MATHS

BOOKS - CBSE COMPLEMENTARY MATERIAL MATHS (HINGLISH)

LINEAR EQUATIONS IN TWO VARIABLES

Part A

1. Which of the following is not a linear equation

   A. $3x + 3 = 5x + 2$

   B. $x^2 + 5 = 3x - 5$

   C. $\dfrac{7}{3}x - 5 = 4x - 3$

   D. $(x + 2)^2 = x^2 - 8$

Answer: b

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2. Which of the following is not a linear equation in two variables

    A. 2x+3y=5

    B. 3x+2y=6

    C. $ax^2 + by = c$

    D. $ax + by = c$

Answer: c

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3. Alinear equation in two variables has maximum

A. only one solution

B. two solution

C. infinite solution

D. none of these

Answer: c

4. The graph of ax+by+c=0 is

    A. a straight line parallel to x axis

    B. a straight line parallel to y axis

    C. a genearl straight line

    D. name of these

Answer: c

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5. If x=1, y=1 is solution of equation 9ax + 12ay =63 then the value of a is

A. 3

B. 0

C. -3

D. 4

Answer: a

6. The equation of X-axis is

A. x=k

B. x=0

C. y=k

D. y=0

Answer: d

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

A. (a,0)

B. (0,a)

C. (a,a)

D. (a,-a)

Answer: c

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8. x=0 represents the equation of

A. x axis

B. y axis

C. a line parallel to x axis

D. a line parallel to y axis

Answer: b

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9. x=2 ,y=3 is a solution of the linear equation

A. 2x+y=8

B. x+2y=8

C. x+y=8

D. $-x + y = 8$

Answer: b

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10. The graph of 2x+3y =6 is a line which meets

the y axis at the point

    A. only one

    B. two

C. three

D. infinitely many

Answer: c

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11. How many linear equation in x and y can be formed by x=18 and y=4

A. only one

B. two

C. three

D. infinitely many

Answer: d

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

A. $x = a$

B. $y = -a$

C. $y = x$

D. $x + y = 0$

Answer: d

13. The graph of y =x passes through the point

A. $\left(\dfrac{5}{2}, -\dfrac{5}{2} \right)$

B. $\left(0, \dfrac{5}{2} \right)$

C. $(1, 1)$

D. $\left(-\dfrac{1}{2}, \dfrac{1}{2} \right)$

Answer: c

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14. Graph of x=5 is a line

A. Parallel to x-axis

B. Parallel to y-axis

C. Passes through origin

D. Lying on x-axis

Answer: b

15. Any solution of the linear equation $5x+0y+7=0$ in two variables is of the form

A. $\left(0, \ -\dfrac{7}{5}\right)$

B. $\left(-\dfrac{7}{5}, \ 0\right)$

C. $\left(-\dfrac{7}{5}, \ k\right)$

D. $\left(k, \ -\dfrac{7}{5}\right)$

Answer: c

16. Any point on the X-axis is of the form

A. (0,-3)

B. (2,3)

C. (3,6)

D. all of these

Answer: d

17. Solution of the equation 3x-y=3 is

A. (0,-3)

B. (2,3)

C. (3,6)

D. All of these

Answer: d

18. The coefficient of the variable y in linear equation $5(2x - y) + 3x + 4y - 7 = 0$

A. -1

B. -9

C. 13

D. 9

Answer: a

19. If a linear eqation has solution (-1,1),(0,0), (2,-2) then its equation is

A. y-x=0

B. x+y=0

C. -2x+y=0

D. -x+2y=0

Answer: b

20. The point (a,-a) does not lie on the graph of

   A. x=a

   B. y=-a

   C. y=x

   D. x+y=0

Answer: c

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21. Which of the following equations represents a line parallel to x axis

A. $2x+3=0$

B. $2y+2=0$

C. $2x+3y=0$

D. $2x-3y=0$

Answer: b

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22. Which of the following equation represents a line parallel to y axis

    A. $2x=3y$

    B. $2y=4$

    C. $2x=4$

    D. $2x-3y=9$

Answer: c

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23. If (a,-2) lies on the graph of 3x-y=10 then the value of a is

A. 4

B. $\dfrac{8}{3}$

C. 0

D. 1

Answer: b

24. The equation $2x + 9 = 0$ on number line is represented by

A. a line

B. a point

C. infinitely many solutions

D. two lines

Answer: B

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25. The distance between the graphs of the equations x=4 and x=1 is

A. 1

B. 5

C. 3

D. none of these

Answer: b

26. The distance between the graphs of the equations y=-2 and y=-5

A. 7

B. 3

C. -7

D. None

Answer: b

27. If $(2k - 1, \ k)$ is a solution of the equation

$10x - 9y = 12,$ then $k =$ 1 (b) 2 (c) 3 (d) 4

A. 1

B. 2

C. 3

D. 4

Answer: b

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28. Which of the following equation passes through the origin

    A. x+y=2

    B. x-y=2

    C. 2x-3y=0

    D. None of these

Answer: c

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29. If the equation 3y=7 is expressed as ax+by+c=0 then which of the following is correct

    A. a=0,b=7,c=3

    B. a=3,b=0,c=-7

    C. a=0,b=3,c=-7

    D. a=3,b=-7,c=0

Answer: c

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30. One experessing x in terms of y for the linear equation $\frac{2}{3}x + 4y = -7$ which of the following is correct

A. $y = \dfrac{-21 - 12x}{2}$

B. $x = \dfrac{-21 - 12y}{2}$

C. $y = -7 + \dfrac{2}{3}x$

D. $x = -7 + 4y$

Answer: b

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31. Express the linear equation $\sqrt{2x} - 4 = 5y$ in the form of ax+by +c=0 and thus indicate the values of a,b and c

32. Express x interms of y for the eqaution 3x+4y =7

33. Express y in the terms of x $3y+5x=9$

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34. Point (9,0) lie on which axis

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35. Find a solution of $x+y=5$ which lies on y axis

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36. Express the equation 5y =9 as linear equation in two variables

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37. Write the linear equation which is parallel to x axis and is at distance of 2 units from the origin in upwards direction

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38. Check whether (1,-2) is solution of 2x-y =6

39. Check whether x=2 & y =-2 is a solution of

2x-y=6

40. How many solution are there for equation

y=5x+2

41. Find the value of k,if x=-1 & y=1 is a solution

of equation kx -2y =0

42. If the graph of equation 2x+ky =10

intersects x axis at point (5,0) find the value of

k

43. The graph of the linear equation $4x=6$ is parallel to which axis

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44. At what point the graph of $2x-y=6$ cuts x axis

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45. On which side of y -axis x+3=0 lies

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46. On which side of y axis x+3 =0 lies

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47. Find any tow soluton of equation 2x+y=x+5

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1. The equation of a line parallel to x axis is

_____=a where a is any non zero real

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2. The equation of a line parallel to y axis is

_____=a where a is any non zero number

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3. The graph of every linear eqution in two variables is a _____

4. An equation of the form ax+b=0 hwere a,b are real numbers and a $\neq$ 0 in the variable x geometrically represents _____

5. The coefficient of x in the linear equation

2(x+y)-x=7 is _____

Part A True Or False

1. The linear equation 7x+9y=8 has a unique

solutions

2. All the points (2,0) ,(3,0),(4,2) lie on the x axis

3. The line parallel to y axis at a distance of 5 units to the left of y axis is given by the equation x =-5

4. The graph of every linear equation in two variables need not be a line.

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5. The graph of the linear equation $x+2y=5$ passes through the point (0,5). True or False ??

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Part B

1. Find the value of p if x=2 ,y=3 is a solution of equation 5x+3py =4a

2. If the ponts A(3,5) and B(1,4) lies on the graph of line ax +by =7 find the value of a

3. Write the coordinates of the point where the graph of the equation 5x+2y =10 intersect both the axes

4. Write the equation of two lines passing through (3,10)

5. The cost of coloured paper is r 7 more than $1/3$ of the cost of white paper wirte this statement in linear equation in two variables

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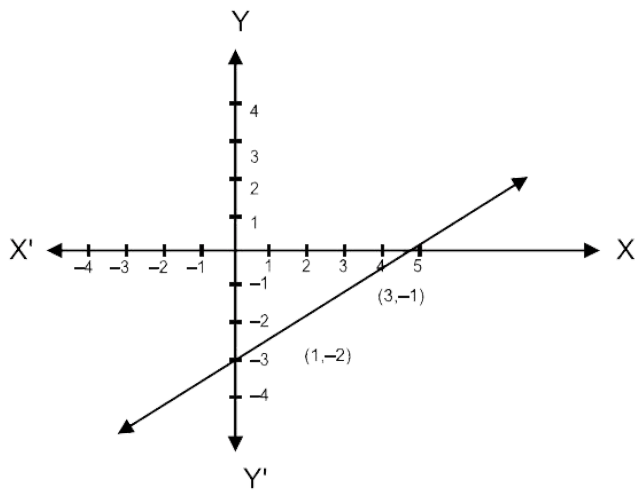
6. Draw the graph of equation x+y=5

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7. From the choices given below choose the equation whose graph is given in

(i) x+2y=5

(ii) x-2y=5

(iii) y+2x=5

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8. The graph of linear equatio 2x-y=6 will pass through which quadrants(s)

9. How many solution of the equation 3x-2=x-3 are there on the

(i) number line

(ii) cartesian plane

10. Find the points where the graph of x+y=4 meets line which is

(i) parallel to x axis at 3 units from origin in positive direction of y axis

(ii) parallel to y axis at 2 units on left of origin

Part C

1. If the points A(4,6) and B(1,3) lie on the graph of ax +by =8 then find the value of a and

b

2. Find the value of 'a' if (1,-1) is the solution of the equation 2x+ay =5 find two more solutions of the equation

3. Find two solution of the equation 4x+5y =28 check whether (-2,10) is solution of the given

equatio

4. Write the equation of line passing through

(3,-3) & (6,-6)

5. If x =3k-2 ; y =2k is a solution of equation 4x-

7y+12=0 then find the value of k

6. If (m-2,2m+1) lies on equation 2x+3y-10=0 find m

7. $F = (9/5)C + 32$ is the linear equation that converts Celsius(C) to Fahrenheit (F).

(i) if the temperature is $35°$ then what is the temperature in fahrenheit (ii) if the

temperature is 30° C then what is the temperature in fahrenheit

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8. Draw the graph of the linear equation 2x+3y=6 find out the coordiantes of the points where the line intersects at x axis and y axis

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9. Draw the graph for the lienar equation

3x+4y=12 if x =8 find the value of y with the

help of graph

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10. Draw the graph of y =x & 2y =-5x one the

same graph

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11. Give the geometrical representatio of

5x+7=0 as equation

(i) in one variable

(ii) in two variable

12. Draw the graph of the linear equations 2y-x=7 with the help of graph check whether x =3 and y=2 is the soluti9on of the equation

1. Write 3y=8x in the form of ax+by+c=0 write x in terms of y find any two solution of the equatio how many solution you can find out

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2. Rohan and Ramita of class IX decided to collect Rs 25 for class cleanliness write it in

linear equation in two variables also draw the graph

3. Sarika distributes chocolates on the occasion of children 's day she gives 5 chocolates to each child and 20 chocolates to adults if number of children is represented by 'x' and total distrubuted chocolates as 'y'

(i) write it in the form of linear equation in two variables

(ii) if she distributed 145 chocolates in total find number of children

4. Priyanka and arti decided to doneate Rs 1600 for the army windows let priyanka 's shares as 'x' and arti share as'y'

(a) form a lienar equation in two variables

(b) if priyanka donates thrice the amount donated by arti then find out the amount donated by both

5. Riya participates in diwali mela with her friends for the charity to centre of handicapped children they donate Rs 3600 to the centre from the ammount earned in mela if each girl donates Rs 150 and each boy donates Rs 200

(a) form the linear equation in two varibales

(b) if number of girls are 8 find number of boys

6. Aftab is diriving a coar with unifomr speed of 60 km/hr assuming total distance to y km & time taken as x hours form a linear equation draw the graph from the graph read the following

(i) distance travelled in 90 minutes

(ii) Time taken to cover a distacne of 150 km

7. The parking charges of a car in a private parking is Rs 20 for the first hour and Rs 10 for

subsequent hours.Taking total parking charges to be y & total parking time as x hours form a linear equation.Write it in standard form.

Practice Test

1. The graph of linear equation 2y =5 is parallel to which axis

2. Write the linear eqaution the graph of whicjh is parallel to y axis and is at a distacnce 3 units on left from the origin

3. If the point (5,2) lies on the graph of the linear eqaution kx +5y =10 k find k

4. Write two linear equations the graph of which passes through (2,-3)

5. Write the linear equation $x + \sqrt{3}y = 4$ in the form of ax+by+c=0 & hence write the values of a,b & c . And, write x in terms of y

6. Find the solutin of linear equation 2x+y=4

which repersents a point on

x axis

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7. Find the solutin of linear equation 2x+y=4

which repersents a point on

y axis

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8. Find the solutin of linear equation $2x+y=4$ which repersents a point on parallel to x axis at distance 3 units from origin

9. Give the geometrical representation of $2x+5 =0$ as a linear equation in one variable

10. Give the geometrical representation of

$2x + 5 = 0$ as a linear equation in

two variables

11. In a residential society, rain water is stored

in underground water tank. If the water stored

at the rate of 30 cubic cm per second and

water is stored in 'x' second and 'y' cubic cm

(i) Write this statement in linear equation in

two variables.

(ii) In how many seconds, water stored is 120 cm^3.

12. In a residential society, rain water is stored in underground water tank. If the water stored at the rate of 30 cubic cm per second and water is stored in 'x' second and 'y' cubic cm

(i) Write this statement in linear equation in two variables.

(ii) In how many seconds, water stored is 120 cm^3.