

Name _____

Similar Shapes and Scale Factor

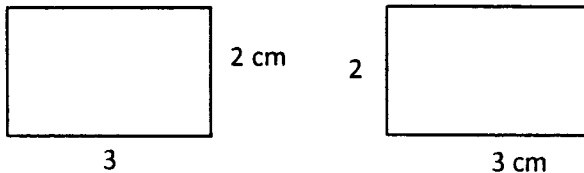
Objectives

SWBAT identify similar figures.

SWBAT solve for and apply scale factor to similar figures.

Silent Launch

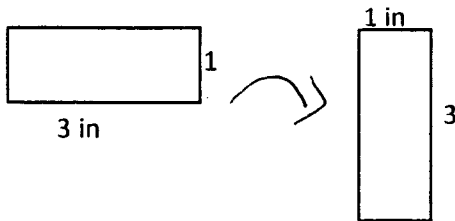
1. Are these two shapes congruent (or the same)?



yes!
isometric!

How do you know?

2. Are these two rectangles congruent?



yes,
Rotations are
isometric!

How do you know?

Class Notes

Similar Figures have....

- Same shape
- Corresponding $\angle$ s are the same
- Sides are in proportion
(Corresponding)

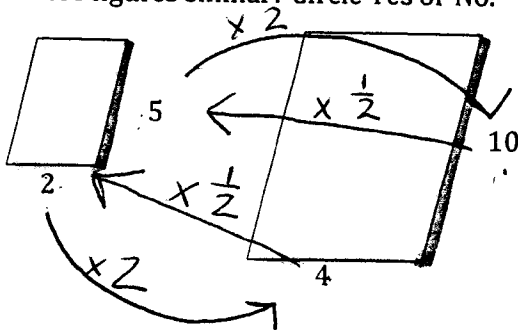
Scale Factor is....

Congruent Vs. Similar

you multiply the sides of a shape (figure) by to either enlarge it or reduce it

Practice

Are these figures similar? Circle Yes or No.



Yes

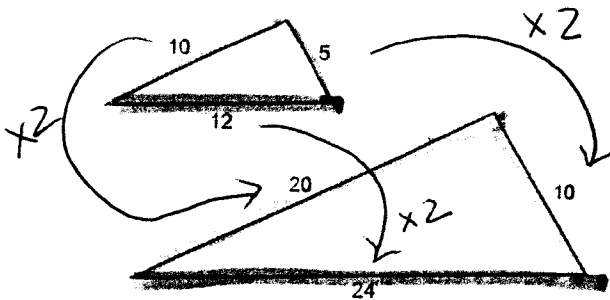
No

$$\frac{2}{4} = \frac{5}{10}$$

$$2(10) = 4(5) \\ 20 = 20$$

$$\frac{10}{5} = \frac{4}{2}$$

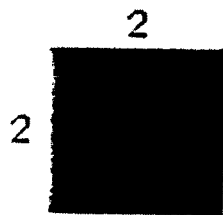
$$10(20) = 5(4) \\ 20 = 20$$



Yes

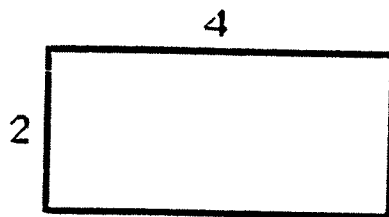
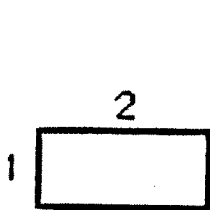
No

$$\frac{5}{10} = \frac{12}{24} = \frac{10}{20} \\ \frac{1}{2} = \frac{1}{2} = \frac{1}{2}$$



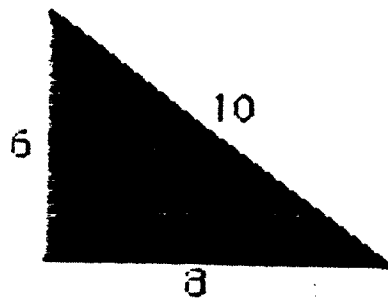
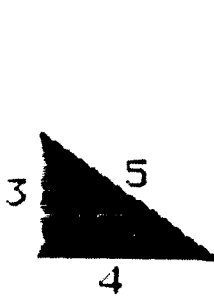
Yes

No



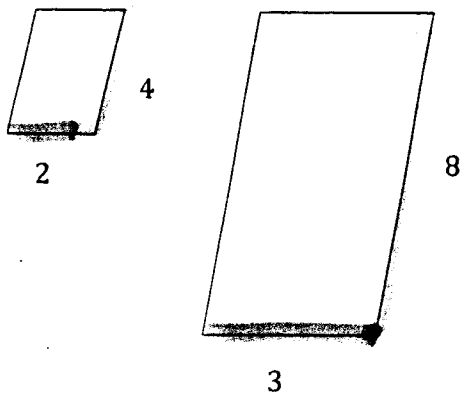
Yes

No



Yes

No



$$\frac{2}{3} = \frac{4}{8}$$

$$2(8) = 3(4)$$

$$16 \neq 12$$

Yes

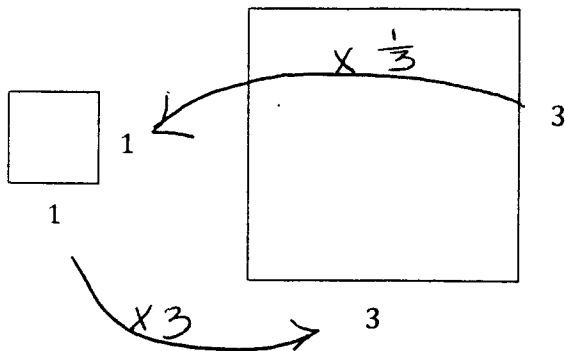
No

$$\frac{3}{2} = \frac{8}{4}$$

$$3(4) = 2(8)$$

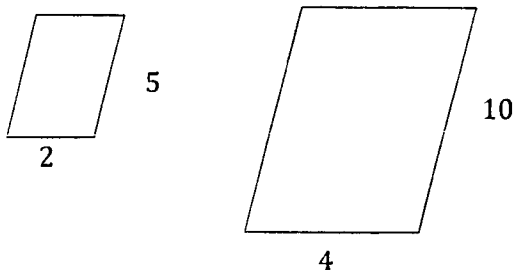
$$12 \neq 16$$

Find the Scale Factor between the pairs of similar shapes



Little to Big
Scale Factor = 3

Big to Little
scale factor = $\frac{1}{3}$
(.33)

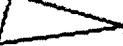
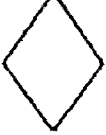


Scale Factor _____

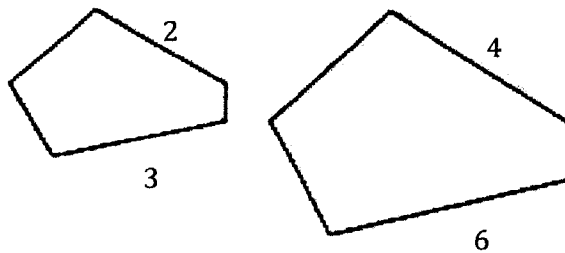
Scale factor = _____

Independent Work

For each shape on the left, circle the shape(s) on the right that are similar.

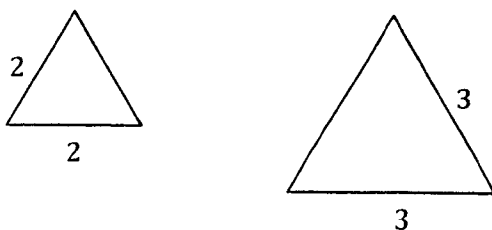
				
				
				
				

For each set of shapes, determine if they are similar and solve for the scale factor if applicable.



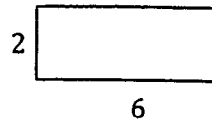
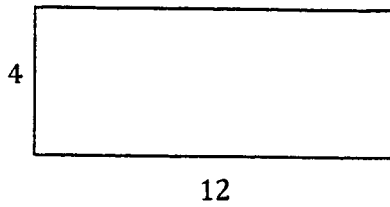
Similar? _____

Scale Factor _____



Similar? _____

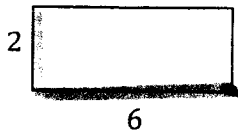
Scale Factor _____



Similar? _____

Scale Factor _____

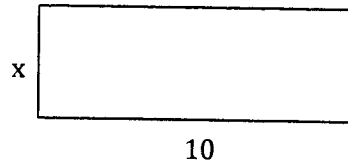
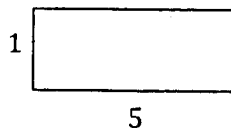
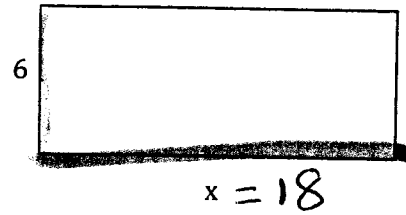
Find the missing side, x.



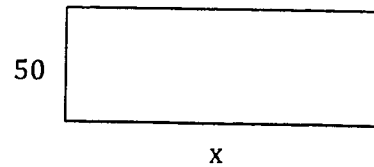
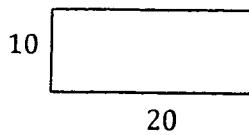
$$\frac{6}{2} = \frac{x}{6}$$

$$\begin{array}{r} 36 = 2x \\ \underline{2} \quad \underline{2} \\ 18 = x \end{array}$$

Scale Factor = 3
x = _____



Scale Factor = 2
x = _____



Scale Factor = _____
x = _____