KV Pragati Vihar
Shift1
Class 9
Mathematics

Time Duration: 90min. Max Marks:40

SECTION A. 1*8=8

1. An example of a whole number is (a) 0
(b) -1/2
(c) 11/5
(d) –7
2. If the decimal representation of a number is non-terminating, non-repeating then the number is……
3. The polynomial of type $ax^2 + bx + c$, $a = 0$ is of type……

4. Which point lies on x-axis?
   (a) (3, 2)
   (b) (-3, 2)
   (c) (2, 0)
   (d) (-1,-2)
5. Which point lies in IV quadrant?
   (a) (-3,-4)
   (b) (2,-4)
   (c) (-2, 3)
   (d) (0, 1)
6. Which of the following points is the solution of given equation y = –x ?
   (i) (1, 1). (ii) (0, 1). (iii) (–1, 1) (iv) (1,0)
7. Write one solution of 3x + y = 8?
8. The boundaries of a surface are _____.

SECTION B 2*5=10

9.Simplify :
i) $(4+\sqrt{3})(4-\sqrt{3})$
ii) $3\sqrt{3}+\sqrt{3}$

10.Verify whether x=-l/m is the zero of the polynomial lx+m.
11. If the two points are A (-3,7) and B(-7,5), then what is (abscissa A)- (abscissa B)?
12. In which quadrant or on which axis do each of the points (-2,4), (3,-1), (-4,0), (2,3) lie?
13. If x = –1 and y = 2 is a solution of kx + 3y = 7, find the value k.

SECTION C 3*2=6

14. Express $0.4\overline{7}$ in the form p/q,

where p and q are integers and $q \neq 0$.

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

SECTION D **4*4=16**

16 a. If a point C lies between two points A and B such that AC = BC, then prove that AC=1/2AB.

b. Explain Euclid fifth postulate with figure.

17. Represent $\sqrt{5}$ on the number line.

18. Read the following situation and answer accordingly.



Student A of class IX is unable to write in his

examination, due to his sickness. Student B of class VI writes the exam for him. The sum of their ages is 23.

Q a. What will the linear equation for above equation?

i. x+y=23

ii.x-y=23

iii.x+y=25

iv. x-y= 25

Q b. Find the age of student A whe the age of student B is 10 yrs.

i. 13 years

ii.14 years

iii.15 years

iv. 16 years

Q c. Find the age of student B whe the age of student B is 14 yrs.

i. 9 years

ii.10 years

iii.11 years

iv. 12 years

Q d. If the present age of student A is 15 years then find the sum of their ages 5 years from now.

i. 32 years

ii. 33years

iii.34 years

iv. 35 years

19. Read the following information and answer accordingly



There is a bakery shop in a locality. The chef bakes different variety of cakes using different ingredients such as flour , chocolate , sugar etc. Based on the number of ingredients used in cakes, the price of individual cake is decided. The polynomial used to calculate price is $\left(x^2-2\right)100$, where x denotes number of ingredients used in cake . Maximum ingredients are 10 and minimum ingredients are 3.Based on the above information answer the below questions -

.

Q a. The price of cake having ingredients 3 is Rs…..

i. 700

ii. 900

iii. 456

iv. 654

Q b. The polynomial by which price of the cake is calculated is

i. Linear

ii. Quadratic

iii. Cubic

iv. None of the these

Q c. The degree of the polynomial by which price of the cake is calculated is

i. 4

ii. 3

iii. 2

iv. None of the these

Q d. Maximum price of the cake can be

i. 9700

ii. 9600

iii. 10000

iv. 9800