



MATHS

BOOKS - PEARSON IIT JEE FOUNDATION

LINEAR EQUATIONS AND INEQUATIONS

Example

1. If $2x + 10 = 40$, find the value of x

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2. Solve for x : $5x - 8 = 3x + 22$

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3. A teacher has 45 chocolates. After giving two chocolates to each student, she is left with 7 chocolates. How many students are there in the class ?



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4. If $4x + 3y = 25$ and $5x + 2y = 26$, then find the values of x and y



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5. If $3x - 2y = 12$ and $6x + y = 9$, then find the values of x and y



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6. Solve $4x + 5y = 37$ and $5x + 4y = 35$



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7. Plot the following points on the co-ordinate plane:

$A(3, 5)$, $B(2, -4)$, $C(-2, 7)$, $D(-3, -4)$, $E(0, -5)$ and $F(5, 0)$

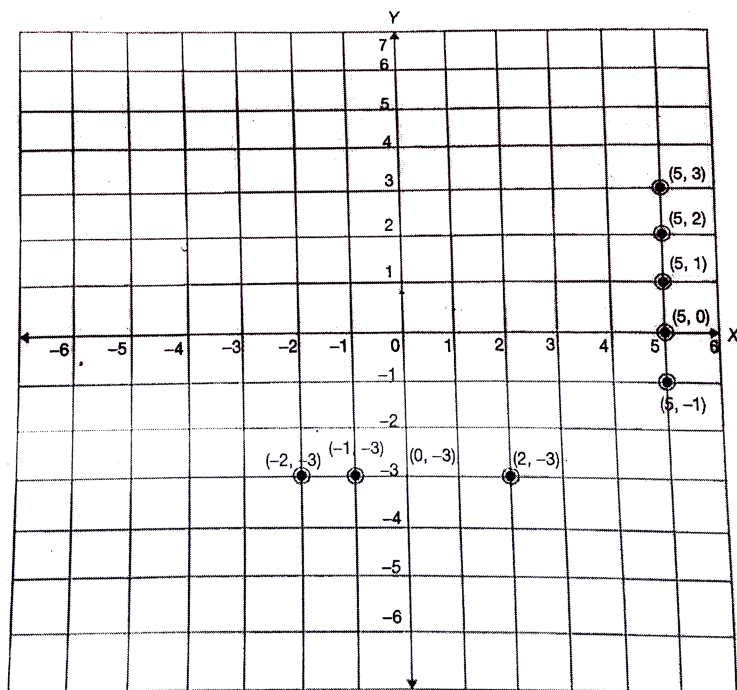


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8. Plot the following points on the coordinate plane. What do you observe ?

(a) $(-2, -3)$, $(-1, -3)$, $(0, -3)$, $(2, -3)$

(b) $(5, 3), (5, 2), (5, 1), (5, 0), (5, -1)$



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9. Plot the following points on the coordinate plane and what do you observe ?

$(-3, 3), (-2, 2), (-1, 1), (0, 0), (1, -1), (2, -2), (3, -3)$



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10. Draw the graph of the equation $y = 3x$ where R is the replacement set for both x and y



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11. Draw the graph of the equations $x + y = 4$ and $x - y = 2$.
What do you notice ?



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12. Solve the following equations $x + 4y = 2$ and $4x - y = -9$
by the graphical method and check the result



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13. Find out the number of solution for the following equations

$$3x + 4y = 89x + 12y = 24$$



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14. Find out the number of solutions for the following equations:

$$4x + 5y = 20$$

$$8x + 10y = 30$$



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15. The sum of two numbers is 30 and the larger number exceeds the smaller by 6. Find the numbers



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16. In a fraction, if unity is added to the numerator and subtracted from the denominator, it becomes $\frac{2}{3}$. Instead, if unity is subtracted from the numerator and added to the denominator, it becomes $\frac{1}{2}$. Find the fraction.



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17. The sum of the digits of a two digit number is 8. If 18 is added to the number, then the resultant number is equal to the number obtained by reversing the digits of the original number. Find the original number



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18. Four years ago, age of a person was 4 times that of his son. Six years later, the age of the person will be 10 years less than thrice the

age of his son. Find the present ages of the person and his son



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19. For what values of k is the set of equation $2x - 3(2k - 1)y = 10$ and $3x + 4(k + 1)y = 20$ are consistent ?



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20. Solve the following inequations :

(a) $5x - 3 < 12, X \in N$ (b) $2x - 4 < 4, x \in R$ (c)

$3x - 1 \geq 5, x \in Z$



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21. Represent the following inequations on the number line

(a) $x \geq -2$

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22. Represent the following inequations on the number line

$$x \leq 3$$

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23. Draw the graph $x \geq 1$ in the cartesian plane

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24. Draw the graph of $y < 2$ in the Cartesian plane

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25. Draw the graph $x - y \leq 1$ in the cartesian plane



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26. Draw graph of $x < -y$



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27. Construct the region represented by the inequation

$$x + 3y \geq 3 \text{ and } 3x + y \leq 3$$



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28. Construct the region represented by the inequations

$$2x + y \leq 2 \text{ and } x - 3y \leq 3$$



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29. Solve $|2x - 3| < 5$

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30. Solve $|3x + 2| \geq 7$

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31. Solve $|5x - 7| < -18$

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32. Find the solution set of $\frac{1}{2x - 4} < 0$

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33. Person A can assemble 10 machines per hour and Person B can assemble 15 machines per hour. Person A works for x hours per day and Person B works for y hours per day and both the persons together can assemble at the most 200 machines in a day. Frame one inequation to represent the above data



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34. Find the two whole numbers such that their sum is utmost 10 and the difference is atleast 4 and also the resultant sum is maximum



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Very Short Answer Type Questions

1. The system of equation $a + b = 3$ and $3a + 3b = 9$ is _____.
(consistent/inconsistent)



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2. The equation $px + qy + r = 0$ and $kpx + kqy + kr = 0$ are _____.
(dependent/inconsistent)



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3. If the equations $4x + py = 12$ and $qx + 3y = 6$ are dependent, then the value of p and q are ____ and respectively



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4. If $2x + 3y = 10$ and $3x + 2y = 5$, then value of $x + y$ is ____



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5. If $2x - 3y = 0$, then the value of $2x + 3y$ in terms of y is ____



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6. The equations $\frac{x}{a} + \frac{y}{b} = 1$ and $\frac{x}{b} + \frac{y}{a} = 1$ are inconsistent if



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7. If sum of two numbers is 10 whereas their difference is 4, then the greater number is ____



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8. If $a + 2b + 3c = 20$ and $2a + 4b + c = 25$, then $c =$ _____



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9. If $2a + 3b + 4c = 35$ and $3a + 5b + 7c = 30$, then $a + b + c =$



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10. If $a > b$, then $\frac{a}{c} < \frac{b}{c}$ for all a, b and $c \in R$, where $c < 0$.
(True /False)



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11. If $a > b$, then $ac > bc$ for all a, b and $c \in R$, where $c > 0$.
(True/False)



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12. The number of common integral solutions of the inequation $x > -5$ and $x < 5$ is ____



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13. The solution set of $ax + by + c < 0$ if $c < 0$ is the ____
(region that contains (0,0)/region that does not contains (0,0))



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14. Solution set for the inequation $\frac{1}{x+1} > 0$ is ____



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15. If $x + y \leq 5$, then either $x \leq 5$ or $y \leq 5$ or both (True/False)



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16. If the system of linear equations is inconsistent, then the solution set is infinite. (Agree/Disagree)



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17. If $\frac{1}{x+y} = \frac{1}{2}$ and $\frac{1}{x-y} = \frac{1}{3}$, then $x = \underline{\hspace{1cm}}$ and $y = \underline{\hspace{1cm}}$



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18. If $a + b = c$ and $a - b = d$, then the value of b is $\underline{\hspace{1cm}}$. (In terms of c and d)



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19. Every system of dependent equations is consistent. Is the converse always true ?



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20. For how many pairs of non-zero integers, $x + y = 0$ and $x - y = 0$?



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21. Any line in a plane divides the plane into three disjoint parts. (True/False)



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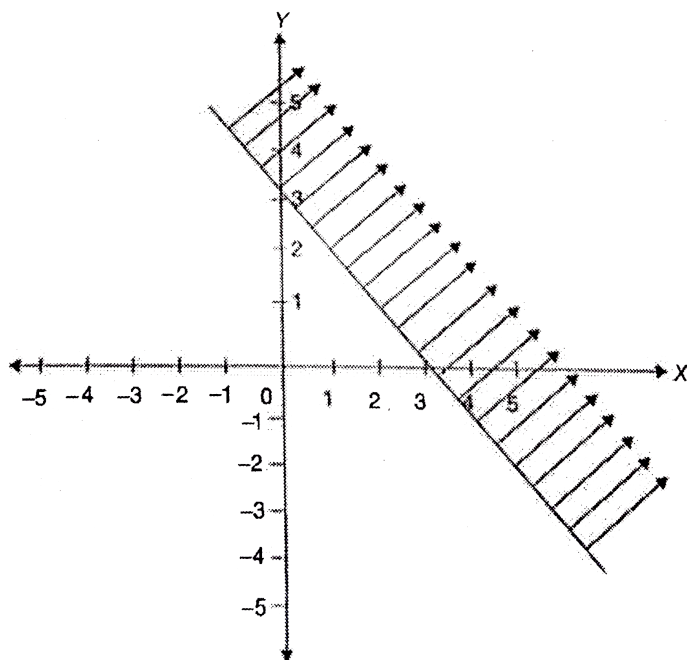
22. If $x + y \leq 7$ and $x - y \leq 3$, then $x \leq 5$. (True/False)

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23. Boundary line for the region $y \leq x + 4$ is ____

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24. Inequation that represents the following graph is ____



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25. The number of solution for the simultaneous equations $3x + 4y = 12$ and $4x + 3y = 18$ is ____

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26. If the cost of 2 chocolates and 3 biscuits is Rs 55 and that of 4 chocolates and 6 biscuits is Rs 110, then the costs of one chocolate and one biscuit are necessarily Rs 20 and Rs 5 respectively (True/False)

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27. An open sentence which contains the symbol $<$, $>$, \leq or \geq is called an ____

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28. If $x > a$ and $x > b$ (where $a > b$), then the solution set of the inequations is ____



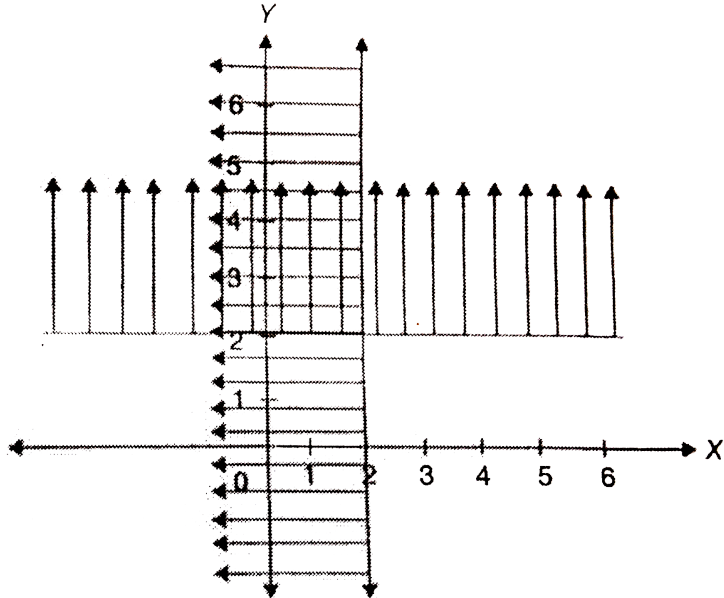
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29. Common region for the inequations $x \leq y$ and $y \leq x$ is ____



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30. Inequations that represents the shaded region of the following graph is ____



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Short Answer Type Questions

1. Solve: $\frac{11}{a+b} + 2(a-b) = 11$, $\frac{22}{a+b} + 3(a-b) = 17$

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2. If $px + qy + r = 0$ and $qx + py + r = 0$ ($x \neq y$), then show that the value of $x + y$ is $\frac{-r}{p}$ or $\frac{-r}{q}$



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3. Find the value of x , if $2x + 3y + k = 12$ and $x + 6y + 2k = 18$



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4. In a fraction the denominator exceeds the numerator by 8. If unity is deducted from both the numerator and the denominator, the fraction becomes $\frac{3}{7}$. Find the fraction



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5. Father's age is 3 years more than thrice the son's age. After 5 years, father's age will be 12 years more than twice the son's age.

Find the father's present age



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6. Sum of successors of two numbers is 40, whereas their difference is 6. Find the two numbers



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7. If $x + y < 2$ and $y = 2x - 7$, then find the range of x .



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8. Which of the following points belong to the region represented by the inequations $2x - 3y \geq 5$ and $x - 2y \leq 3$?

(a) (3, 0)

(b) (- 4, - 4)

(c) (3, - 5)

(d) (2, - 2)

(e) (5, 1)



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9. Find the number of solutions for the inequations $x + y \leq 8$ and $2x + y \leq 8$. (where x and y are positive integers)



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10. If the cost of 2 pencils and 3 erasers is Rs 14. Whereas the cost of 3 pencils and 5 erasers is Rs 22, then find the cost of one pencil and one eraser



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11. The sum of the digits of a two digit number is 7. If 9 is added to the number, the digits interchange their places. Find the number



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12. Harry has Rs 2 and Rs 5 coins with him. If he has a total of 33 coins worth Rs 120 with him, how many Rs coins does he have ?



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13. If $\frac{1}{x - y} < 1$, then show that x does not lie from y to $y + 1$



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14. Shade the regions that show the solution set of the following inequations :

(a) $x > 3$

(b) $y < 2$

(c) $2y \leq 5$

(d) $x \geq 0, y \geq 0$

(e) $x \geq 4, y \leq 4$



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Essat Type Questions

1. There are some chocolates with Tom and Jerry. If Tom gives certain number of chocolates to Jerry, then the number of chocolates with them will be interchanged. Instead, if Jerry gives same number of chocolates to Tom, then the number of chocolates with Jerry will be one-fourth of the number of chocolates that Tom has. If the total number of chocolates with them is 100, then find the number of chocolates with Tom



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2. Solve the system of inequations graphically

$$x + 2y \leq 6, 2x + y \geq 6 \text{ and } x \leq 4$$



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3. Find the two natural numbers so that their sum cannot exceed 6 and the difference between first and second number is positive and does not exceed 2 and also the resultant sum is maximum



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4. A test has 150 questions. A candidate gets 2 marks for each correct answer and loses 1 mark for each wrong answer and loses $\frac{1}{2}$ mark for leaving the question unattempted. A student score 165 marks. If the student left 18 questions unattempted, find the number of questions he marked wrong.



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1. How many pairs of x and y satisfy the equations

$$2x + 4y = 8 \text{ and } 6x + 12y = 24 ?$$

A. 0

B. 1

C. Infinite

D. None of these

Answer: C



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2. Find the value of ' k ' for which the system of linear equation

$$kx + 2y = 5 \text{ and } 3x + y = 1 \text{ has zero solutions}$$

A. $k = 6$

B. $k = 3$

C. $k = 4$

D. None of these

Answer: A



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3. Find the minimum value of $|x - 3| + 11$

A. 8

B. 11

C. 0

D. -8

Answer: B



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4. The maximum value of $23 - |2x + 3|$ is

A. 20

B. 26

C. 17

D. 23

Answer: D



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5. The product of a number and 72 exceeds the product of the number and 27 by 360. Find the number

A. 12

B. 7

C. 8

D. 11

Answer: C



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6. The total cost of 10 erasers and 5 sharpeners is at least Rs 65. The cost of each eraser cannot exceed Rs 4. Find the minimum possible cost of each sharpener

A. Rs6

B. Rs 5.50

C. Rs 5

D. Rs 6.50

Answer: C



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7. If the system of linear equations $px + 3y = 9$ and $4x + py = 8$ has unique solution, then

A. $p = - + 2\sqrt{3}$

B. $p \neq - + 3\sqrt{2}$

C. $p \neq - + 2\sqrt{3}$

D. $p = - + 3\sqrt{2}$

Answer: C



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8. In a group of goats and hens, the total number of legs is 12 more than twice the total number of heads. The number of goats is

A. 8

B. 6

C. 2

D. Cannot be determined

Answer: B



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9. If $\frac{x+3}{x-3} < 1$, then which of the following cannot be the value of x ?

A. 0

B. 1

C. 2

D. 4

Answer: D

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10. The system of equation $px + 4y = 32$ and $2qy + 15x = 96$ has infinite solutions. The value of $p - q$ is

A. -1

B. 1

C. 0

D. 11

Answer: A

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11. If x and y are two integers where $x \geq 0$ and $y \geq 0$, then the number of ordered pairs satisfying the inequation $2x + 3y \leq 1$ is

A. 1

B. 2

C. 3

D. 4

Answer: A



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12. The common solution set of the inequations

$$\frac{x}{2} + \frac{y}{2} \leq 1 \text{ and } x + y > 2 \text{ is } \text{---}$$

A. $\{(x, y) / x < 2 \text{ and } y > 2\}$

B. $\{(x, y) / x < 1 \text{ and } y > 1\}$

C. an empty set

D. $\{(x, y) / x < 2 \text{ and } y < 1\}$

Answer: C



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13. If $(1, 4)$ is the point of intersection of the lines $2x + by = 6$ and $3y = 8 + ax$, then find the value of $a - b$

A. 2

B. 3

C. 4

D. -3

Answer: B



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14. If x be a negative integer, then the solution of the inequation

$$1 \leq 2x + 8 \leq 11 \text{ is}$$

A. $\{-5, -3, -4, -2, -1\}$

B. $\{-4, -2, -1\}$

C. $\{-6, -3, -1\}$

D. $\{-3, -2, -1\}$

Answer: D



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15. If $5u + 3v = 13uv$ and $u - v = uv$, then $(u, v) = \underline{\hspace{2cm}}$

A. $(2, 1)$

B. $\left(\frac{1}{2}, 1\right)$

C. $\left(1, \frac{1}{2}\right)$

D. (1, 2)

Answer: C



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16. Solve the equations :

$$4(2^{x-1}) + 9(3^{y-1}) = 17 \text{ and } 3(2^x) - 2(3^y) = 6$$

A. $(x, y) = (2, 1)$

B. $(x, y) = (-2, -1)$

C. $(x, y) = (1, 2)$

D. $(x, y) = (2, -1)$

Answer: A



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17. The solution set of $\frac{2}{x} + \frac{3}{y} = 2$ and $\frac{3}{x} + \frac{4}{y} = 20$ is

A. $(4, -2)$

B. $\left(-\frac{1}{2}, \frac{1}{4}\right)$

C. $(2, -4)$

D. $\left(\frac{1}{4}, \frac{-1}{2}\right)$

Answer: D



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18. Cost of 5 pens and 7 note books is Rs 82 and cost of 4 pens and 4 note books is Rs 52. Find the cost of 2 note books and 3 pens

A. Rs 34.50

B. Rs 30.50

C. Rs 32.50

D. Rs 36.50

Answer: B



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19. If $(a + b, a - b)$ is the solution of the equations $3x + 2y = 20$ and $4x - 5y = 42$, then find the value of b

A. 8

B. -2

C. -4

D. 5

Answer: D



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20. If $0 < \frac{2x - 5}{2} < 7$ and x is an integer, then the sum of the greatest and the least value of x is

A. 9

B. 10

C. 6

D. 12

Answer: D



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21. Number of integral values of x that do not satisfy the inequation

$$\frac{x - 7}{x - 9} > 0 \text{ is } \text{----}$$

A. 4

B. 3

C. 2

D. 0

Answer: B



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22. The solution set formed by the regions $x + y > 7$ and $x + y < 10$ in the first quadrant represents a ___

A. triangle

B. rectangle

C. trapezium

D. rhombus

Answer: C



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23. Solve $\left| 3 - \frac{2x}{5} \right| \leq 4$

A. $\frac{5}{2} \leq x \leq \frac{35}{2}$

B. $\frac{-5}{2} \leq x \leq \frac{35}{2}$

C. $\frac{-35}{2} \leq x \leq \frac{-5}{2}$

D. None of these

Answer: B



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24. In a fraction, if numerator is increased by 2 and denominator is increased by 2, it becomes $\frac{3}{4}$ and if numerator is decreased by 3 and denominator is decreased by 6, it becomes $\frac{4}{3}$. Find the sum of the numerator and denominator

A. 13

B. 18

C. 20

D. 14

Answer: A



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25. If 100 cm is divided into two parts such that the sum of 2 times the smaller part and $\frac{1}{3}$ of the larger part is less than 100 cm, then which of the following is correct ?

A. Larger portion is always less than 60

B. Smaller portion is always less than 60 and more than 40

C. Larger portion is always greater than 60

D. Smaller portion is always greater than 40

Answer: C



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26. If $2a - 3b = 1$ and $5a + 2b = 50$, then what is the value of $a - b$?

A. 10

B. 6

C. 7

D. 3

Answer: D



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27. The fair of 3 full tickets and 2 half tickets is Rs 204 and the fair of 2 full tickets and 3 half tickets is Rs 186. find the fair of a full ticket and a half ticket.

A. Rs 94

B. Rs 78

C. Rs 86

D. Rs 62

Answer: B



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28. If $\frac{3}{2}x + 2y = \frac{x}{4} - \frac{y}{2} = 1$, then $x - y =$

A. 1

B. 3

C. 2

D. 0

Answer: B



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29. If we add 1 to the numerator and subtract 1 from the denominator, a fraction becomes 1. It also becomes $\frac{1}{2}$ if we only add 1 to the denominator. What is the fraction?

A. 7

B. 8

C. 2

D. 11

Answer: B

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30. If $4x - 3y = 7xy$ and $3x + 2y = 18xy$, then $(x,y) =$

A. $\left(\frac{1}{2}, \frac{1}{3}\right)$

B. $(3, 4)$

C. $(4, 3)$

D. $\left(\frac{1}{3}, \frac{1}{4}\right)$

Answer: D

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Level 2

1. Jeevesh had 92 currency notes in all, some of which were of Rs 100 denomination and the remaining of Rs 50 denominator. The total

value of amount of all these currency notes was Rs 6350. How much amount in rupees did he have in the denomination of Rs 50 ?

A. 3500

B. 3350

C. 2850

D. 2600

Answer: C



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2. The solution set of the inequation $\frac{1}{5+3x} \leq 0$ is

A. $x \in \left(\frac{-5}{3}, \infty \right)$

B. $x \in \left(-\infty, \frac{5}{3} \right)$

C. $x \in \left(\frac{5}{3}, \infty \right)$

D. $x \in \left(\infty, \frac{-5}{3}\right)$

Answer: D



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3. If $2|x| - |y| = 3$ and $4|x| + |y| = 3$, then number of possible ordered pairs of the form (x,y) is

A. 0

B. 1

C. 2

D. 4

Answer: A



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4. The solution set formed by the inequations $x \geq -7$ and $y \geq -7$ in the third quadrant represents a

A. trapezium

B. rectangle

C. square

D. rhombus

Answer: C



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5. Find the solution of the inequation $\frac{1}{|3x - 5|} > 2$, where x is a positive integer

A. $\{2, 3\}$

B. $\{2, 3, 4\}$

C. $x = 2$

D. Null set

Answer: D



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6. A father wants to divide Rs 200 into two parts between two sons such that by adding three times the smaller part of half of the larger part, then this will always be less than Rs 200. How will he divide this amount ?

A. Smaller part is always less than 50

B. Larger part is always greater than 160

C. Larger part is always less than 160

D. Smaller part is always greater than 40

Answer: B



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7. Solve $|7 - 2x| \leq 13$

A. $3 \leq x \leq 10$

B. $-3 < x < 10$

C. $-10 \leq x \leq 3$

D. $-3 \leq x \leq 10$

Answer: D



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8. If an ordered pair, satisfying the equations $x + y = 7$ and $3x - 2y = 11$, is also satisfies the equation

$3x + py - 17 = 0$, then the value of p is ____

A. 2

B. -2

C. 1

D. 3

Answer: C



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9. Solve for x : $|2x + 3| < 2x + 4$

A. $x > -2$

B. $x > -\frac{7}{4}$

C. $x < -\frac{7}{4}$

D. $x < -2$

Answer: B



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10. Find the value of x and y , which satisfy the simultaneous equations $1010x + 1011y = 4040$ and $1011x + 1010y = 4044$

A. $x = 2, y = -4$

B. $x = 0, y = 4$

C. $x = 4, y = 4$

D. $x = 4, y = 0$

Answer: D



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11. A bus conductor gets a total of 220 coins of 25 paise, 50 paise and Rs 1 daily. One day he got Rs 110 and next day he got Rs 80 in that the number of coins of 25 paise and 50 paise coins are interchanged then find the total number of 50 paise coins and 25 paise coins

A. 180

B. 190

C. 160

D. 200

Answer: D



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12. The common solution set of the inequations $5 \leq 2x + 7 \leq 8$ and $7 \leq 3x + 5 \leq 9$ is _____

A. $\frac{2}{3} \leq x \leq \frac{4}{3}$

B. $-1 \leq x \leq \frac{4}{3}$

C. $\frac{2}{3} \leq x \leq \frac{1}{2}$

D. Null set

Answer: D



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13. The solution set formed by the inequations

$x + y \geq 3, x + y \leq 4, x \leq 2$ in the first quadrant represents a

A. triangle

B. parallelogram

C. rectangle

D. rhombus

Answer: B



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14. Shiva's age is three times that of Ram. After 10 years Shiva's age becomes less than twice the age of Ram. What can be the maximum present age (in complete years) of Shiva?

A. 30

B. 10

C. 9

D. 29

Answer: D



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15. In an ICC Champions trophy series, Sachin scores 68 runs and 74 runs out of three matches. A player can be placed in Grade A of ICC rankings if the average score of three matches is at least 75 and at most 85. Sachin is placed in Grade A. What is the maximum runs that he should score in the third match ?

A. 105

B. 83

C. 113

D. 97

Answer: C



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16. The sum of predecessors of two numbers is 36 and their difference is 4. Find the numbers.

The following are the steps involved in solving the above problem.

Arrange them in sequential order

(A) $X - 1 + Y - 1 = 36$ and $X - Y = 4$

(B) Solve for X and Y

(C) Let $X > Y$

(D) Let the number be X and Y

A. CDAB

B. CDBA

C. DCAB

D. DCBA

Answer: C



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17. The following are the steps involved in solving the equations $2^x + 3^y = 17$ and $2^{x+1} + 3^{y+1} = 43$ for x and y . Arrange them in sequential order. (A) Rewrite the given equations in terms of p and q . (B) Let $p = 2^x$ and $q = 3^y$ (C) Solve for x and y (D) solve for p and q

A. ABCD

B. ABDC

C. BACD

D. BADC

Answer: C



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18. There are two numbers. The predecessor of the larger number exceeds the successor of the smaller number by 6. The sum of the

numbers is 32. Find the numbers

The following are the steps involved in solving the above problem.

Arrange them in sequential order.

(A) $M + N = 32$ and $M - 1 - (N + 1) = 6$

(B) Let $N < M$

(C) Solve for M and N

(D) Let of numbers be M and N

A. BDCA

B. BDAC

C. DBCA

D. DBAC

Answer: D



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19. The following are two steps involved in finding the values of p and q from $3^p + 5^q = 52$ and $3^{p-1} + 5^{q-1} = 14$. Arrange them in sequential order

- (A) Let $x = 3^p$ and $y = 5^q$
- (B) Solve for x and y
- (C) find p and q
- (D) Rewrite the given equations in terms of x and y

A. ABCD

B. ADCB

C. ACBD

D. ADBC

Answer: D



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20. Solve for x : $2x - 3 \leq 5x + 9$

A. $x \geq -4$

B. $x \geq -3$

C. $x \geq -2$

D. $x \geq -1$

Answer: A



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21. X is an integer satisfying $1 \leq 2X + 3 \leq 7$. How many values can it take ?

A. 4

B. 3

C. 5

D. 6

Answer: A



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22. Solve for x : $5x + 4 \geq x + 12$

A. $x \geq 0$

B. $x \geq 1$

C. $x \geq 2$

D. $x \geq 3$

Answer: C



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23. Y is an integer satisfying $-3 \leq 4Y - 7 \leq 5$. How many values can it take ?

A. 2

B. 4

C. 3

D. 5

Answer: C



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24. N is a three-digit number. If exceeds the number formed by reversing the digits by 792. Its hundreds digit can be

A. 9

B. 8

C. Either (a) or (b)

D. Neither (a) nor (b)

Answer: C



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25. X is a three-digit number. The number formed by reversing the digits of X is 891 less than X. Find its units digit

A. 0

B. 1

C. 2

D. Cannot be determined

Answer: A



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Level 3

1. An examination consists of 160 questions. One mark is given for every correct option. If one fourth mark is deducted for every wrong option and half mark is deducted for question left, then one person scores 79. And if half mark is deducted for every wrong and one-fourth mark is deducted for every left question, then person scores 76, then find the number of questions he attempted correctly

- A. 80
- B. 100
- C. 120
- D. 140

Answer: b



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2. Runs scored by Sachin in a charity match is 10 more than the balls faced by Lara. The number of balls faced by Sachin is 5 less than the runs scored by Lara. Together they have scored 105 runs and Sachin faced 10 balls less than the balls faced by Lara. How many runs were scored by Sachin ?

A. 45

B. 60

C. 50

D. 55

Answer: b



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3. The number of ordered pairs of different prime numbers whose sum is not exceeding 26 and difference between second number and first number cannot be less than 10

A. 8

B. 9

C. 10

D. 11

Answer: d



View Text Solution

4. The number of possible pairs of successive prime numbers, such that each of them is greater than 40 and their sum is utmost 100, is

A. 3

B. 2

C. 4

D. 1

Answer: a



View Text Solution

5. In an election the supporters of two candidates A and B were taken to polling booth in two different vehicles, capable of carrying 10 and 15 voters respectively. If at least 90 vehicles were required to carry a total of 1200 voters, then find the maximum number of votes by which the elections could be won by the Candidate B

A. 900

B. 600

C. 300

D. 500

Answer: b



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6. A test has 60 questions. For each correct answer 2 marks are awarded and each wrong answer 1 marks is deducted. A candidate attempted all the questions in the test and scored 90 marks. Find the number of questions he attempted correctly

A. 54

B. 48

C. 49

D. 50

Answer: d



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7. Krishna and Sudheer have some marbles with them. If Sudheer gives 10 marbles to Krishna. Krishna will have 40 more marbles than Sudheer. If Sudheer gives 40 marbles to Krishna, Krishna will have 5 times as many marbles as Sudheer. Find the number of marbles with Sudheer

A. 65

B. 55

C. 70

D. 50

Answer: A

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8. In a test, for each correct answer 1 mark is awarded and each wrong answer half a mark is deducted. The test has 70 questions. A candidate attempted all the questions in the test and scored 40 marks. How many question did he attempt wrongly ?

A. 15

B. 20

C. 25

D. 10

Answer: b



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9. Amar and Bhavan have a certain amount with them. If Bhavan gives $Rs. 20$ to Amar, he will have half the amount with Amar. If

Amar gives $Rs. 40$ to Bhavan, he will have half the amount with Bhavan. Find the amount with Bhavan.

A. $Rs70$

B. $Rs90$

C. $Rs60$

D. $Rs80$

Answer: d



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10. Solve for z : $4x + 5y + 9z = 36$, $6x + \frac{15}{2}y + 11z = 49$

A. 2

B. 1

C. 3

D. Cannot be determined

Answer: A



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