VIDYA BHARATI SCHOOL

OLYMPIAD WORKSHEET: July - 2017

GRADE: X

SUBJECT: MATHEMATICS

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1. Write the correct answer in each in each of the following:

(A) unique solution (B) Two solutions

(C) Infinitely Many Solutions (D) No solutions

2. The equation 2x+5y=7 has a unique solution, if x, y are :

(A) Natural numbers (B) Positive real numbers

(C)) Real numbers (D) Rational numbers

3. If (2,0) is a solution of the linear equation 2x+3y=k, then the value of kis.

(A) 4 (B) 6 (C) 5 (D) 2

4. Any solution of the linear equation 2x+0y+9=0 in two variables is of the form.

(A) (-9/2,m) (B) (n,-9/2)

(C) (0,-9/2) (D) (-9,0)

5. The graph of the linear equation 2x+3y=6 cuts the y-axis at the point.

(A) (2,0) (B) (0,3) (C) (3,0) (D) (0,2)

6. The equation=7, in two variables, can be written as

(A) 1 , x + 1 . y =7 (B) 1 . x + 0 . y = 7

(C) 0. x + 1 . y =7 (D) 0. x + 0. y = 7

7. Any point on the x-axis is of the form.

(A) (x, y) (B) (0, y) (C) 5(x, 0) (D) (x, x)

8. Any point on the line y = x is of the form

(A) (a, a) (B) (0, a) (C) (a, 0) (D) (a, -a)

9. Any equation of x- axis of the form

(A) x = 0 (B) y = 0 (C) x + y = 0 (D) x = y

10. The graph of y = 6 is a line.

a) Parallel to x- axis at a distance 6 units from the origin

b) Parallel to y- axis at a distance 6 units from the origin

c) making on intercept 6 on both the axes.

d) making an intercept 6 on both the axes.

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

(A) x +2y = 7 (B) 5x + 2y = 7 (C) x +y = 0 (D) 5 x +y =7

12. If a linear equation has solutions (-2, 2), (0,0) and (2,-2), then it is of the form.

(A) y –x =0 (B) x + y =0

(C) -2x+ y =0 (D) –x = 2y = 0

13 The positive solutions of the equation as + by + c = 0 always lie in the .

(A) 1st quadrant (B) 2nd quadrant

(C)) 3rd quadrant (D) 4th quadrant

14. The graph of the linear equation 2x + 3y = 6 is a line which meets the x-axis at the point.

(A)(0,2) (B) (2,0) (C) (3,0) (D) (0.3)

15. The graph of the linear equation y = x passes through the point

(A) (3/2,-3/2) (B) (0,3/2) (C) (1,1) (D) (-1/2,1/2)

16. If we multiply or divide both sides of a linear equation with a non-zero number, then the solution of the linear equation:

a) Changes
b) remains the same
c) Changes is case of multiplication only
d) Changes in case of division only

17. How many linear equations in x and y can be satisfied by x = 1 and y = 2?

(A) Only one (B) Two (C) Infinitely many (D) Three

18. The point of the form (a, a always lies on :

(A) x-axis (B) y-axis

(C) On the line y = x (D) On the line x + y = 0

19. The point of the form (a, -a) always lies on the line.

(A) x = a (B) y = -a (C) y = x (D) x + y = 0

20. How many lines can pass thought two point (3, -4)

(A) Only one (B) Two (C) Three (D) Infinitely many