

7th Grade Math
Lesson: April 6

Learning Target:

Students will find scale factor and use it to enlarge a shape.

Let's Get Started:

Watch Video: [Scale Factor](#)

Enlargement/Reduction

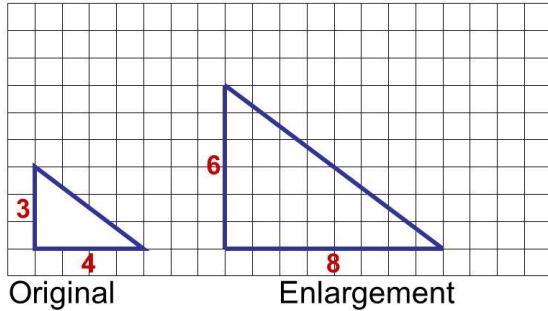
Steps to Success



Multiply **all** lines by **Scale Factor**

Leave tricky lines till last

Scale Factor 2



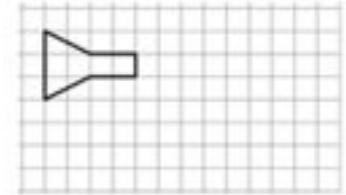
Warm-up activities

Using the “Let’s Get Started” video to help you, see if you can enlarge and reduce the shapes below.

Make this double in size.

or

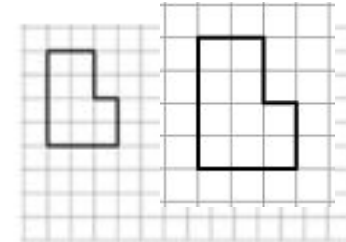
Enlarge using a scale factor of 2.



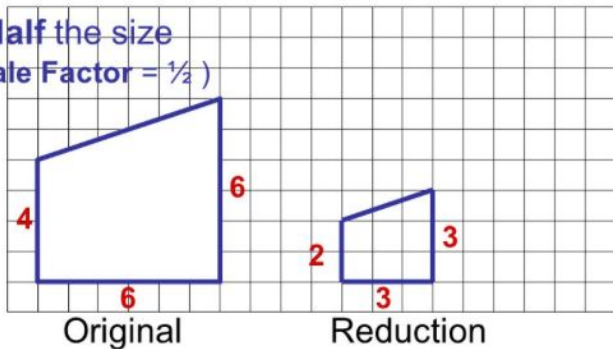
Make this half the size.

or

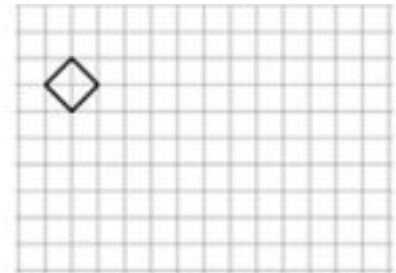
Enlarge using a scale factor of $\frac{1}{2}$.



Half the size
(Scale Factor = $\frac{1}{2}$)



CHALLENGE:
Enlarge using a scale factor of 3.



Enlargement/Reduction

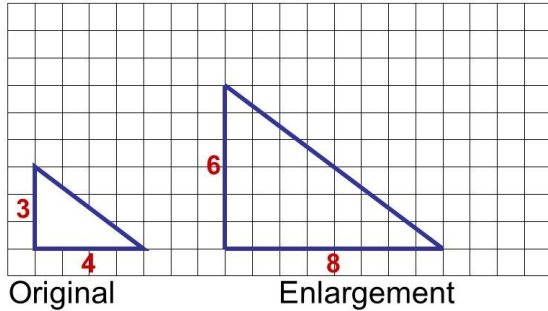
Steps to Success



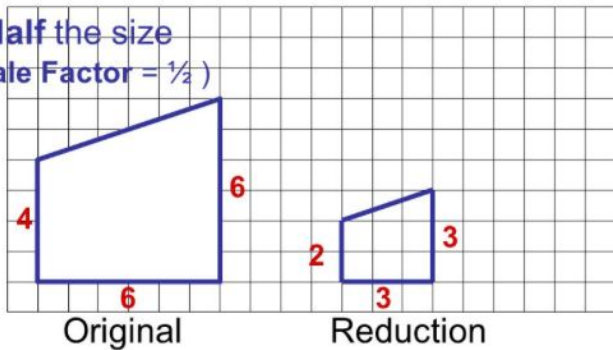
Multiply **all** lines by **Scale Factor**

Leave tricky lines till last

Scale Factor 2



Half the size
(Scale Factor = $\frac{1}{2}$)



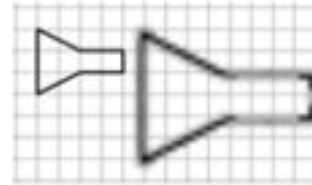
Warm-up activities

Using the “Let’s Get Started” video to help you, see if you can enlarge and reduce the shapes below.

Make this double in size.

or

Enlarge using a scale factor of 2.

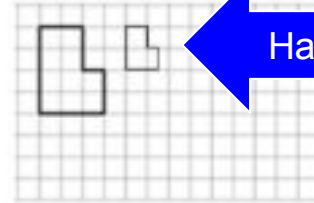


Twice as big

Make this half the size.

or

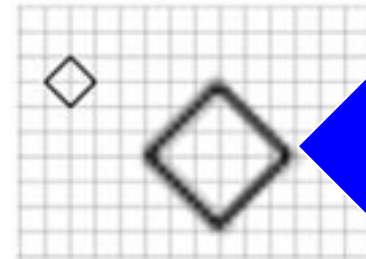
Enlarge using a scale factor of $\frac{1}{2}$.



Half as big

CHALLENGE:

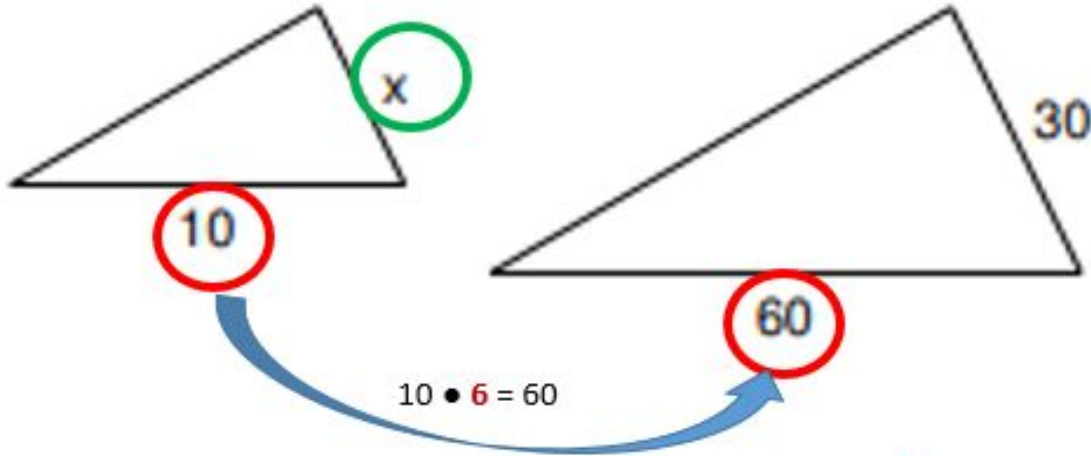
Enlarge using a scale factor of 3.



Three times bigger

Practice:

Use scale factor to help you find the missing side length.



The original (on the left) ENLARGES by a Scale Factor of **6**.

This means the similar shape (on the right) is 6 times bigger than the original.

To find x , since we know that $x \bullet 6 = 30$, we can do $30 \div 6 = 5$

So $\rightarrow x = 5$

Correct Answer

Practice:

Go to this website:

[Similar Figures - Side Lengths and Angle Measurements](#)

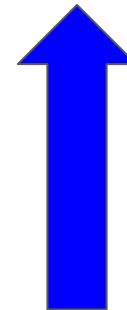
1. Wait until the advertisement is finished to play.
2. Look for the missing side length and find its corresponding (or matching) side on the other shape.
3. Determine what the scale factor would be to go from the original to the similar shape.
4. Select the answer that shows the correct answer.
5. Each game has 10 questions. Green boxes mean your answer was correct and yellow answer means your answer was incorrect.

Note: Corresponding (matching) angles in similar shapes are the SAME SIZE.

Similar Figures: Side Lengths and Angle Measures Scratch Pad

If these two figures are similar, what is the measure of the missing length?

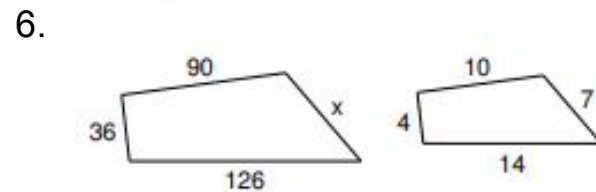
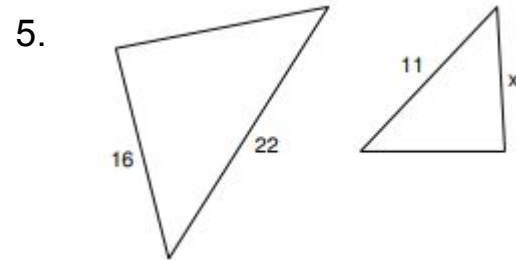
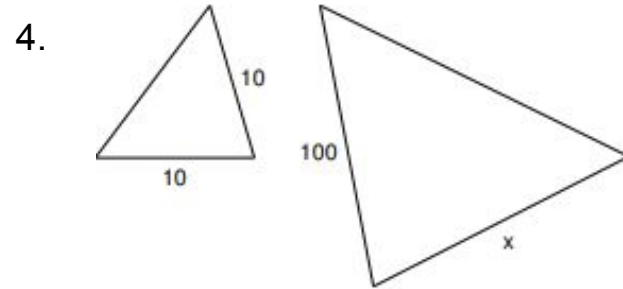
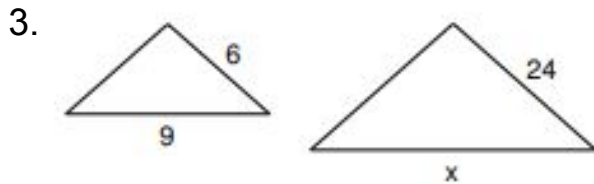
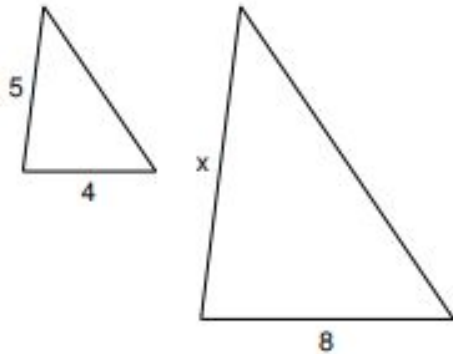
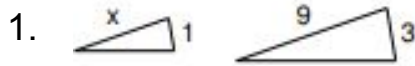
61 cm	71 cm
86 cm	101 cm



Practice:

Answer the questions on a piece of paper.

For each problem, draw and label the shapes, then use scale factor to help you find the missing side length.



Answer Key:

Once you have completed the problems, check your answers here.

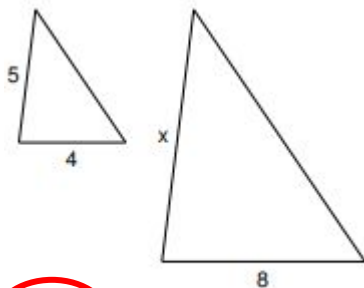
Note: You may have labeled your shapes correctly, but when you found the missing side length, you may have multiplied instead of divided OR divided instead of multiplied. Did the missing side length happen on the original shape (on the left) or on the similar figure (on the right)?

1.



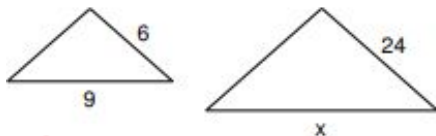
3

2.



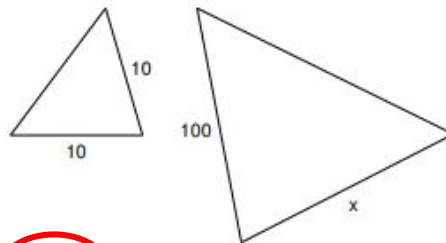
10

3.



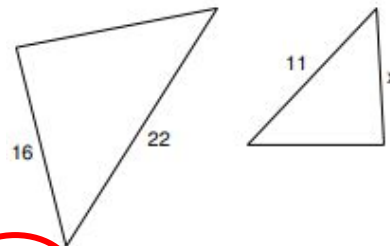
36

4.



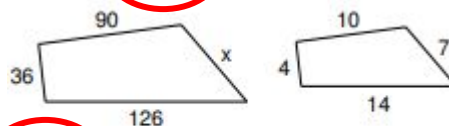
100

5.



8

6.



63

Additional Practice:

Click on the links below to get additional practice and to check your understanding!

[Scale Factor in Scale Drawings](#)

[Identifying Similar Figures](#)