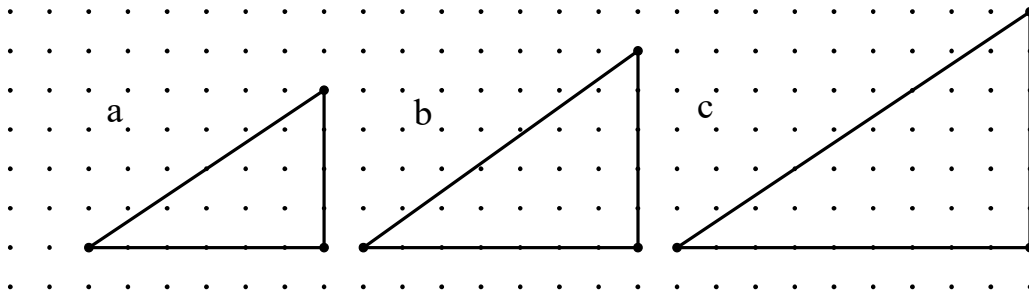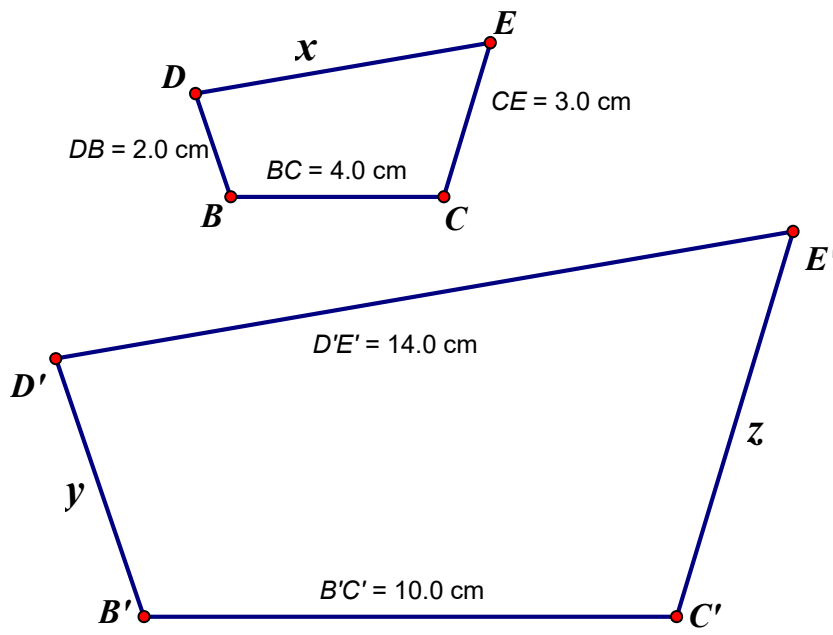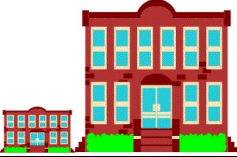Similar shapes worksheet
1. Are all of these triangle similar? Are any of these triangles similar? Tell how you know:

a   b   c

2. The length of a rectangle is 45 inches and the width is 8 inches. A similar rectangle has a width of 24 inches. What is the perimeter of the second rectangle?

3. These two shapes are similar. Find the missing side lengths.

E

x

D

CE = 3.0 cm

DB = 2.0 cm

BC = 4.0 cm

B   C

E'

D'E' = 14.0 cm

D'

z

y

B'C' = 10.0 cm

B'   C'

4. I drew two pictures of a school. If the larger picture is twice as wide and 3 times as high as the smaller picture, by what factor has the area increased?	Is it proportional? What is the area scale factor?
5. I have two pictures of a tree. the smaller picture was made from the larger picture by compressing by a scale factor of 1/2 vertically, and 1/2 horizontally. If the smaller picture has an area of 6 cm^2, what is the area of the larger tree?	Is it proportional? What is the area?
6. I have two similar (proportional) pictures of a moon and star. The larger picture was enlarged by 200% on a standard copy machine from the smaller one: a. If the area of the *smaller* star is 5 cm^2, what is the area of the *larger* star? b. If the area of the *larger* moon is 48 cm^2, what is the area of the *smaller* moon?	a. b.

Assignment:

Describe a person-shaped (mythical) creature that is either smaller or larger than you are by some scale factor (for example, they could be a giant 3 times as tall or a fairy 1/4 as tall).

1. Find two things you can measure about yourself or the things you own, where you can find a length measurement. Explain what your measurements are and how you figured out the corresponding sizes for things that the giant or fairy has.

2. Find two things that you can measure about you or your things where you can find an area measurement. Explain what your measurements are and the corresponding sizes for the things the giant or fairy has.

3. Find two things that you can measure about you or your things where you can find a volume or weight measurement. Explain what your measurements are the corresponding sizes for things the giant or fairy has.