides of a rectangle is a :

(a) rhombus (ii)square (iii)rectangle (iv) parallelogram

9. Angles in the same segment of a circle are :

(i) equal (ii)complementary (iii) supplementary (iv) none of these

10. The lengths of 3 sides of a triangle are 20 cm, 16 cm and 12 cm .The area of the triangle is :

(i) 96 cm (ii) 120 cm (iii) 144 cm (iv) 160 cm

SECTION B (2 MARKS )

11. Find two rational and irrational numbers between and .

12. Rationalise the denominator of .

13. Find the remainder when the polynomial p(x) =xv+2x-3x +x –1 is divided by g(x) =x-2 .

14. If x=2 ,y=1 is a solution of the equation 2x+3y =k,find the value of k .

15. In which quadrants do the given points lie ?

(i) (4,-2) (ii) (-3,7 ) (iii) (-1,-2) (iv) (3,6 )

16. On which axes do the given points lie ?

(i) (7,0 ) (ii) (0,-3) (iii) (0,6 ) (iv) (-5,0 )

17. In the adjoining figure ,ABCD is a rhombus .If A =70 ,find CDB .

18. Find the area of an isosceles triangle each of whose equal sides is 13 cm and whose base is 24 cm.

19. The radius of a circle is 13 cm and the lengths of one of its chords is 10 cm. Find the distance of the chord from the centre .

SECTION C (3 marks )

20. If a = 3-2 ,find the value of :

a - 1/a

21. In the figure given below ,find x where ABCD .

22. In the adjoining figure , ABCD is a square and EDC is an equilateral triangle .Prove that :

(i)AE =BE (ii) DAE =15

23. Find the area of atriangular field whose whose sides are 91 m,98 m and 105 m in length .Find the height corresponding to the longest side .

SECTION D ( 4 marks )

24. If ax+bx-5x +2 has x+2 as a factor and leaves a remainder 12 when divided by (x-2) ,find the values of a and b .

25. Draw the graph of the equation x+2y-3 =0 .

From your graph ,find the value of y when (i)x =5 (ii) x=-5

26. In a ABC ,it is given that A :B :C =3:2:1 and CDAC .Find ECD .

27. Calculate value of x in the following figure :

28. In the adjoining figure , O is the centre of a circle ,Chord CD is parallel to diameter AB . If ABC =25 ,Calculate CED .