JSUNIL TUTORIAL

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Solved Assignments

Solve the following system of linear equations by Substitution method:

Q. 1.

$y = 3(x+1)\ ;\ 2x+3y = 9.$

Q. 2.

$x - y = 0.9\ ;\ \dfrac{11}{2(x+y)} = 1.$

Solve the following system of linear equations by Elimination Method(Equating coefficients)

Q. 3.

$\dfrac{44}{x+y} + \dfrac{30}{x-y} = 10\ ;\ \dfrac{55}{x+y} + \dfrac{40}{x-y} = 13, \quad x+y \neq 0, x-y \neq 0.$

Q. 4.

$8x + y = 2xy;\ 6x + y = 10xy.$

Solve the following system of linear equations by Cross Multiplication method

Q. 5.

$ax + by = a - b\ ;\ bx - ay = a + b.$

Q. 6.

$\dfrac{2x}{a} + \dfrac{y}{b} = 2, \dfrac{x}{a} - \dfrac{y}{b} = 4. a, b \neq 0.$

Solve the following pairs of equations by reducing them to a pair of linear equations.

Q. 7.

$\dfrac{1}{2(x+2y)} + \dfrac{5}{3(3x-2y)} = \dfrac{17}{42};\ \dfrac{5}{4(x+2y)} - \dfrac{3}{5(3x-2y)} = \dfrac{41}{700}.$

Q. 8.

$$\frac{1}{2(x+2y)}+\frac{5}{3(3x-2y)}=-\frac{3}{2};\ \frac{5}{4(x+2y)}-\frac{3}{5(3x-2y)}=\frac{61}{60}.$$

Solve the following pair of linear equations in two variables:

Q. 9.

$$\frac{148}{x}+\frac{231}{y}=\frac{527}{xy};\ \frac{231}{x}+\frac{148}{y}=\frac{610}{xy};\ x,y\neq 0.$$

Q. 10. Solve:

$$\frac{5x+6y-7}{2}=\frac{2x+5y+3}{3}=\frac{8-4x+3y}{2}.$$

Q. 11. Solve graphically: $5x-6y+30=0\ \&\ 5x+4y-20=0$. Determine the vertices of the triangle formed by the lines and x-axis.

Q. 12. The present age of a father is equal to the sum of the ages of his 5 children. 12 years hence the sum of the ages of his children will be twice the ages of their father. Find the present age of the father.

Q. 13. A man travels 600 km partly by train and partly by car. If he covers 400 km by train and the rest by car, it takes 6 hours and 30 minutes. But if he travels 200 km by train and rest by car, he takes half an hour longer. Find the speed of the train and that of car.

Q. 14. Two places A and B are 80 km apart from each other on a highway. A car stats from A and another from B at the same time. If they move in the same direction, they meet in 8 hours and if they move in opposite directions the meet in 1hour and 20 minutes. Find the seed of the cars.

Q. 15. A train covered a certain distance at a uniform speed. If the train would have 6 km/hr. aster it would have taken 8 hrs. Less than the scheduled time. And if the train were slower by 6 km/hr. it would have taken 12 hours more than the scheduled time. Find the length of the journey