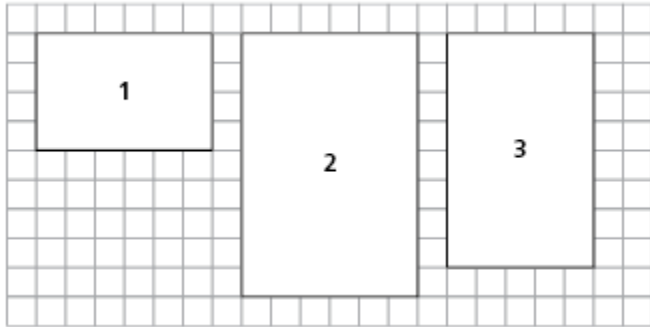# Homework #10: Quarter 2 Review

# DUE: <u>Thursday</u> January 11<sup>th</sup>!

1. Which rectangles below are similar? Explain why.
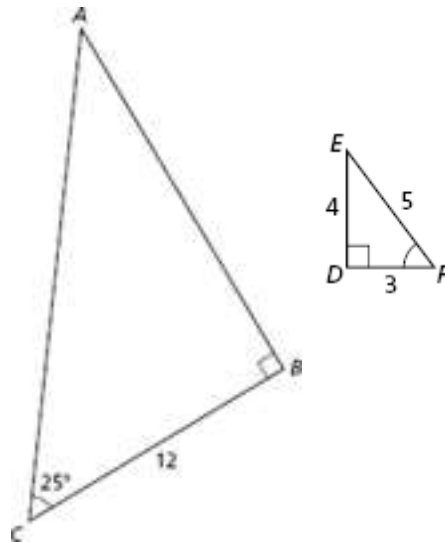


2. The triangles at the right are similar.

   **a.** Use the side lengths of triangle *DEF* and the fact that the triangles are similar to find the lengths of sides *AC* and *AB* and the measure of angle *E*.



   side *AC* =_____
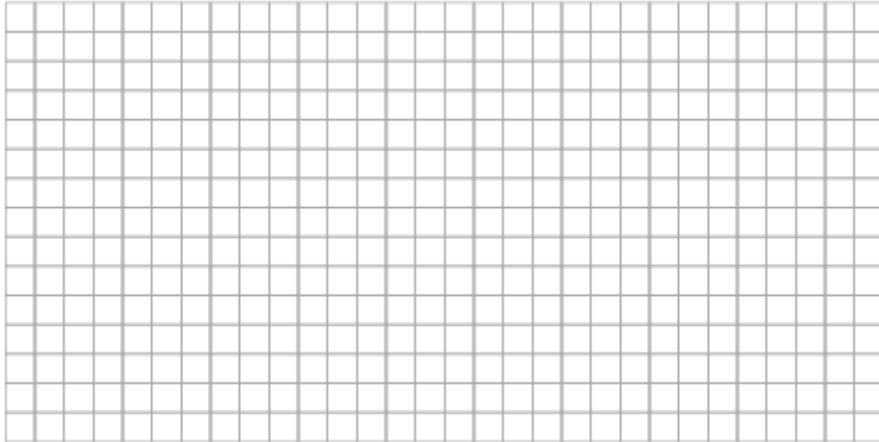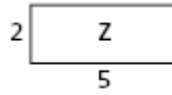
   side *AB* =_____

   angle *E* =_____

   **b.** What is the scale factor from triangle *DEF* to triangle *ABC*?

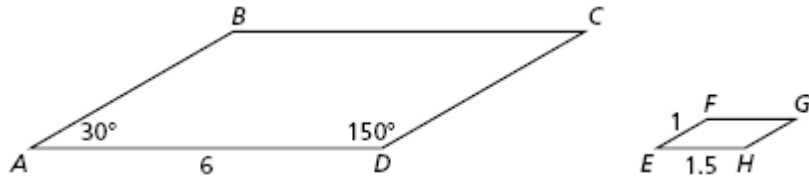   **c.** What is the scale factor from triangle *ABC* to triangle *DEF*?

3. Rectangle Z is sketched below.



    **a.** Rectangle M is similar to rectangle Z. The scale factor from Z to M is 2.
       Draw and label rectangle M on the grid above

    **b.** Rectangle T is similar to rectangle Z. The scale factor from Z to T is 3.
       Draw and label rectangle T on the grid above.

4. The parallelograms below are similar.



**a.** Find the length of side *AB* and the measure of angle *E*. Explain how
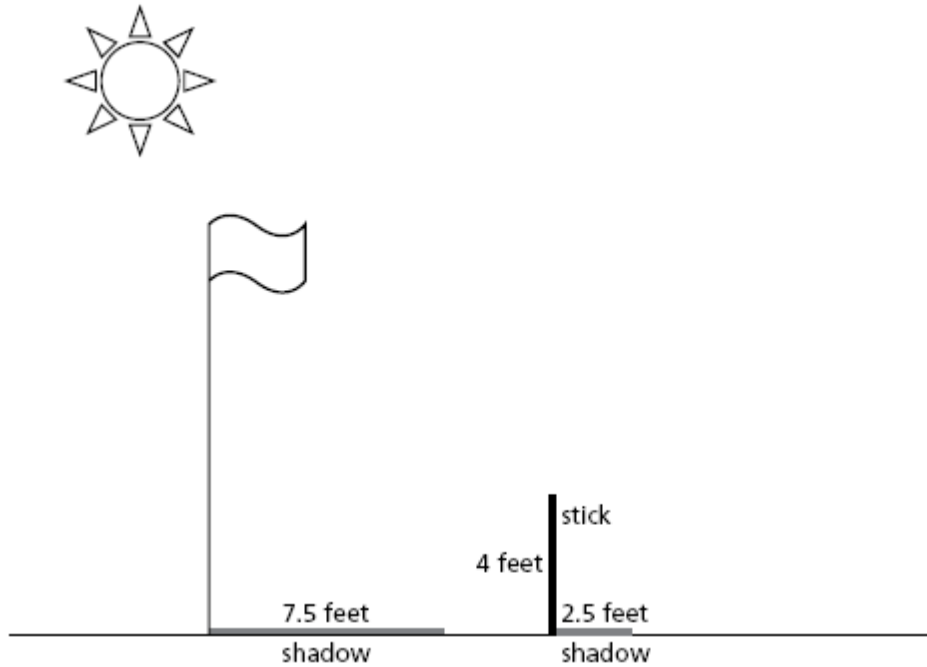you found your answers.

    side *AB* = _____        angle *E* =_____

**b.** Find the ratio of the lengths of two adjacent sides in one parallelogram.
Then find the ratio of the corresponding side lengths in the other. How
do the ratios compare?

**c.** Find the ratio of a pair of corresponding sides in the two parallelograms. What information does this ratio tell you about the two parallelograms? Explain.

5. Use the diagram to determine the height of the flagpole.



6. A group of students were planning a picnic for the 30 members of their homeroom. They investigated prices for food and drink at two stores and listed their findings in a table.

**Food and Drink Prices**

| Item | Streamline Market | | Bulky Store | |
|---|---|---|---|---|
| | Quantity | Cost | Quantity | Cost |
| Cola | 6 cans (12 ounces each) | $1.99 | a case of twenty-four cans (12 ounces each) | $6.99 |
| Ground Beef (for hamburgers) | 1 pound (makes four hamburgers) | $1.39 | 10 patties (1/4 pound each) | $4.99 |
| Hamburger Buns | 8-count package | $1.49 | 12-count package | $2.09 |
| Potato Chips | small bag (1.5 ounces) | $.89 | Fun Pack (eight 1.5-ounce bags) | $6.99 |

a) How much would it cost to make 30 hamburger patties with ground beef purchased from Streamline? Show your work.
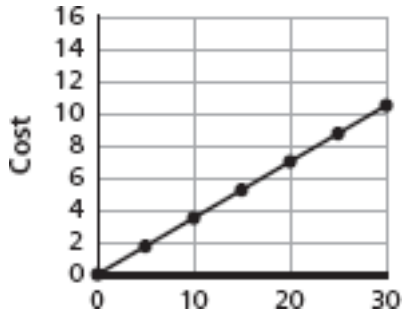
b) How much would 30 hamburger patties cost at Bulky's? Show your work.

c) Which store offers the better buy for cola? Explain how you decided.

7. You need to purchase enough hamburger buns to make 30 sandwiches. Buns come in packages of 8 or 12, depending where you shop. Which store offers the better buy for 30 buns? Can you get an even better deal by combining purchases at both stores? Explain how you decided.
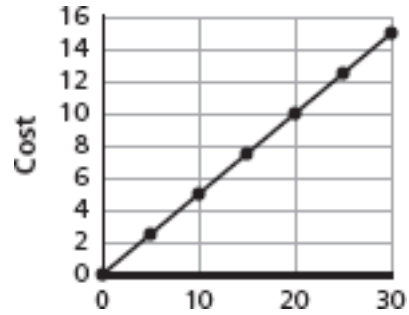
**8. a.** Which graph represents the cost of hamburgers at Bulky's store? Explain.



**Number of Hamburgers**

Graph A

**Number of Hamburgers**

Graph B

**b.** Match each equation with one of the graphs above. Explain how you made your match.

$C = 0.5n$                              $C = 0.35n$

**c.** Explain how you could use the graph or equation to determine the cost for a given number of hamburgers.

9.   a. $\dfrac{12}{10} = \dfrac{x}{2}$                                     b. $\dfrac{4}{x} = \dfrac{9}{18}$