

1. In each of the two equations $x - y = 2$ and $x + 3y = 26$ express the value of x . Apply the principle: Quantities that are equal to the same quantity are equal to each other. What is the equation? What is the value of y ? By substitution find the value of x .

2. By comparison of equations, as in the last exercise, find the value of x in the equations $x + y = 8$ and $2x + y = 14$. What is the value of y ?

By comparison find the value of x and of y in the following equations:

$$3. \begin{cases} x + y = 9. \\ 3x + y = 17. \end{cases}$$

$$4. \begin{cases} 4x + y = 14. \\ 3x + y = 11. \end{cases}$$

$$5. \begin{cases} 2x + 3y = 24. \\ 3x + y = 22. \end{cases}$$

$$6. \begin{cases} 2x - y = 4. \\ 3x + 2y = 27. \end{cases}$$

$$7. \begin{cases} 2x + 3y = 25. \\ x - 2y = 2. \end{cases}$$

$$8. \begin{cases} 3x + 2y = 46. \\ 4x - 3y = 16. \end{cases}$$

$$9. \begin{cases} 2x + 5y = 53. \\ 4x - 4y = 8. \end{cases}$$

$$10. \begin{cases} 3x - 6y = 12. \\ 4x + 3y = 60. \end{cases}$$

$$11. \begin{cases} 2x + 4y = 66. \\ 8x - 3y = 36. \end{cases}$$

$$12. \begin{cases} 5x + 2y = 74. \\ 6x + 3y = 96. \end{cases}$$

$$13. \begin{cases} 3x + 2y = 63. \\ 8x - 6y = 66. \end{cases}$$

$$14. \begin{cases} 4x + 3y = 56. \\ 8x - 5y = 24. \end{cases}$$

$$15. \begin{cases} \frac{x}{2} + 8 = 5y - 6. \\ \frac{x}{4} + 12 = 6y - 9. \end{cases}$$

$$16. \begin{cases} \frac{2x + 3y}{5} = 2y - 4. \\ \frac{x - y}{3} - \frac{y}{4} = \frac{x + 2}{5}. \end{cases}$$

$$17. \begin{cases} \frac{3x - y}{3} = \frac{y}{4} + 6. \\ \frac{x}{2} + \frac{2y}{8} = \frac{3x}{4} + 1. \end{cases}$$

$$18. \begin{cases} \frac{2x - 3y}{6} = \frac{x}{3} + 1. \\ \frac{x}{3} + \frac{5x}{2} = x + 5. \end{cases}$$

$$19. \begin{cases} \frac{3x + 2y}{8} = \frac{2y}{3} + 5. \\ \frac{x}{4} - \frac{3y}{9} = \frac{y}{12}. \end{cases}$$

$$20. \begin{cases} \frac{4x - 40}{8} = \frac{y}{4\frac{1}{2}}. \\ \frac{4y - 60}{12} = \frac{x}{3} + 1. \end{cases}$$

$$21. \begin{cases} \frac{x}{2} + \frac{x}{3} = \frac{y}{4}. \\ \frac{z}{2} - \frac{y}{5} = \frac{x}{4}. \\ \frac{3x}{2} - \frac{2z}{3} = 4. \end{cases}$$

$$22. \begin{cases} \frac{2x}{8} + \frac{6y}{4} = 6. \\ 6y - 2 = z. \\ \frac{3y}{2} + \frac{x}{6} = 5. \end{cases}$$

$$23. \begin{cases} 3x - y + z = 13. \\ 2y - 3x - 2z = 1. \\ \frac{x}{3} + \frac{y}{2} = 2z + 1. \end{cases}$$