DELHI PUBLIC SCHOOL, JAMMU

Pre (C.T.-I)ASSIGNMENT (2019-20)

CLASS- IX

SECTION-A (1X12=12)

MULTIPLE CHOICE

Q1 A rational number equivalent to rational number 7/19 is

    (a) 17/119

    (b) 14/57

    (c) 21/38

    (d) 21/57

Q2 Every rational number is

    (a) A natural number
    (b) an integer
    (c) a real number
    (d) a whole number.

Q3 A rational number between $\sqrt{2}$ and $\sqrt{3}$

    (a) 3/2
    (b) 1/2
    (c) 3/7
    (d) 1/4

Q4 The product of $4\sqrt{6}$ and $3\sqrt{24}$ is

    (a) 144
    (b) 72
    (c)   124
    (d) 154

Q5 Points (-3,5) lies in

    (a) I quadrant
    (b) I and II quadrant
    (c) I and III quadrant
    (d) II and IV quadrent.

Q6 Abscissa of all the points on the X-axis is

   (a) o
   (b) 1
   (c) 2
   (d) any number

Q7 Ordinate of all points on X-axis is

   (a) 0
   (b) 1
   (c) -1
   (d) any number

Q8 The mirror image of point (3,5) in X-axis is

   (a) 3,5
   (b) 3,-5
   (c) -3,5
   (d) -3,-5

Q9 Zero of Zero polynomial is

   (a) 0
   (b) 1
   (c) any number
   (d) not defined

Q10 A polynomial of degree n has almost

   (a) n terms
   (b) n+1 terms
   (c) n+2 terms
   (d) none

Q11 Degree of a constant polynomial is

   (a) 0
   (b) 1
   (c) 2
   (d) 3

Q12 Degree of polynomial 3x(x+2) is

    (a) 1
    (b) 2
    (c) 3
    (d) 0

SECTION-B(2X5=10)

Q13 Express $0.4\overline{7}$ in the form of $\frac{p}{q}$

Q14 Simplify $\left[9\left(64^{\frac{1}{3}} + 125^{\frac{1}{3}}\right)^3\right]^{\frac{1}{4}}$

Q15 If x+y+z=0, show that $x^3+y^3+z^3=3xyz$.

Q16 If a + b = 10 & a b = 16, find $a^2 - a\,b + b^2$ and $a^2 + a\,b + b^2$.

Q17 Plot the points A (2,3)B(2,1)C(0,1)and D(0,3). Join the points and identify the figure obtained. Find the area and perimeter.

OR

Plot A(0,2), B(-2.5,0) and C(3.5,0) in graph and find area of triangle ABC

SECTION-C(3X4=12)

Q18 Locate $\sqrt{4.7}$ on the number line and justification

Q19. Factorize:
    a) $729a^3 - 125b^3$

    b) $\frac{25}{4}x^2 - \frac{y^2}{9}$

OR

$a = 3 + 2\sqrt{2}$. Find $a^2 + \frac{1}{a^2}$, $a^3 + \frac{1}{a^3}$

Q20. The polynomials x³ +2x²-5ax-8 and x³ +ax² -12x-11 when divided by (x-2) and (x-3) respectively leaves the remainder p and q.if q-p =10,find the value of a.

OR

If $x^2 + \frac{1}{x^2}$ = 79. Find the value of

a) $x^3 + \dfrac{1}{x^3}$

b) $x^3 - \dfrac{1}{x^3}$

Q21. Factorize $x^3 - 6x^2 + 11x - 6$

SECTION-D(4X4=16)

Q22Find the value of X and Y, if two ordered pairs(x-3,-6) and (4,x+y) are equal.

Q23 If x +y +z = 8 and x y + y z + z x = 20, find $x^3 + y^3 + z^3$ - 3xyz.

Q24 If p= 2-a, prove that $a^3 + 6ap - 8 = 0$

Q25 what should be added to $x^3 + 3x^2 - 12x + 19$ so that the result is exactly divisible by x²+x-6

OR

What should be subtracted from $x^3 - 6x^2 - 15x + 80$ so that the result is exactly divisible by x²+x-12

SYLLABUS FOR C.T.-I

1. Natural Number

2. Polynomial

3. Coordinate Geomatery

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