

2.2 Two Step Equations

Ex. 1: Solve $\frac{x}{2} + 5 = 11$

$$\frac{x}{2} + 5 = 11$$
$$\frac{x}{2} - 5 = 11 - 5$$
$$\frac{x}{2} = 6$$
$$2 \cdot \frac{x}{2} = 6 \cdot 2$$
$$x = 12$$

Ex. 2: Solve $5x + 9 = 34$

$$5x + 9 = 34$$
$$5x - 9 = 34 - 9$$
$$5x = 25$$
$$\frac{5x}{5} = \frac{25}{5}$$
$$x = 5$$

Ex. 3: Solve $4y - 4 = 16$

Ex. 4: Solve $-1 = \frac{z}{3} - 7$

Combining Like Terms!

Ex. 5: Solve $7x - 4x = 21$

$$7x - 4x = 21$$
$$3x = 21$$
$$\frac{3x}{3} = \frac{21}{3}$$
$$x = 7$$

Ex. 6: Solve $-16 = 5d - 9d$

$$-16 = 5d - 9d$$
$$-16 = -4d$$
$$\frac{-16}{-4} = \frac{-4d}{-4}$$
$$d = 4$$

Find the input of a function

Ex. 7: The output of a function is 3 less than 5 times the input. Find the input when the output is 17.

Step 1: Write the Equation.

$$5x - 3 = 17$$

Step 2: Solve the Equation.

$$5x - 3 = 17$$
$$+3 \quad +3$$
$$\frac{5x}{5} = \frac{20}{5}$$
$$x = 4$$

Step 3: Check the answer.

Homework: