Name_____ Date_____

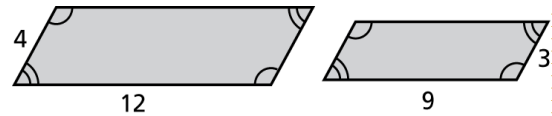# 2.5 – Similar Figures

Complete each statement. Explain briefly why it is true.

1) Tell whether the two figures are similar. Explain your reasoning.

2) The rectangular traffic sign is 18 inches wide and 8 inches tall. The rectangular realtor sign is 27 inches wide and 10 inches tall. Are the signs similar? Explain.

3) The given rectangle needs to be modified.

   a) From the original, each side is increased by 2. Is the new rectangle similar to the original? Explain.

   b) From the original, each side is cut in half. Is the new rectangle similar to the original? Explain.

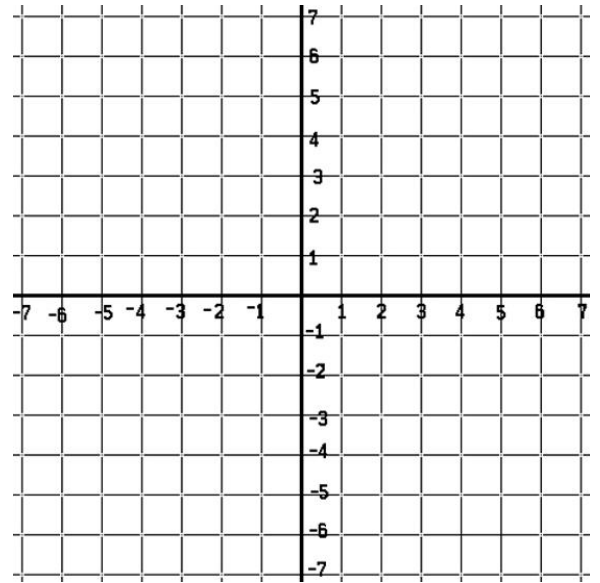4) Which of the following card dimensions are similar rectangles?

   a) 2 in. by 5 in.   b) 3 in. by 6 in.

   c) 1 in. by 3 in.   d) 1 in. by 2.5 in.

5) In a coordinate plane, draw the figures with the given vertices. Which figures are similar? Explain your reasoning.

Rectangle A: $(0, 0)$, $(3, 0)$, $(3, 2)$, $(0, 2)$
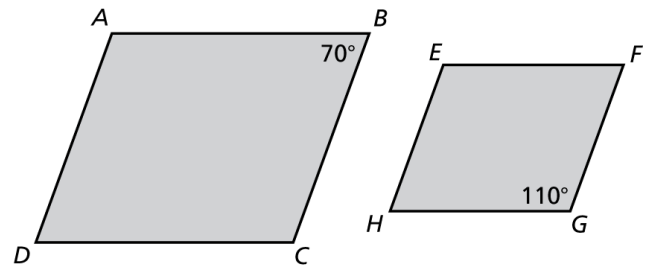
Rectangle B: $(0, 0)$, $(1, 0)$, $(1, 3)$, $(0, 3)$

Rectangle C: $(0, 0)$, $(2, 0)$, $(2, -3)$, $(0, -3)$

The two parallelograms are similar. Find the degree measure of each angle:

6) $m\angle A =$ _____

7) $m\angle H =$ _____

8) $m\angle D =$ _____

9) $m\angle F =$ _____

10) Is it possible for the following figures to be similar? Explain.

a) A stop sign and a speed limit sign

b) A cell phone and an exam paper

c) A yield sign and a home plate

d) A laptop and a swimming pool

11) You have a triangle that has side lengths of 6, 9, and 12.

a) Give the side lengths of a similar triangle that is smaller than the given triangle.

b) Give the side lengths of a similar triangle that is large than the given triangle.