Name _____ Date _____ Class _____

Additional Practice

Investigation 3

Stretching and Shrinking

1. a. On grid paper, make a right triangle with legs of length 8 and 12.

b. Give the leg lengths of two smaller right triangles that are similar to the one you drew and that have whole-number side lengths.

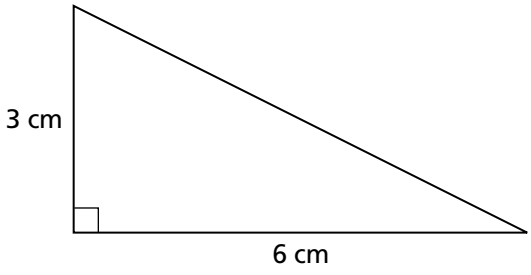
c. Copies of each smaller triangle can be put together to exactly match the original triangle. How many of each smaller triangle does it take to match the original?

2. On centimeter-grid paper, make an isosceles triangle with base and height both equal to 6 centimeters.

a. Can isosceles triangles with base and height equal to 2 centimeters be put together to exactly match the shape of the original triangle? Is each smaller triangle similar to the original?

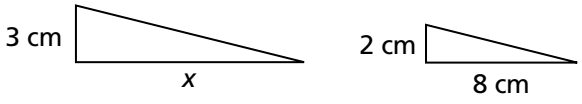
b. Can isosceles triangles with base and height equal to 4 centimeters be put together to exactly match the shape of the original triangle? Is each smaller triangle similar to the original?

c. Can copies of the triangle below be put together to exactly match the shape of your original isosceles triangle? Is this triangle similar to the original?

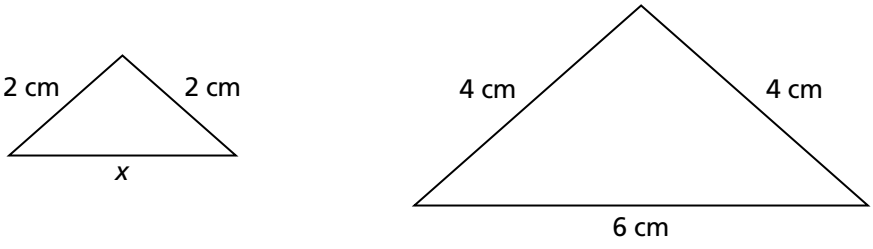


3. Find the missing values in each pair of similar figures below.

a.



b.



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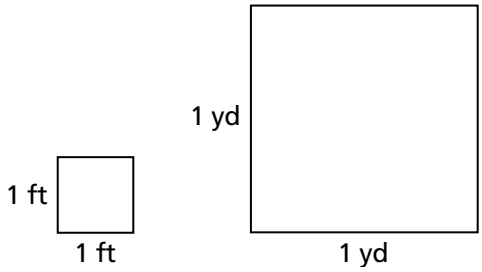
Additional Practice *(continued)*

4. a. The drawing below shows how a square foot and a square yard compare. How many square feet are in a square yard? Explain your reasoning.



b. Are a square foot and a square yard similar? If so, what is the scale factor from a square foot to a square yard? What is the scale factor from a square yard to a square foot?

c. Compare a square inch with a square foot. What is the scale factor from a square inch to a square foot?

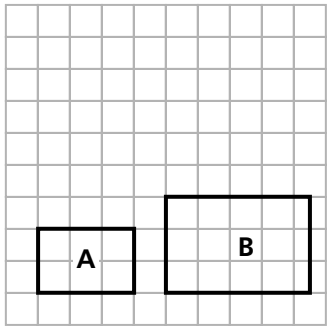
d. How many square inches are in a square foot? Explain.

e. Compare a square inch with a square yard. What is the scale factor from a square inch to a square yard?

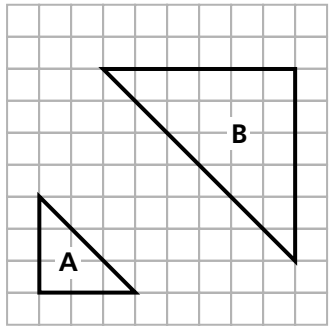
f. How many square inches are in a square yard?

5. For each pair of figures below, give the scale factor from figure A to figure B.

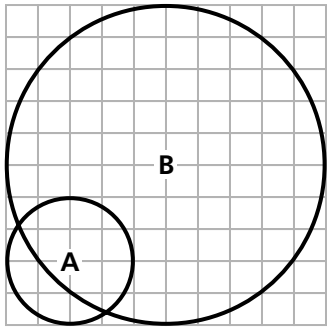
a.



b.



c.



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