



INDIAN SCHOOL AL WADI AL KABIR

Class X, Mathematics

Topic: Pair of linear equations in two variables

(M.C.Q & DESCRIPTIVE), 02-04-2020

1. Indicate the pair or pairs representing simultaneous linear equations (solvable).
 $7x - 3y = 5$ & $2x + 5y = 1$

Choose the correct option:

2. If $ax + by = c$ and $lx + my = n$ has unique solution then the relation between the coefficients will be _____.

- A) am is not equal to lb
- B) $am = lb$
- C) $ab = lm$
- D) ab is not equal to lm

Choose the correct option:

3. One equation of a pair of dependent linear equations is $-5x + 7y = 2$.
The second equation can be _____.

- A) $10x + 14y + 4 = 0$
- B) $-10x - 14y + 4 = 0$
- C) $-10x + 14y + 4 = 0$
- D) $10x - 14y = -4$

4. In a function if 10 guests are sent from room A to B, the no. of guests in room A and B are same. If 20 guests are sent from B to A, the no. of guests in A is double the no. of guests in B. Find the number of guests in both. the rooms in the beginning.

5. For what values of k , the following equations have infinite solution

$$Kx + 3y - (K-3) = 0 \text{ \& \ } 12x + Ky - K = 0$$

6. The sum of the digits of a two-digit number is 15. the number obtained by interchanging the digit exceeds the given number by 9. the number is

- A) 96
- B) 69
- C) 87
- D) 78

Choose the correct option:

7. Graphically $x - 2 = 0$ represents a line _____.
- A) Parallel to x-axis at a distance 2 units from x-axis
 - B) Parallel to y-axis at a distance 2 units from it.
 - C) Parallel to x-axis at a distance 2 units from y-axis
 - D) Parallel to y axis at a distance 2 units from x axis

8. If solvable, solve: $3x - 2y = 1$ & $3x + 2y = 5$

Choose the correct option:

9. For a pair to be consistent and dependent the pair must have _____.
- A) No solution
 - B) Unique solution
 - C) Infinitely many solutions
 - D) None of these

10. If twice the age of son is added to age of father, the sum is 56. But if twice the age of the father is added to the age of son, the sum is 82. Find the ages of father and son.

11. For which value of k, $kx + y = 2$ and $x + ky = 1$ are inconsistent?

Choose the correct option:

12. Graph of every linear equation in two variables represent a _____.
- A) Point
 - B) Straight line
 - C) Curve
 - D) Triangle

Choose the correct option:

13. Each point on the graph of pair of two lines is a common solution of the lines in case of _____.
- A) Infinitely many solutions
 - B) Only one solution
 - C) No solution
 - D) None of these

14. A mobile company charges a fixed amount as monthly rental which includes 100 minutes free per month and charges a fixed amount thereafter for every additional minute. Abhishek paid ₹ 433 for 370 minutes. and Ashish paid ₹ 398 for 300 minutes. Find the bill amount under the same plan, if Usha use for 400 minutes.

15. Choose the correct option:

If $2/x+3/y=10$ and $3/x+2/y=5$, then find $1/x + 1/y = \dots\dots\dots$

- A) 3
- B) 2
- C) 4
- D) 1/3

16. Two pens and one eraser cost ₹ 35 and ₹ 3 pens and four erasers cost ₹ 65. Find the cost of pen and eraser separately.

Choose the correct option:

17. The pair of linear equations $x = 2$ and $x = 5$ has _____.

- A) No common solution
- B) Infinitely many solutions
- C) Unique solution
- D) None of these

18. Check graphically whether the pair of lines $3x + 2y - 4 = 0$ and $2x - y - 2 = 0$ is consistent. Also, find the coordinates of the points where the graphs of the lines of equations meet the y-axis.

Choose the correct option:

19. The coordinates of the point where x-axis and the line represented by $x/2+y/3=1$ intersect are _____.

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

20. Solve the pair or pairs representing simultaneous linear equations.

$$6x - 4y = 8 \text{ \& } 3x - 2y = 4$$

Pair of linear equations in two variables

Answers

- $7/2 \neq -3/5$, so the two equations represent simultaneous equations; in this case they have only one solution.
- Option A
- Option D
- 100, 80
- $K=6$
- Option D
- Option B
- $x = 1, y = 1$
- Option C
- Father 36 & son 10
- The two equations will be inconsistent if $k/1 = 1/k \neq 2/1$ that means, $k^2 = 1$ or $k = \pm 1$ Therefore, the two given equations will be inconsistent if $k = \pm 1$
- Option B
- Option A
- (₹ 298, ₹ 1/2) ₹ 448
- Option A
Solution: add equation 1 and equation 2
so $2/x + 3/y + 3/x + 2/y = 10 + 5$
 $5/x + 5/y = 15$
 $5(1/x + 1/y) = 15$
Therefore, $1/x + 1/y = 15/5 = 3$
- the cost of 1 pen is ₹ 15 and the cost of 1 eraser is ₹ 5.
- Option A
- Yes
- Option C
- $6/3 = -4/-2 = 8/4$ Simultaneous equations; have infinite solutions.