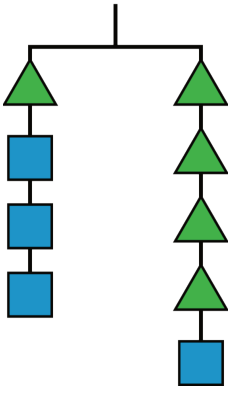
Lesson 3 Practice Problems

1. In this hanger, the weight of the triangle is x and the weight of the square is y.



a. Write an equation using x and y to represent the hanger.

b. If x is 6, what is y?

2. Andre and Diego were each trying to solve $2x + 6 = 3x - 8$. Describe the first step they each make to the equation.

a. The result of Andre's first step was $-x + 6 = -8$.

b. The result of Diego's first step was $6 = x - 8$.

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3. a. Complete the table with values for x or y that make this equation true: $3x + y = 15$.

x	2		6	0	3		
y		3				0	8

b. Create a graph, plot these points, and find the slope of the line that goes through them.

(From Unit 3, Lesson 11.)

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4. Match each set of equations with the move that turned the first equation into the second.

A. $6x + 9 = 4x - 3$
$2x + 9 = -3$

B. $-4(5x - 7) = -18$
$5x - 7 = 4.5$

C. $8 - 10x = 7 + 5x$
$4 - 10x = 3 + 5x$

D. $\frac{-5x}{4} = 4$
$5x = -16$

E. $12x + 4 = 20x + 24$
$3x + 1 = 5x + 6$

1. Multiply both sides by $\frac{-1}{4}$
2. Multiply both sides by -4
3. Multiply both sides by $\frac{1}{4}$
4. Add $-4x$ to both sides
5. Add -4 to both sides

5. Select **all** the situations for which only zero or positive solutions make sense.

A. Measuring temperature in degrees Celsius at an Arctic outpost each day in January.

B. The height of a candle as it burns over an hour.

C. The elevation above sea level of a hiker descending into a canyon.

D. The number of students remaining in school after 6:00 p.m.

E. A bank account balance over a year.

F. The temperature in degrees Fahrenheit of an oven used on a hot summer day.

(From Unit 3, Lesson 14.)

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