



MATHS

BOOKS - OSWAL PUBLICATION

PAIR OF LINEAR EQUATIONS IN TWO VARIABLES

Stand Alone Mcqs

1. Graphically, the pair of equations

$$6x - 3y + 10 = 0$$

$$2x - y + 9 = 0$$

represents two lines which are

- A. intersecting at exactly one point
- B. intersecting at exactly two point
- C. coincident
- D. parallel

Answer: D



Watch Video Solution

2. The pair of equations $x + 2y + 5 = 0$ and $-3x - 6y + 1 = 0$ has

- A. a unique solution
- B. exactly two solutions
- C. infinitely many solutions
- D. no solution

Answer: D



Watch Video Solution

3. If a pair of linear equations is consistent, then the lines will be

A. parallel

B. always coincident

C. intersecting or coincident

D. always intersecting

Answer: C



Watch Video Solution

4. The pair of equations $x = a$ and $y = b$ graphically represents lines which are

- A. parallel
- B. intersecting at (b,a)
- C. coincident
- D. intersecting at (a,b)

Answer: D



Watch Video Solution

5. The pair of equations $y = 0$ and $y = -7$ has

- A. one solution
- B. two solutions
- C. infinitely many solutions
- D. no solution

Answer: D



Watch Video Solution

6. For what value of k , do the equations

$$3x - y + 8 = 0 \quad \text{and} \quad 6x - ky = -16$$

represent coincident lines ?

A. $\frac{1}{2}$

B. $\frac{-1}{2}$

C. 2

D. -2

Answer: C



Watch Video Solution

7. If the lines given by $3x + 2ky = 2$ and $2x + 5y = 1$ are parallel, then the value of k is

A. $\frac{-5}{4}$

B. $\frac{2}{5}$

C. $\frac{15}{4}$

D. $\frac{3}{2}$

Answer: C



Watch Video Solution

8. The value of c for which the pair of equations $cx - y = 2$ and $6x - 2y = 3$ will have infinitely many solutions is

A. 3

B. -3

C. -12

D. no value

Answer: D



Watch Video Solution

9. A pair of linear equations which has a unique solution $x = 2$ and $y = -3$ is

- A. $x + y = -1$
 $2x - 3y = -5$
- B. $2x + 5y = -11$
 $4x + 10y = -22$
- C. $2x - y = 1$
 $3x + 2y = 0$
- D. $x - 4y - 14 = 0$
 $5x - y - 13 = 0$

Answer: B::D



Watch Video Solution

10. If $x = a$ and $y = b$ is the solution of the equations $x - y = 2$ and $x + y = 4$, then the values of a and b are, respectively

A. 3 and 5

B. 5 and 3

C. 3 and 1

D. -1 and 3

Answer: C



Watch Video Solution

11. Aruna has only Rs. 1 and Rs. 2 coins with her. If the total number of coins that she has is 50 and the amount of money with her is Rs. 75, then the number of Rs. 1 and Rs. 2 coins are, respectively

A. 35 and 15

B. 35 and 20

C. 15 and 35

D. 25 and 25

Answer: D



Watch Video Solution

12. The father's age is six times his son's age. Four years hence, the age of the father will be four times his son's age. The present ages (in year) of the son and the father are, respectively

A. 4 and 24

B. 5 and 30

C. 6 and 36

D. 3 and 24

Answer: C



Watch Video Solution

13. 8 chairs and 5 tables for a classroom cost Rs.10500, while 5 chairs and 3 tables cost Rs. 6450. Find the cost of each chair and that of each table.

A. *Rs.* 750

B. *Rs.* 600

C. *Rs.* 900

D. None of these

Answer: A



Watch Video Solution

14. In a $\triangle PQR$, Let $\angle PQR = 30^\circ$ and the sides PQ and QR have lengths $10\sqrt{3}$ and 10, respectively. Then, which of the following statement(s) is (are) TRUE

A. 30°

B. 60°

C. 40°

D. 80°

Answer: C



Watch Video Solution

15. The sum of two numbers is 1000 and the difference between their squares is 256000.

Find the numbers.

A. 372

B. 700

C. 628

D. 640

Answer: C



Watch Video Solution

16. The larger of the two supplementary angles exceeds the smaller by 20° . Find smaller angle.

A. 80°

B. 100°

C. 90°

D. 70°

Answer: A



Watch Video Solution

Assertion And Reason Based Mcqs

1. Assertion (A) : Pair of linear equations

$$9x + 3y + 12 = 0 \quad \text{and} \quad 18x + 6y + 24 = 0$$

have infinitely many solutions

Reason (R) : Pair of linear equations

$$a_1x + b_1y + c_1 = 0 \quad \text{and} \quad a_2x + b_2y + c_2 = 0$$

have infinitely many solutions if

$$\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$$

A. Both A and R are true and R is the

correct explanation for A.

B. Both A and R are true and R is not correct explanation for A.

C. A is true but R is false

D. A is false but R is true

Answer: A



Watch Video Solution

2. Find the number of solutions a pair of linear equation $(4x-9y+13=0$ and $2x+3y-13=0)$ have.

A. Both A and R are true and R is the correct explanation for A.

B. Both A and R are true and R is not correct explanation for A.

C. A is true but R is false

D. A is false but R is true

Answer: C



Watch Video Solution

3. Assertion (A) : $x = 3$ and $y = 1$ is the solution for the lines $x + 5y = 3$ and $x - y = 1$

Reason (R) : The point of intersection of two lines in a graph is the common solution for both the lines represented by the equations.

A. Both A and R are true and R is the correct explanation for A.

B. Both A and R are true and R is not correct explanation for A.

C. A is true but R is false

D. A is false but R is true

Answer: D



Watch Video Solution

4. Assertion (A) : The lines $2x - 5y = 7$ and $6x - 15y = 8$ are parallel lines.

Reason (R) : Pair of linear equations

$$a_1x + b_1y + c_1 = 0 \text{ and } a_2x + b_2y + c_2 = 0$$

have infinitely many solutions if

$$\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$$

A. Both A and R are true and R is the correct explanation for A.

B. Both A and R are true and R is not correct explanation for A.

C. A is true but R is false

D. A is false but R is true

Answer: B



Watch Video Solution

5. The ratio of incomes of two person is $8 : 5$ and the ratio of their expenditure is $2 : 1$. If each of them manages to save ? 1000 per month , find the difference of their month income.

A. Both A and R are true and R is the correct explanation for A.

B. Both A and R are true and R is not correct explanation for A.

C. A is true but R is false

D. A is false but R is true

Answer: B



Watch Video Solution

6. Assertion (A) : The value of $q = \pm 2$, if $x = 3$, $y = 1$ is the solution of the line $2x + y - q^2 - 3 = 0$.

Reason (R) : The solution of the line will satisfy the equation of the line.

A. Both A and R are true and R is the correct explanation for A.

B. Both A and R are true and R is not correct explanation for A.

C. A is true but R is false

D. A is false but R is true

Answer: A



Watch Video Solution

7. A part of monthly hostel charges is fixed and the remaining depends on the number of days one has taken food in the mess. When a student A takes food for 20 days she has to pay 1000 as hostel charges whereas a student who takes B food for 26 days, pays 1180 as hostel charges. Find the fixed charges and the cost of food per day.

A. Both A and R are true and R is the correct explanation for A.

B. Both A and R are true and R is not correct explanation for A.

C. A is true but R is false

D. A is false but R is true

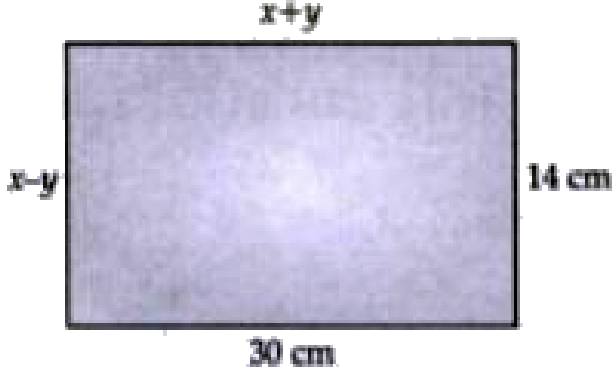
Answer: A



Watch Video Solution

8. Assertion : For the given figure , $x + y = 14$

and $x - y = 30$



Reason : Opposite sides of the rectangle are equal.

- A. Both A and R are true and R is the correct explanation for A.
- B. Both A and R are true and R is not correct explanation for A.
- C. A is true but R is false

D. A is false but R is true

Answer: D



Watch Video Solution

Case Based Mcqs

1. A sailor in river takes a boat from place A to place B, and returns to A. place A and B are 21 km apart. And he takes 10 hours to go and return. The time taken by the boat to row 7 km

downstream is equal to the time taken by the boat to row 3 km upstream. Then what is the speed of the current?

A. $(x + y)km / h$

B. $(x - y)km / h$

C. $xykm / h$

D. $\frac{x}{y}km / h$

Answer: A



Watch Video Solution

2. To attend an exam Sudhir reached the school by travelling 5 km towards south and after a sharp left turn he travelled for about 10 km . He again made a sharp left turn and reached in front of the school by travelling 5 km more which direction is Sudhir's starting point from the school ?

A. $(x + y)km / h$

B. $(x - y)km / h$

C. $xykm / h$

D. $\frac{x}{y}km / h$

Answer: B



Watch Video Solution

3. A sailor in river takes a boat from place A to place B, and returns to A. place A and B are 21 km apart. And he takes 10 hours to go and return. The time taken by the boat to row 7 km downstream is equal to the time taken by the boat to row 3 km upstream. Then what is the speed of the current?

A. 5 km/h

B. 2 km/h

C. 7 km/h

D. none of these

Answer: A



Watch Video Solution

4. To attend an exam Sudhir reached the school by travelling 5 km towards south and after a sharp left turn he travelled for about 10

km . He again made a sharp left turn and reached in front of the school by travelling 5 km more which direction is Sudhir's starting point from the school ?

A. 5 km/h

B. 2 km/h

C. 7 km/h

D. none of these

Answer: B



Watch Video Solution

5. To attend an exam Sudhir reached the school by travelling 5 km towards south and after a sharp left turn he travelled for about 10 km . He again made a sharp left turn and reached in front of the school by travelling 5 km more which direction is Sudhir's starting point from the school ?

A. 5 km/h

B. 4 km/h

C. 3 km/h

D. none of these

Answer: C



Watch Video Solution

6. 8% of the voters in an election did not cast their votes. In this election, there were only two candidates. The winner by obtaining 48% of the total votes defeated his contestant by 1100 votes. The total number of voters in the election was:

A. $18000 - xy$

B. $18000 + x - y$

C. $18000 - x - y$

D. none of these

Answer: C



Watch Video Solution

7.8% of the voters in an election did not cast their votes. In this election, there were only two candidates. The winner by obtaining 48%

of the total votes defeated his contestant by 1100 votes. The total number of voters in the election was:

A. 8000

B. 6000

C. 5400

D. 12000

Answer: A



Watch Video Solution

8. Equal masses of two samples of charcoal A and B are burnt separately and the resulting carbon dioxide are collected in two vessels. The radioactivity of ^{14}C is measured for both the gas samples. The gas from the charcoal A gives 2100 counts per week and the gas from the charcoal A gives 2100 counts per week and the gas from the charcoal B gives 1400 counts per week. Find the age difference between the two samples. Half-life of $^{14}\text{C} = 5730\text{y}$.

A. 8000

B. 6000

C. 5400

D. 12000

Answer: B

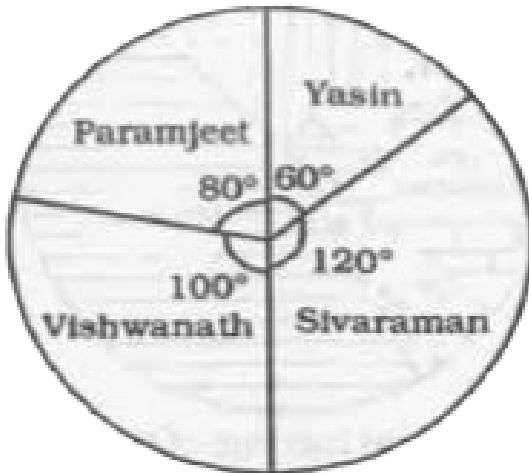


Watch Video Solution

9. The pie chart, given here, represents the number of valid votes obtained by four students who contested election for school leadership. The total number of valid votes

polled was 720.

Observe the chart and answer the questions based on it.



By how many votes did the winner defeat his nearest rival ?

A. 8000

B. 6000

C. 5400

D. 14000

Answer: D



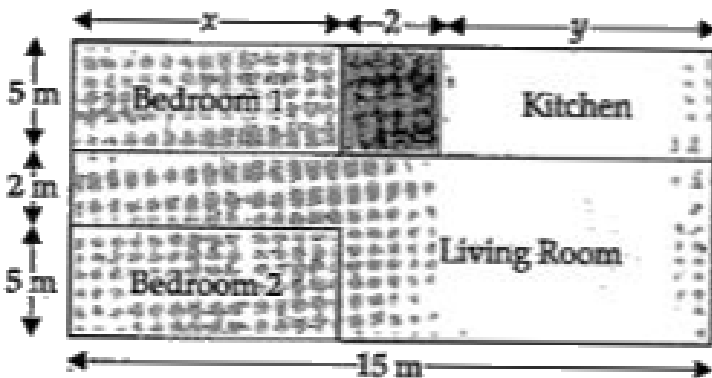
Watch Video Solution

10. If $5x - 3 = 2x - 9$; then $x = ?$



Watch Video Solution

11. Amit is buying house and its layout is given below. The design and the measurement has been made such that areas of two bedrooms and kitchen together is 95 sq.m.



Which of the following equations represents above situation ?

A. $2x + y = 19, x + y = 13$

B. $2x - y = 19, x - y = 13$

C. $2x + y = 19, x - y = 13$

D. $2x - y = 19, x + y = 13$

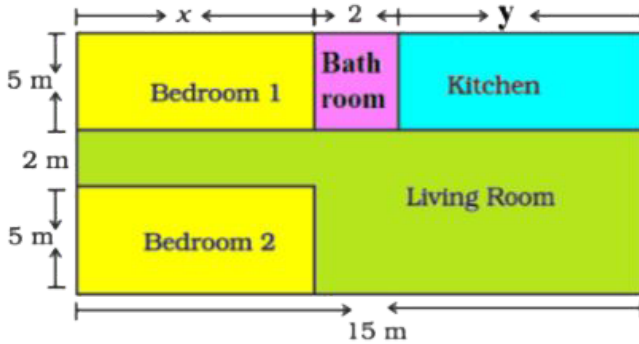
Answer: A



Watch Video Solution

12. Amit is planning to buy a house and the layout is given below. The design and the measurement has been made such that areas of two bedrooms and kitchen together is 95

sq.m.



Based on the above information, answer the following questions:

Find the area of each bedroom and kitchen in the layout.

A. 30 sq.m, 45 sq.m

B. 30 sq.m, 35 sq.m

C. 50 sq.m, 35 sq.m

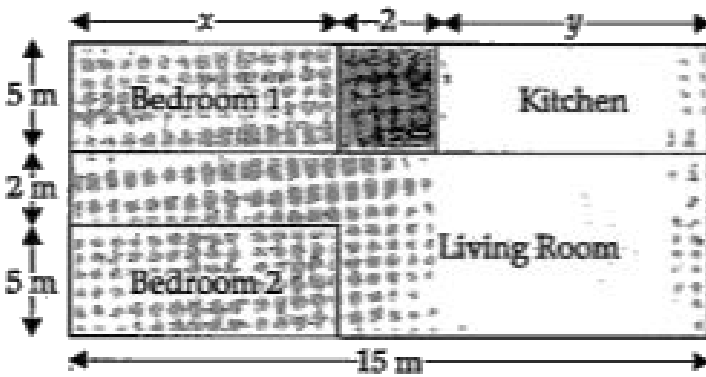
D. 30 sq.m, 55 sq.m

Answer: B



Watch Video Solution

13. Amit is buying house and its layout is given below. The design and the measurement has been made such that areas of two bedrooms and kitchen together is 95 sq.m.



Find the length of outer boundary of the layout.

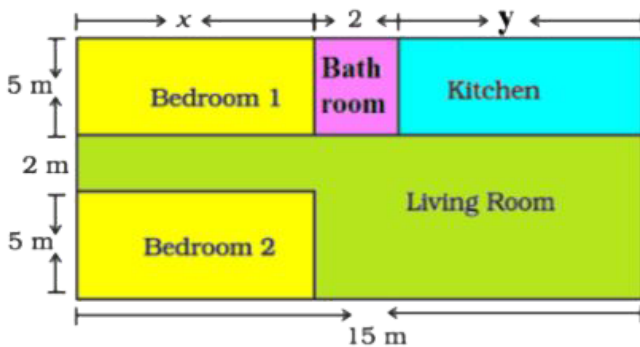
- A. 100m
- B. 50m
- C. 65m
- D. 54m

Answer: D



Watch Video Solution

14. Amit is planning to buy a house and the layout is given below. The design and the measurement has been made such that areas of two bedrooms and kitchen together is 95 sq.m.



Based on the above information, answer the

following questions:

Find the area of living room in the layout.

A. 75 sq.m

B. 60 sq.m

C. 85 sq.m

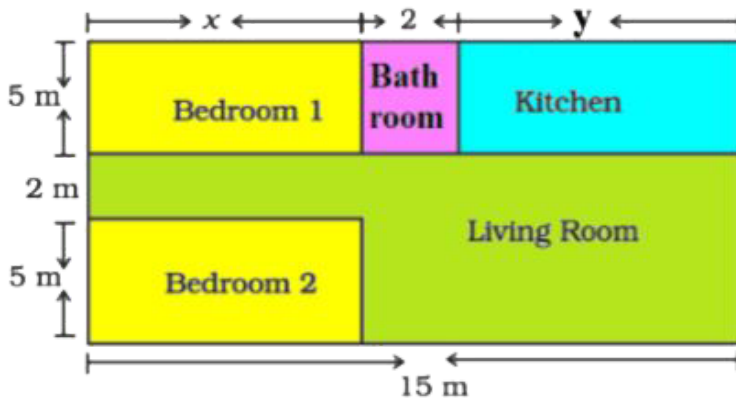
D. 100 sq.m

Answer: A



Watch Video Solution

15. Amit is planning to buy a house and the layout is given below. The design and the measurement has been made such that areas of two bedrooms and kitchen together is 95 sq.m.



Based on the above information, answer the following questions:

Find the cost of laying tiles in kitchen at the rate of Rs. 50 per sq.m

A. 1500 Rs.

B. 1750 Rs.

C. 1450 Rs.

D. 1200Rs.

Answer: B



Watch Video Solution