

# MULTI-STEP EQUATIONS WITH THE DISTRIBUTIVE PROPERTY

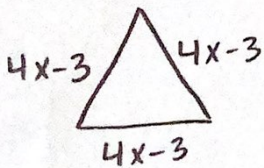
Solve each equation by distributing. Draw a line from each equation to the expanded form and the solution.

EQUATION	EXPANDED	SOLUTION
1. $3(1.5x + 9) = ?$ $4.5x + 27$	$4.5x + 16 = 11.5$	$x = -4$
2. $-9(\frac{1}{2}x - 3) = ?$ $-4.5x + 27$	$4.5x + 27 = -9$	$x = 6$
3. $2(2.25x + 8) = ?$ $4.5x + 16$	$4.5x - 16 = 11$	$x = -8$
4. $8.5x - 2(2x + 8) = ?$	$-4.5x + 27 = 45$	$x = -1$

Answer the following questions.

5. The perimeter of an equilateral triangle is 63 inches. If the length of each side is  $(4x - 3)$ , find the value of  $x$ .

Equation:  $3(4x - 3)$



$$12x - 9 = 63$$

$$\quad \quad \quad +9$$

$$12x = 72$$

$$\quad \quad \quad \div 12$$

Solution:  $x = 6$

6. The Gonzales family has three children. On summer break, they went to an amusement park. They bought 3 child tickets for \$18.50 and 2 adult tickets. If they spent a total of \$104.50, how much was the price of each adult ticket?

Equation:  $18.50 + 2x = 104.50$

$$18.50 + 2x = 104.50$$

$$\quad \quad \quad -18.50$$

$$2x = 86$$

$$\quad \quad \quad \div 2$$

Solution:  $x = 43$