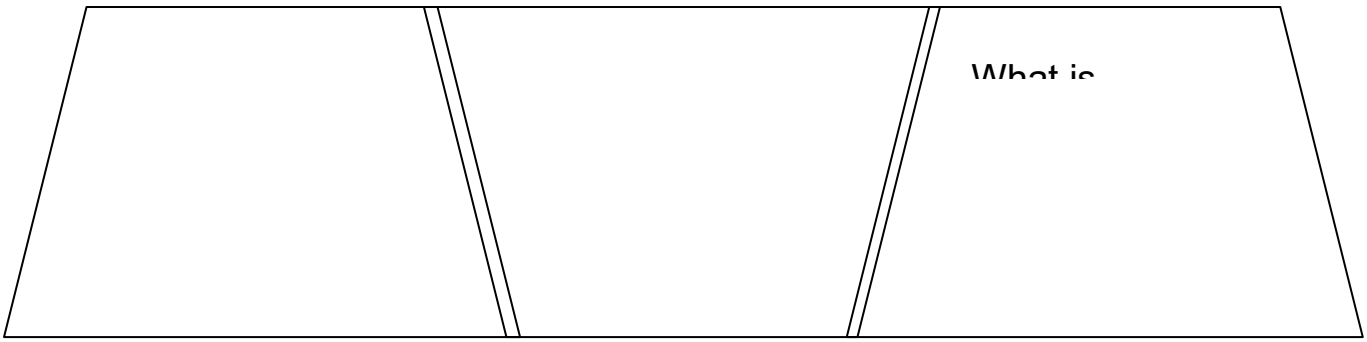
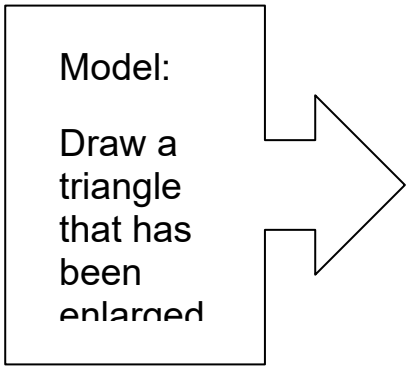
Lesson 1: What Are Scaled Copies?

scaled copies

examples:

nonexamples:





Lesson 3: Making Scaled Copies

Scale Factor: see lesson 2

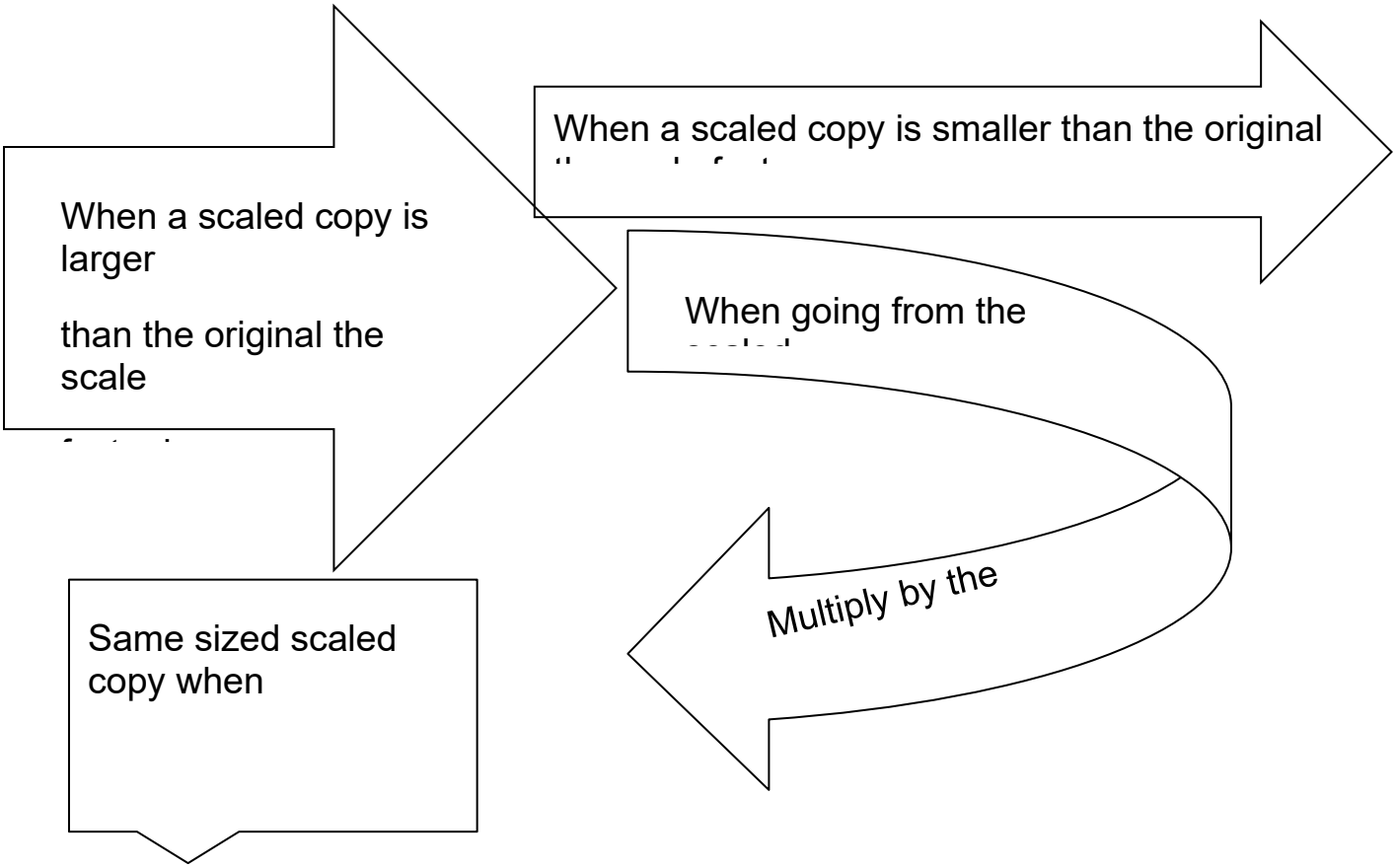
Lesson 4: Scaled Relationships

When a figure is a _____ _____ of another figure we know that:

1.

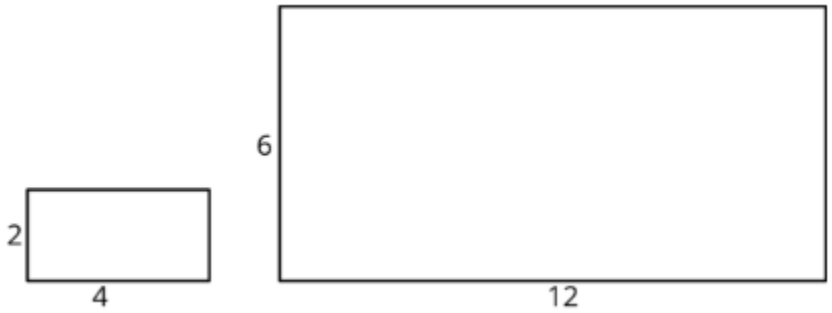
2.

Lesson 5: The Size of the Scale Factor



Lesson 6: Scaling and Area

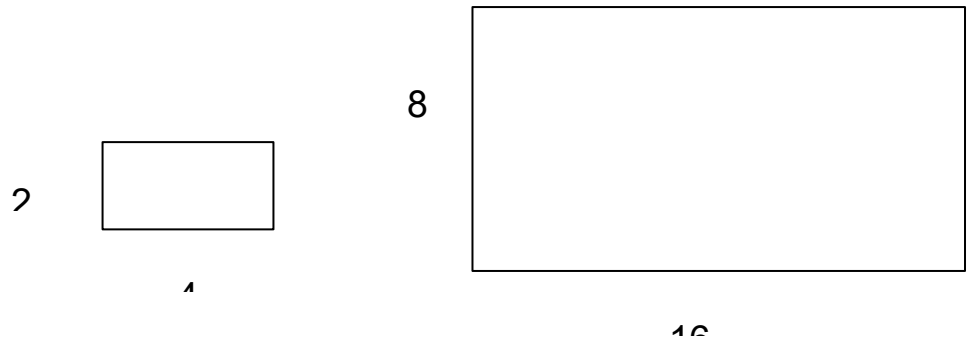
Scaling effects side lengths and area **DIFFERENTLY!**



Scale factor is _____.

Side lengths become _____ times larger.

The area becomes _____ times larger, or (_____)^2



Scale factor is _____.

Side lengths become _____ times larger.

The area becomes _____ times larger, or (_____)^2

Lesson 7: Scale Drawings

What are scaled drawings?

Summary

Lesson 8: Scale Drawings and Maps

Once a distance is known….

Once a speed is known…..

Lesson 9: Creating Scale Drawings

The size of the scale determines the size of the drawing. You can have different-sized scale drawings of the same actual object, but the size of the actual object doesn’t change.

- Suppose there are two scale drawings of the same house. One uses the scale of 1 cm to 2m, and the other uses the scale 1 cm to 4 m. Which drawing is larger? Why?

- Another scale drawing of the house uses the scale of 5 cm to 10m. How does its size compare to the other two?

Lesson 10: Changing Scales in Scale Drawings

Sometimes we have a scale drawing and want to reproduce it at a different scale. Two common approaches are:

1.

2.

Suppose you have a map that uses the scale 1 cm to 200 m. You draw a new map of the same place using the scale 1 cm to 20 m.

- How does your new map compare to your original map?

- How much actual area does 1 cm^2 on your new map represent?

- How much actual area did 1 cm^2 on your original map represent?

Lesson 11: Scales Without Units

- What does it mean when the scale on a scale drawing does not indicate any units?

- How is a scale without units the same as or different from a scale with units?

- How can a scale without units be used to calculate scaled or actual distances?

Lesson 12: Units in Scale Drawings

Scales can be expressed in many different ways, including using different units or not using any units.

- **How can we express the scale 1 inch to 5 miles without units?**

A scale tells us how a distance on a scale drawing corresponds to an actual distance, and it can also tell us how an area on a drawing corresponds to an actual area.

If a map uses the scale 1 inch to 5 miles:

- **How can we find the actual area of a region represented on the map?**

- **How can we find a region's scaled area if we know its actual area?**