

Solving

Equations

Equations involving Addition

① $y + 6 = 9$ ② $x + 3 = 1$ ③ $-3 = a + 4$ ④ $14 + m = 20$

⑤ The sum of a number and 3 is -2. Find the number.

⑤ Three more than the product of a number and 4 is 15. Find the number.

⑥ Five less than three times a number is 1. Find the number,

⑦ The product of 2 and a number is increased by 9. The result is -17. What is the number?

⑧ If you subtract 3 from twice a number, the result is 25. What is the number?

$$\textcircled{1} \quad 3x + 2 = 23$$

$$\textcircled{2} \quad -2y - 7 = 3$$

$$\textcircled{3} \quad -3n - 8 = 7$$

$$\textcircled{4} \quad \frac{k}{-2} + 7 = 10$$

Equations involving subtraction

$$\textcircled{6} \quad x - 2 = 1$$

$$\textcircled{7} \quad y - 3 = 4$$

$$\textcircled{8} \quad r - 4 = -2$$

$$\textcircled{9} \quad -9 = q - 8$$

$\textcircled{10}$ If you decrease a number by 4, the result is -5. Find the number.

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Equations involving Multiplication

① $20 = 4z$

② $-8g = 24$

③ $30 = -6e$

④ $-9h = -72$

⑤ The product of a number and 5 is -35. Find the number.

Equations involving Division

⑥ $\frac{x}{4} = 7$

⑦ $\frac{m}{-6} = 6$

⑧ $-12 = \frac{r}{2}$

⑨ $-15 = \frac{g}{-3}$

⑩ The quotient of a number and -4 is 5. What is the number?



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Answer Key!

Solving

Equations

Equations involving Addition

$$\begin{array}{r} \textcircled{1} \quad y + 6 = 9 \\ \quad -6 \quad -6 \\ \hline \end{array}$$

$$y = 3$$

$$\begin{array}{r} \textcircled{2} \quad x + 3 = 1 \\ \quad -3 \quad -3 \\ \hline \end{array}$$

$$x = -2$$

$$\begin{array}{r} \textcircled{3} \quad -3 = a + 4 \\ \quad -4 \quad -4 \\ \hline \end{array}$$

$$-7 = a$$

$$a = -7$$

$$\begin{array}{r} \textcircled{4} \quad 14 + m = 20 \\ \quad -14 \quad -14 \\ \hline \end{array}$$

$$m = 6$$

- ⑤ The sum of a number and 3 is -2. Find the number.

$$\begin{array}{r} n + 3 = -2 \\ \quad -3 \quad -3 \\ \hline \end{array}$$

$$n = -5$$

- ⑤ Three more than the product of a number and 4 is 15. Find the number.

$$4n + 3 = 15$$

$$4n + 3 = 15$$

$$4n = 12$$

$$n = 3$$

- ⑥ Five less than three times a number is 1. Find the number,

$$3n - 5 = 1$$

$$3n - 5 = 1$$

$$3n = 6$$

$$n = 2$$

- ⑦ The product of 2 and a number is increased by 9. The result is -17. What is the number?

$$2n + 9 = -17$$

$$2n + 9 = -17$$

$$2n = -26$$

$$n = -13$$

- ⑧ If you subtract 3 from twice a number, the result is 25. What is the number?

$$2n - 3 = 25$$

$$2n - 3 = 25$$

$$2n = 28$$

$$n = 14$$

$$\begin{aligned} \textcircled{1} \quad 3x + 2 &= 23 \\ -2 \quad -2 \\ 3x &= 21 \\ x &= 7 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad -2y - 7 &= 3 \\ +7 \quad +7 \\ -2y &= 10 \\ y &= -5 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad -3n - 8 &= 7 \\ +8 \quad +8 \\ -3n &= 15 \\ n &= -5 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad \frac{k}{-2} + 7 &= 10 \\ -7 \quad -7 \\ \frac{k}{-2} &= 3 \\ k &= -6 \end{aligned}$$

Equations involving subtraction

$$\begin{aligned} \textcircled{6} \quad x - 2 &= 1 \\ +2 \quad +2 \\ \hline x &= 3 \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad y - 3 &= 4 \\ +3 \quad +3 \\ \hline y &= 7 \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad r - 4 &= -2 \\ +4 \quad +4 \\ \hline r &= 2 \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad -9 &= q - 8 \\ +8 \quad +8 \\ \hline -1 &= q \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad &\text{If you decrease a number by 4, the result is -5. Find the number.} \\ n - 4 &= -5 \\ +4 \quad +4 \\ \hline n &= -1 \end{aligned}$$

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Equations involving Multiplication

$$\textcircled{1} \quad \frac{20}{4} = \frac{4z}{4}$$

$$z = 5$$

$$\textcircled{2} \quad \frac{-8g}{-8} = \frac{24}{-8}$$

$$g = -3$$

$$\textcircled{3} \quad \frac{30}{-6} = \frac{-6e}{-6}$$

$$e = -5$$

$$\textcircled{4} \quad \frac{-9h}{-9} = \frac{-72}{-9}$$

$$h = 8$$

$\textcircled{5}$ The product of a number and 5 is -35. Find the number.

$$\frac{5n}{5} = \frac{-35}{5}$$

$$n = -7$$

Equations involving Division

$$\textcircled{6} \quad 4 \cdot \frac{x}{4} = 7 \cdot 4$$

$$x = 28$$

$$\textcircled{7} \quad -6 \cdot \frac{m}{-6} = 6 \cdot -6$$

$$m = -36$$

$$\textcircled{8} \quad 2 \cdot 12 = \frac{r}{2} \cdot 2$$

$$\begin{aligned} 24 &= r \\ r &= 24 \end{aligned}$$

$$\textcircled{9} \quad -3 \cdot 15 = \frac{g}{-3} \cdot -3$$

$$\begin{aligned} 45 &= g \\ g &= 45 \end{aligned}$$

$\textcircled{10}$ The quotient of a number and -4 is 5. What is the number?

$$\frac{n}{-4} = 5$$

$$n = -20$$

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Directions:

Step 1: Print pages 1 & 2 and 3 & 4 front to back so that the writing is facing in opposite directions.

Step 2: Line up the bottom of the two pages as shown below:



Step 3: Fold over the top of both pages and secure at the top with a few staples.

The final product should look like this:

