

Review Exercise Set 15

Exercise 1: Solve for n.

$$\frac{n}{5} = 6$$

Exercise 2: Solve for x.

$$\frac{5}{9} = \frac{x}{3} + \frac{1}{9}$$

Exercise 3: Solve.

$$4a = 15$$

Exercise 4: A number plus one-fifth equals one-third. Find the number.

Exercise 5: Negative two-thirds is equal to one-fourth times a number. Find the number.

Review Exercise Set 15 Answer Key

Exercise 1: Solve for n.

$$\frac{n}{5} = 6$$

Multiply both sides of the equation by the denominator of 5 to eliminate the fraction

$$\frac{n}{5} \times 5 = 6 \times 5$$

$$\frac{n}{\cancel{5}^1} \times \cancel{5}^1 = 6 \times 5$$

$$n = 30$$

Exercise 2: Solve for x.

$$\frac{5}{9} = \frac{x}{3} + \frac{1}{9}$$

Isolate the fraction with the variable by subtracting one-ninth from both sides

$$\frac{5}{9} - \frac{1}{9} = \frac{x}{3} + \frac{1}{9} - \frac{1}{9}$$

$$\frac{5}{9} - \frac{1}{9} = \frac{x}{3}$$

$$\frac{5-1}{9} = \frac{x}{3}$$

$$\frac{4}{9} = \frac{x}{3}$$

Multiply both sides of the equation by the denominator of 3 to eliminate the fraction

$$\frac{4}{9} \times 3 = \frac{x}{3} \times 3$$

$$\frac{4}{3 \times \cancel{3}^1} \times \cancel{3}^1 = \frac{x}{\cancel{3}^1} \times \cancel{3}^1$$

$$\frac{4}{3} = x$$

$$1\frac{1}{3} = x$$

Exercise 3: Solve.

$$4a = 15$$

Divide both sides by 4

$$\frac{4a}{4} = \frac{15}{4}$$

$$\cancel{4}^1 a = \frac{15}{\cancel{4}^1}$$

$$a = \frac{15}{4}$$

$$a = 3\frac{3}{4}$$

Exercise 4: A number plus one-fifth equals one-third. Find the number.

Begin by assigning a variable to represent the unknown number

Let n = a number

Now, setup the equation that needs to be solved based on the information given.

$$\begin{array}{ccccccc} \text{A number} & \text{plus} & \text{one-fifth} & \text{equals} & \text{one-third.} & & \\ \hline n & + & \frac{1}{5} & = & \frac{1}{3} & & \end{array}$$

Solve for the variable

$$n + \frac{1}{5} - \frac{1}{5} = \frac{1}{3} - \frac{1}{5}$$

$$n = \frac{1}{3} - \frac{1}{5}$$

$$n = \frac{1 \times 5}{3 \times 5} - \frac{1 \times 3}{5 \times 3}$$

$$n = \frac{5}{15} - \frac{3}{15}$$

$$n = \frac{2}{15}$$

Exercise 5: Negative two-thirds is equal to one-fourth times a number. Find the number.

Assign a variable to unknown number

Let n = a number

Setup the equation

Negative two-thirds is equal to one-fourth times a number.

$$-\frac{2}{3} = \frac{1}{4} \times n$$

Solve for the variable

$$-\frac{2}{3} = \frac{1}{4} \times n$$

$$4 \times -\frac{2}{3} = 4 \times \frac{1}{4} \times n$$

$$-\frac{8}{3} = n$$

$$-2\frac{2}{3} = n$$