Core Connections 2 - Chapter 4 - Individual Version 1

Name:_____Date:_____

1. As Tish and Tan were traveling to their next cross country meet, they followed their progress along on a map. The map showed a scale of one inch equaling 60 miles. Their route's total length on the map is $2\frac{1}{2}$ inches long. How far will they be traveling to the meet? Show all work and justify your answer.

Standards: CCSS.Math.Content.7.G.A

2. Simplify the following:

    a. $2(3\cdot 5 - 8) - 4\cdot 2(8 - 6 + 2) =$ b. $12 \div 4 \cdot 3^2 =$

Standards: CCSS.Math.Content.7.NS.A

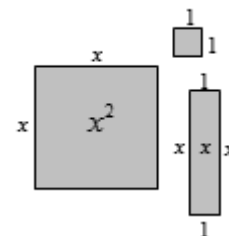**3.** What is the perimeter and area of the shape made with tiles at right?

P =

A =

Standards: CCSS.Math.Content.7.EE.A

4.

Hermione uses the same algebra tiles we used in class which consist of unit squares, skinny rectangles, and large squares. The dimensions of each are shown at right. Hermione empties her bag of tiles on her desk and notices she has *three* large squares, *seven* skinny rectangles, and *six* small squares.

a. Write an algebraic expression that represents what Hermione has on her desk. (Note: writing an "algebraic expression" DOES NOT mean that you write, "She has three large squares, seven skinny rectangles, and six small squares." You must write a statement with *x*'s and plus signs!)

b. As Ron passes by, he removes two large squares, three skinny rectangles, and one small square from Hermione's desk. Write an algebraic expression representing what Ron took.

c. Write an algebraic expression representing what Hermione has left.

d. Write an algebraic *equation* showing what Hermione started with, what was removed, and what was left.

Standards: CCSS.Math.Content.7.EE.A

5. Murphy loves pistachio nuts. Every Saturday morning, she walks to the market and buy some. Last week, she bought two pounds and paid $7.96, and this week she bought only one half pound and paid $1.99.
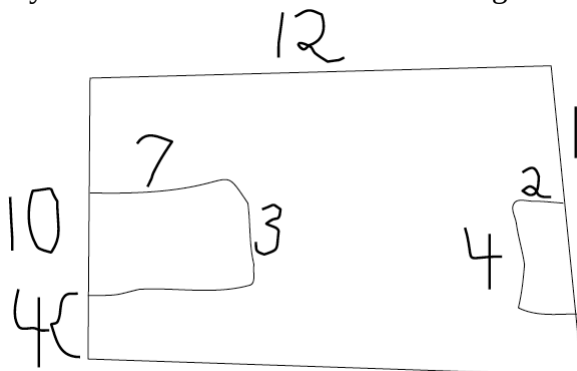
a. Is the relationship between the pounds of pistachio nuts and the cost a proportional relationship? How do you know? Explain.

b. What the unit rate for pistachio nuts? How do you know?

c. Next week, Murphy plans to buy five pounds so that she can share the nuts with her visiting cousins. How much will the five pounds cost her? Show your work and/or explain.

Standards: CCSS.Math.Content.7.RP.A

6. Tess made a quick sketch of her room, and added some quick measurements, shown below. If the grid represents square feet, use Tess' sketch and the measurements to draw an accurate scale drawing of her room. Note: you can assume the room is a rectangle as are her bed and dresser, and all her measurements
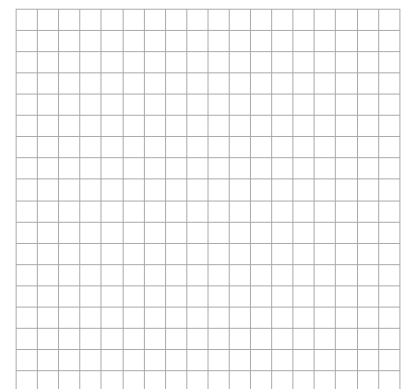

are in feet.

Standards: CCSS.Math.Content.7.G.A

7. Is division commutative? Explain. Justify and explain your answer.

Standards: CCSS.Math.Content.7.NS.A

8. Consider the expression $6 + 3(2 + 5 \cdot 2) + 3(-2)$. Draw a diagram of Cecil's movements or of $+$ and $-$ pieces that could be represented by this expression. (Bonus: do the other for extra credit!)

Standards: CCSS.Math.Content.7.NS.A