

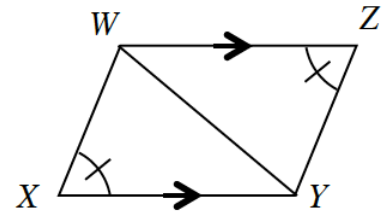
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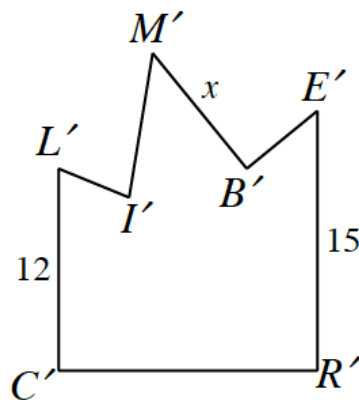
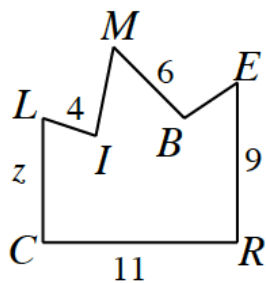
Chapter 2 Study Guide

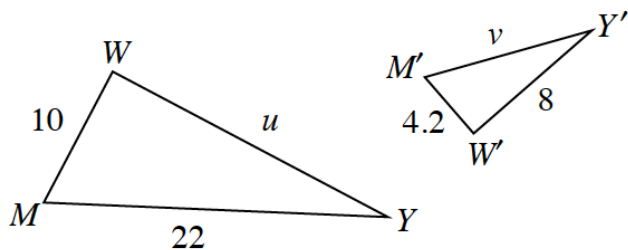
CL 2-120. Given the information in the diagram at right, use a flowchart to prove that $\triangle XYW \cong \triangle ZWY$.



CL 2-122.

Each pair of figures below is similar. What are the lengths of the unknown sides that are marked with a variable?

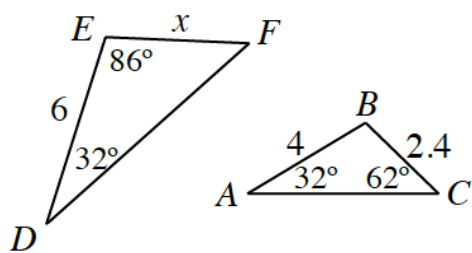




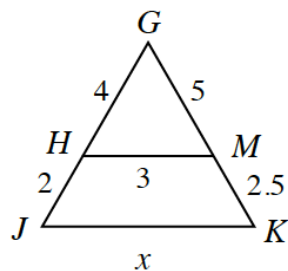
CL 2-123.

For each diagram below, write a similarity statement and explain how you know the triangles are similar. Then calculate the value of each variable.

a.



b.



CL 2-126.

For each expression below, draw an area model and use it to write the product as a sum.

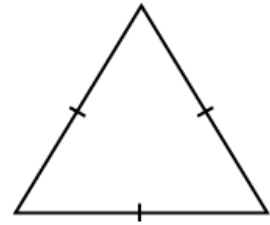
a. $(3x + 1)(x - 2)$

b. $(x + 1)(x + 2)$

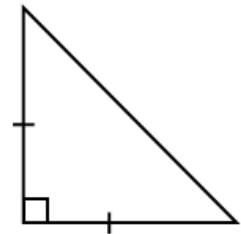
CL 2-128.

Use the relationships you have found about triangle side lengths and angle measures to answer these questions about special triangles.

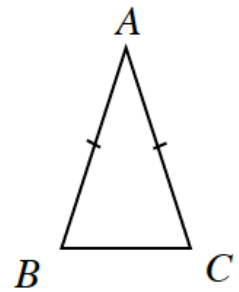
- a. What is the measure of each angle in an equilateral triangle?
Justify your conclusion.



- b. Consider an isosceles right triangle (also sometimes referred to as a “half-square”). What are the measures of each of the angles in an isosceles right triangle?



- c. What if you only know one angle of an isosceles triangle? For example, if $m\angle A = 34^\circ$, what are the measures of the other two angles? Which side of $\triangle ABC$ is the shortest? The longest?



CL 2-129.

Calculate the area and perimeter of each of the following polygons. **The picture on the right,** assume that all angles that appear to be right angles are right angles. Assume all lengths are in centimeters.

