Think Academy

Solving Equations with Variables on Both Sides

1 Find the solution to the equation.

$$3x + 5 = 2x - 1$$

$$x = \_\_\_\_\_$$

2 If $5x - 3 = 7x + 9$, then $x =$ _____ .

A. 1 B. -1 C. 6 D. -6

3 Find the solution to the equation.

$$-4-2x=3x-18$$

$x=$ _____

4 Find the solution to the equation.

$$5x+7=6x-1$$

$x=$ _____

5 Find the solution to the equation.

$$8x - 3 = 5x + 9$$

$$x = \_\_\_\_\_$$

6 Find the solution to the equation.

$$7x - 2 = 4x + 13$$

$$x = \_\_\_\_\_$$

7 Find the solution to the equation.

$$3x + 9 = 5x - 3$$

$$x = \_\_\_\_\_$$

8 Find the solution to the equation.

$$5x + 4x + 3 = 3x + 2x + 27$$

$$x = \_\_\_\_\_$$

9 Find the solution to the equation.

$$6x + 3x + 2 = 38 + 5x - 8x$$

$$x = \_\_\_\_\_$$

10 Find the solution to the equation.

$$42 - 5x + 2x = 63 - 4x - 6x$$

$$x = \_\_\_\_\_$$

Think Academy

Solving Equations with Variables on Both Sides

1 Find the solution to the equation.

$$3x + 5 = 2x - 1$$

$$x = \_\_\_\_$$

Answer -6

Solution $3x + 5 = 2x - 1$

$3x + 5 - 2x = 2x - 1 - 2x$

$x + 5 - 5 = -1 - 5$

$x = -6$

2 If $5x - 3 = 7x + 9$, then $x =$ ____ .

A. 1 B. -1 C. 6 D. -6

Answer D

Solution $5x - 7x = 9 + 3$

$-2x = 12$

$x = -6$

3 Find the solution to the equation.

$$-4 - 2x = 3x - 18$$

$$x = \_\_\_\_$$

Answer 2.8

Alternative: $\frac{14}{5}$

Solution $5x = 14$

$x = 14 \div 5 = 2.8$

4 Find the solution to the equation.

$$5x + 7 = 6x - 1$$

$$x = \_\_\_\_$$

Answer 8

Solution $5x + 7 = 6x - 1$

$6x - 5x = 1 + 7$

$x = 8$

5 Find the solution to the equation.

$$8x - 3 = 5x + 9$$

$$x = \_\_\_\_$$

Answer 4

Solution $8x - 3 = 5x + 9$

$8x - 5x = 9 + 3$

$3x = 12$

$x = 4$

6 Find the solution to the equation.

$$7x - 2 = 4x + 13$$

$$x = \_\_\_\_$$

Answer 5

Solution $7x - 2 = 4x + 13$

$7x - 4x = 13 + 2$

$3x = 15$

$x = 5$

7 Find the solution to the equation.

$$3x + 9 = 5x - 3$$

$$x = \_\_\_\_\_$$

Answer 6

Solution $3x + 9 = 5x - 3$

$5x - 3x = 9 + 3$

$2x = 12$

$x = 6$

8 Find the solution to the equation.

$$5x + 4x + 3 = 3x + 2x + 27$$

$$x = \_\_\_\_\_$$

Answer 6

Solution $9x + 3 = 5x + 27$

$9x + 3 - 5x = 5x + 27 - 5x$

$4x + 3 = 27$

$4x + 3 - 3 = 27 - 3$

$4x = 24$

$4x \div 4 = 24 \div 4$

$x = 6$

9 Find the solution to the equation.

$$6x + 3x + 2 = 38 + 5x - 8x$$

$$x = \_\_\_\_$$

Answer 3

Solution $12x = 36$

$x = 3$

10 Find the solution to the equation.

$$42 - 5x + 2x = 63 - 4x - 6x$$

$$x = \_\_\_\_$$

Answer 3

Solution $42 - 5x + 2x = 63 - 4x - 6x$

$42 - 3x = 63 - 10x$

$10x - 3x = 63 - 42$

$7x = 21$

$x = 3$