

Name: ANSWER KEY

Period:



Communication



Successful Partnership



Encouragement



Solving Problem Together



Collaboration

### Lesson 6-4 Classwork

#### No Calculators

Solve for  $n$ .

$$\begin{aligned} \text{a) } (4x + 3) + 3(x + 8) &= 7x + n \\ \underline{4x + 3} + \underline{3x + 24} &= 7x + n \\ 4x + 3x + 3 + 24 &= 7x + n \\ 7x + 27 &= 7x + n \\ \uparrow & \quad \uparrow \\ n &= 27 \end{aligned}$$

~~n = 27~~  
n = 27

$$\begin{aligned} \text{c) } (9x + 2) - 2(-5x + 3) &= 19x + n \\ \underline{9x + 2} + \underline{10x - 6} &= 19x + n \\ 9x + 10x + 2 - 6 &= 19x + n \\ 19x - 4 &= 19x + n \\ \uparrow & \quad \uparrow \\ n &= -4 \end{aligned}$$

n = -4

$$\begin{aligned} \text{b) } (10x + 4) - 2(4x - 1) &= 2x + n \\ \underline{10x + 4} - \underline{8x + 2} &= 2x + n \\ 10x - 8x + 4 - 2 &= 2x + n \\ 2x + 6 &= 2x + n \\ \uparrow & \quad \uparrow \\ n &= 6 \end{aligned}$$

n = 6

$$\begin{aligned} \text{d) } (7x + 10) - 3(5x + 2) &= -8x + n \\ \underline{7x + 10} - \underline{15x - 6} &= -8x + n \\ 7x - 15x + 10 - 6 &= -8x + n \\ -8x + 4 &= -8x + n \\ \uparrow & \quad \uparrow \\ n &= 4 \end{aligned}$$

n = 4

$$\begin{array}{l}
 \text{e) } (14x+5) - 4(3x+7) = 2x+n \\
 \underline{\underline{14x+5}} - \underline{\underline{12x-28}} = 2x+n \\
 14x-12x \quad +5-28 \\
 \underbrace{\hspace{1.5cm}} \quad \underbrace{\hspace{1.5cm}} \\
 2x \quad -23 = 2x+n
 \end{array}$$

$$n = -23$$

$$\begin{array}{l}
 \text{h) } (7x+8) - 5(4x-10) = -13x+n \\
 \underline{\underline{7x+8}} - \underline{\underline{20x+50}} = -13x+n \\
 7x-20x \quad +8+50 \\
 \underbrace{\hspace{1.5cm}} \quad \underbrace{\hspace{1.5cm}} \\
 -13x \quad +58 = -13x+n
 \end{array}$$

$$n = 58$$

$$\begin{array}{l}
 \text{f) } (6x+5) - 2(-4x+8) = 14x+n \\
 \underline{\underline{6x+5}} + \underline{\underline{8x-16}} = 14x+n \\
 6x+8x \quad +5-16 \\
 \underbrace{\hspace{1.5cm}} \quad \underbrace{\hspace{1.5cm}} \\
 14x \quad -11 = 14x+n
 \end{array}$$

$$n = -11$$

$$\begin{array}{l}
 \text{i) } (4x+5) + 3(-2x-3) = -2x+n \\
 \underline{\underline{4x+5}} - \underline{\underline{6x-9}} = -2x+n \\
 4x-6x \quad +5-9 \\
 \underbrace{\hspace{1.5cm}} \quad \underbrace{\hspace{1.5cm}} \\
 -2x \quad -4 = -2x+n
 \end{array}$$

$$n = -4$$

$$\begin{array}{l}
 \text{g) } (5x+2) - 2(-x-3) = 7x+n \\
 \underline{\underline{5x+2}} + \underline{\underline{2x+6}} = 7x+n \\
 5x+2x \quad +2+6 \\
 \underbrace{\hspace{1.5cm}} \quad \underbrace{\hspace{1.5cm}} \\
 7x \quad +8 = 7x+n
 \end{array}$$

$$n = 8$$

$$\begin{array}{l}
 \text{j) } (x+5) - 2(2x+4) = -3x+n \\
 \underline{\underline{x+5}} - \underline{\underline{4x-8}} = -3x+n \\
 x-4x \quad +5-8 \\
 \underbrace{\hspace{1.5cm}} \quad \underbrace{\hspace{1.5cm}} \\
 -3x \quad -3 = -3x+n
 \end{array}$$

$$n = -3$$