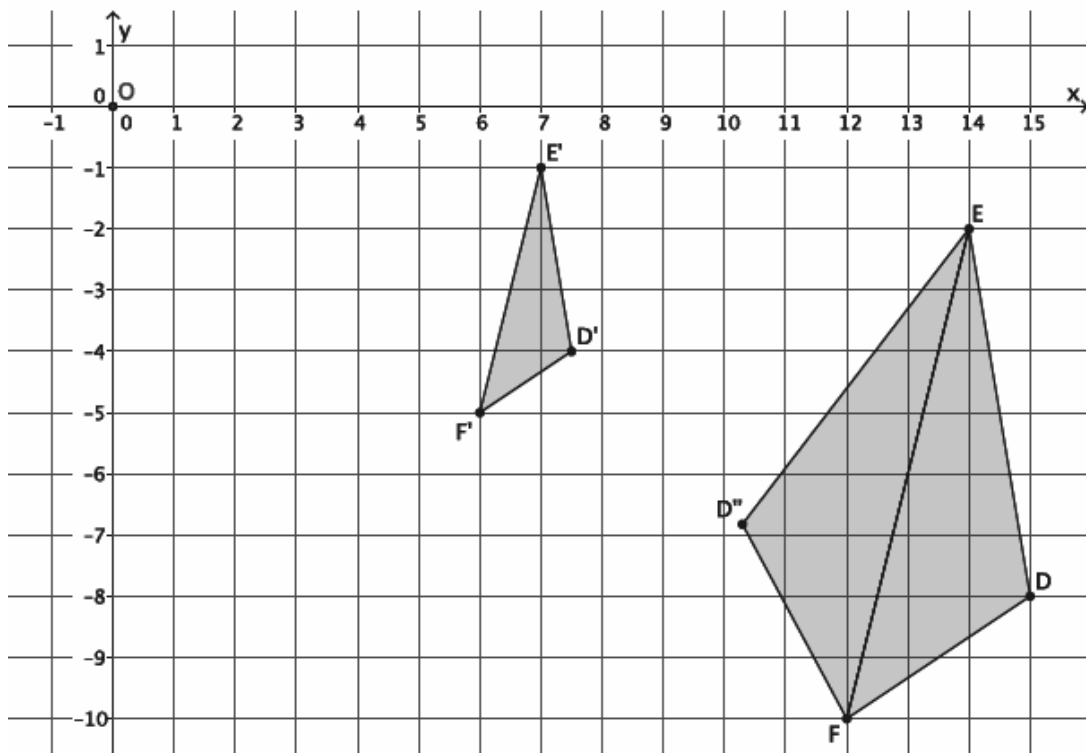Name _____   Date _____

Lesson 8: Similarity

Exit Ticket

In the picture below, we have triangle DEF that has been dilated from center O by scale factor $r = \frac{1}{2}$. The dilated triangle is noted by $D'E'F'$. We also have a triangle $D''EF$, which is congruent to triangle DEF (i.e., $\triangle DEF \cong \triangle D''EF$). Describe the sequence of a dilation followed by a congruence (of one or more rigid motions) that would map triangle $D'E'F'$ onto triangle $D''EF$.
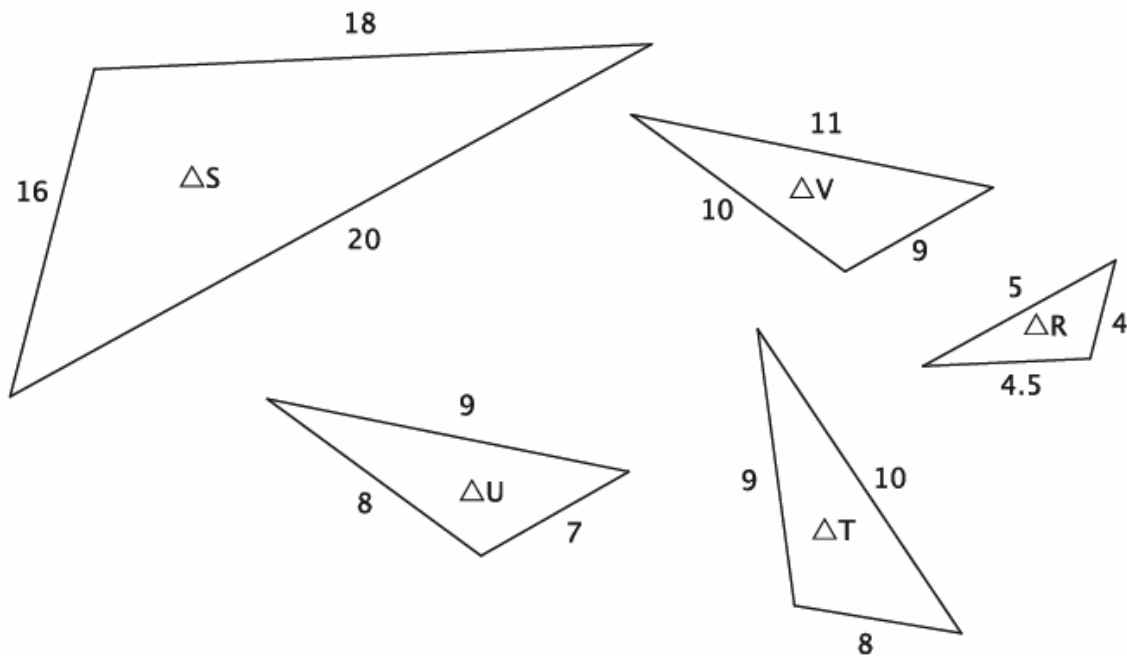
Name _____   Date _____

Lesson 9: Basic Properties of Similarity

Exit Ticket

Use the diagram below to answer Problems 1 and 2.

1. Which two triangles, if any, have similarity that is symmetric?

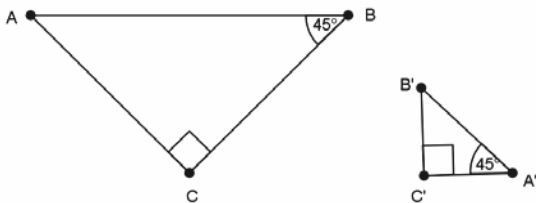2. Which three triangles, if any, have similarity that is transitive?
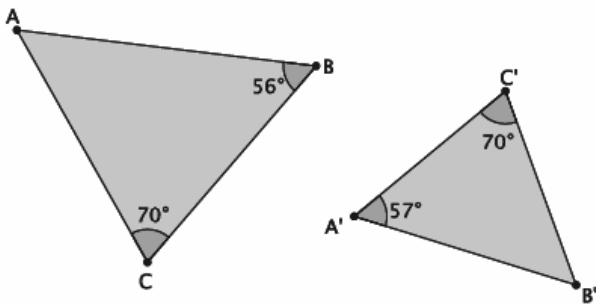
Name _____   Date _____

Lesson 10: Informal Proof of AA Criterion for Similarity

Exit Ticket

1. Are the triangles shown below similar? Present an informal argument as to why they are or are not similar.

2. Are the triangles shown below similar? Present an informal argument as to why they are or are not similar.
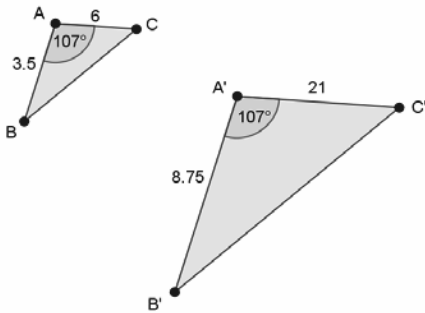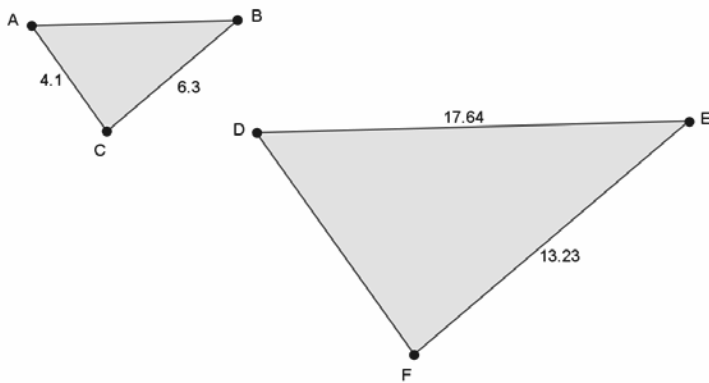
Name _____   Date _____

Lesson 11: More About Similar Triangles

Exit Ticket

1. In the diagram below, you have $\triangle ABC$ and $\triangle A'B'C'$. Based on the information given, is $\triangle ABC \sim \triangle A'B'C'$? Explain.

2. In the diagram below, $\triangle ABC \sim \triangle DEF$. Use the information to answer parts (a)–(b).

   a. Determine the length of side $\overline{AB}$. Show work that leads to your answer.

   b. Determine the length of side $\overline{DF}$. Show work that leads to your answer.

Name _____   Date _____

Lesson 12: Modeling Using Similarity

Exit Ticket

Henry thinks he can figure out how high his kite is while flying it in the park. First, he lets out 150 feet of string and ties the string to a rock on the ground. Then, he moves from the rock until the string touches the top of his head. He stands up straight, forming a right angle with the ground. He wants to find out the distance from the ground to his kite. He draws the following diagram to illustrate what he has done.
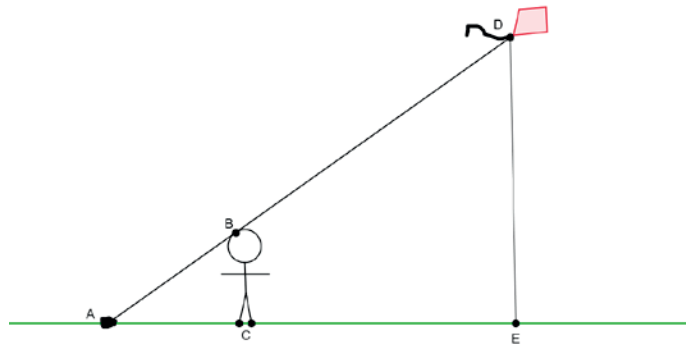
    a.   Has Henry done enough work so far to use similar triangles to help measure the height of the kite? Explain.

    b.   Henry knows he is $5\frac{1}{2}$ feet tall. Henry measures the string from the rock to his head and finds it to be 8 feet. Does he have enough information to determine the height of the kite? If so, find the height of the kite. If not, state what other information would be needed.