

Homework: Writing Two-Step Equations

Define the variable, write the equation, and solve the equation.

- a. Five less than two times a number is fifteen.

Let n represent the number.

Five less \longrightarrow -5

Two times a number \longrightarrow $2n$

Is fifteen \longrightarrow $= 15$

$$2n - 5 = 15$$

$$2n - 5 + 5 = 15 + 5 \quad \text{Add 5 to each side.}$$

$$\frac{2n}{2} = \frac{20}{2} \quad \text{divide each side by 2}$$

$$n = 10$$

- b. Four more than a number divided by 3 is twelve.

Let a represent the number.

Four more \longrightarrow $+ 4$

a number divided by 3 \longrightarrow $\frac{a}{3}$

Is twelve \longrightarrow $= 12$

$$\frac{A}{3} + 4 = 12$$

$$3$$

$$\frac{A}{3} + 4 - 4 = 12 - 4 \quad \text{subtract 4 from each side}$$

$$\frac{A}{3} = 8$$

$$\frac{A}{3} \times 3 = 8 \times 3$$

$$3 \quad \text{Multiply each side by 3}$$

$$A = 24$$

1. Four less than five times a number is twenty-six.

2. Three times a number minus five is twenty-five.

3. Seven less than thirteen times a number is nineteen.

4. Six less than eighteen times a number is thirty.

5. Fifteen less than six times a number is nine.

6. Thirty-two divided by a number minus seven equals one.