

Express the value of x in the following equations :

1. $x + y = 8$; $2x + z = 10$; $x - 2y = 12$; $\frac{x}{2} = y + z$.

2. $\frac{x+2}{4} = y$; $2x + y - \frac{x}{2} + \frac{y}{4} = 12$; $\frac{3x+2y}{8} = \frac{x+18}{4}$.

3. $x - a = b + 8$; $3x - a + b = \frac{2a}{4}$; $2x + \frac{2a}{9} = \frac{36 + 9}{9}$.

4. $\frac{x+a}{8} + \frac{b+6}{4} = 12$; $\frac{3x+a}{5} + \frac{b}{2} = \frac{8a}{10}$; $\frac{x}{a} + b = 4 - 2b$.

Express the value of x and of y in the following equations :

5. $x + y = 18$; $x - y = 2$; $2x + y = 28$; $2x - y = 12$.

6. $3x + 2y = 32$; $4x - 3y = 20$; $\frac{3x}{4} + y = 10$; $x + \frac{y}{2} = 10$.

7. $4x - 3y = \frac{a}{4}$; $\frac{3x}{9} + \frac{4y}{3} = \frac{a}{3}$; $\frac{2x-4y}{3} + a = \frac{b-1}{6}$.

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

9. If from the equation $3x + 2y = 18$ you take the equation $2x + 2y = 14$, what remains? If to the equation $2x + 2y = 14$ you add $3x - 2y = 6$, what is the sum?

10. Show by adding the two equations $x + y = 9$ and $3x - y = 11$ how you can find the value of x . What is the value of y ?

11. Show by subtraction in the equations $x + y = 9$ and $3x + y = 19$ how you can find the value of x .

12. Having two equations with two unknown quantities in each, how, by addition or subtraction, may the value of one of the unknown quantities be found?

Find by addition or subtraction the value of x and y in the following equations :

13. $\begin{cases} x + 4y = 16. \\ x - 2y = 4. \end{cases}$

14. $\begin{cases} x + y = 11. \\ 2x + 3y = 28. \end{cases}$

15. $\begin{cases} 2x + 3y = 29. \\ x + 2y = 17. \end{cases}$

16. $\begin{cases} 3x + 2y = 21. \\ 9x - 4y = 3. \end{cases}$

17. $\begin{cases} 2x + 6y = 30. \\ x - 3y = 3. \end{cases}$

18. $\begin{cases} 5x + 4y = 55. \\ 3x + 3y = 39. \end{cases}$