

**Solve for X.**

1)  $9(2x + 2) = -72$

2)  $6(-2x - 10) = 60$

3)  $-5(x - 8) = 0$

4)  $-8(-3x + 8) = 8$

5)  $-5(10x - 7) = 535$

6)  $-4(-x + 10) = -32$

7)  $-2(3x - 9) = 72$

8)  $-8(-x - 9) = 8$

**Solve for X.**

1)  $9(2x + 2) = -72$

Answer:  $-5$

2)  $6(-2x - 10) = 60$

Answer:  $-10$

3)  $-5(x - 8) = 0$

Answer:  $8$

4)  $-8(-3x + 8) = 8$

Answer:  $3$

5)  $-5(10x - 7) = 535$

Answer:  $-10$

6)  $-4(-x + 10) = -32$

Answer:  $2$

$$7) -2(3x - 9) = 72$$

Answer:  $-9$

$$8) -8(-x - 9) = 8$$

Answer:  $-8$

MathVine - Pre-Algebra

Name \_\_\_\_\_

Distributed Linear Equations

Date \_\_\_\_\_ Period \_\_\_\_\_

### Solution Steps

$$1) 9(2x + 2) = -72$$

$$9(2x + 2) = -72$$

$$$(9 \cdot 2x) + (9 \cdot 2) = -72$$$

$$18x + 18 = -72$$

$$-18 = -18$$

$$18x = -90$$

$$/18 = /18$$

$$x = -5$$

$$2) 6(-2x - 10) = 60$$

$$6(-2x - 10) = 60$$

$$$(6 \cdot -2x) + (6 \cdot -10) = 60$$$

$$-12x - 60 = 60$$

$$+60 = +60$$

$$-12x = 120$$

$$/ -12 = / -12$$

$$x = -10$$

$$3) -5(x - 8) = 0$$

$$-5(x - 8) = 0$$

$$$(-5 \cdot x) + (-5 \cdot -8) = 0$$$

$$-5x + 40 = 0$$

$$-40 = -40$$

$$-5x = -40$$

$$/ -5 = / -5$$

$$x = 8$$

$$4) -8(-3x + 8) = 8$$

$$-8(-3x + 8) = 8$$

$$$(-8 \cdot -3x) + (-8 \cdot 8) = 8$$$

$$24x - 64 = 8$$

$$+64 = +64$$

$$24x = 72$$

$$/24 = /24$$

$$x = 3$$

$$\begin{aligned}
5) \quad & -5(10x - 7) = 535 \\
& -5(10x - 7) = 535 \\
& \$(-5 \cdot 10x) + (-5 \cdot -7) \$ \$ = \$ \\
& -50x + 35 = 535 \\
& -35 = -35 \\
& -50x = 500 \\
& / - 50 = / - 50 \\
& x = -10
\end{aligned}$$

$$\begin{aligned}
6) \quad & -4(-x + 10) = -32 \\
& -4(-x + 10) = -32 \\
& \$(-4 \cdot -1x) + (-4 \cdot 10) \$ \$ = \$ \\
& 4x - 40 = -32 \\
& +40 = +40 \\
& 4x = 8 \\
& /4 = /4 \\
& x = 2
\end{aligned}$$

$$\begin{aligned}
7) \quad & -2(3x - 9) = 72 \\
& -2(3x - 9) = 72 \\
& \$(-2 \cdot 3x) + (-2 \cdot -9) \$ \$ = \$ \\
& -6x + 18 = 72 \\
& -18 = -18 \\
& -6x = 54 \\
& / - 6 = / - 6 \\
& x = -9
\end{aligned}$$

$$\begin{aligned}
8) \quad & -8(-x - 9) = 8 \\
& -8(-x - 9) = 8 \\
& \$(-8 \cdot -1x) + (-8 \cdot -9) \$ \$ = \$ \\
& 8x + 72 = 8 \\
& -72 = -72 \\
& 8x = -64 \\
& /8 = /8 \\
& x = -8
\end{aligned}$$