# Bell Ringer

Quadrilateral WXYZ is similar to quadrilateral PQRS.
Find QR if XY is 25 meters, WX is 52 meters,
and PQ is 10.4 meters.

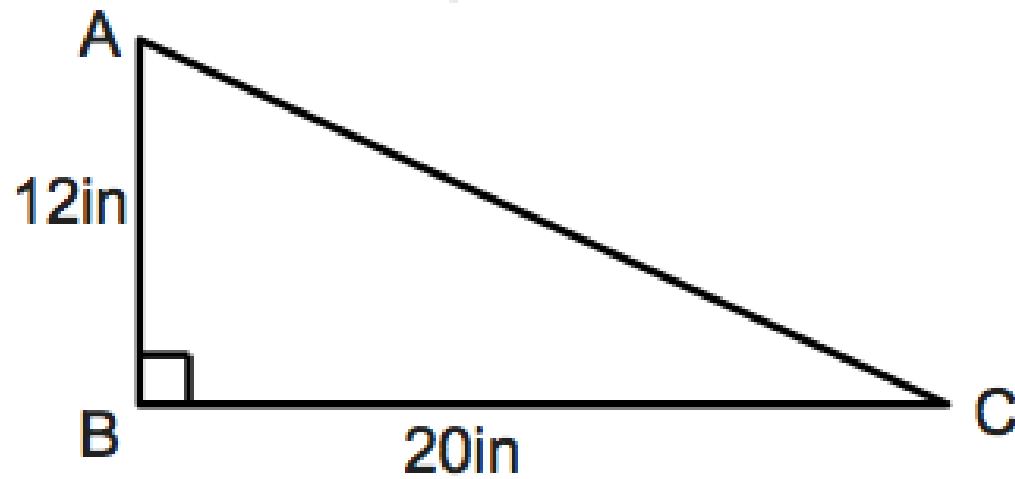# Similar Figures - Constant of Proportionality

Similar figures have proportional side lengths.

The constant of proportionality, called a scale factor, explains how one similar figure compares to the other similar figure.

Using a scale factor to find measurements
1) Identify the original figure
2) Multiply each measurement of the original figure by the scale factor
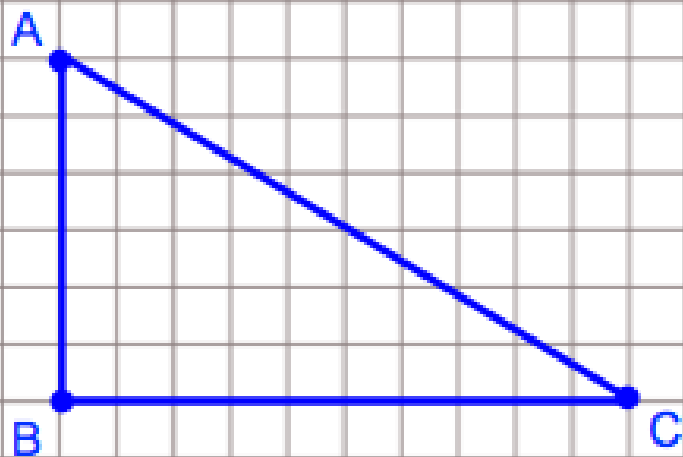3) Write the measurements of the similar figure

1) Using a scale factor of 3/2, draw and label Triangle A'B'C' so its similar to Triangle ABC.

A

12in

B    20in    C

$$AB' \quad \overset{6}{\cancel{12}} \cdot \dfrac{3}{\cancel{2}_1} = 18 \text{ in}$$

$$BC' \quad \overset{10}{\cancel{20}} \cdot \dfrac{3}{\cancel{2}_1} = 30 \text{ in}$$

Scale by 2s

2) The image on the mimio screen is 5 meters by 3 meters.  The mimio magnifies the image by 200 times.  What is the original image measured in centimeters?

original screen 500cm by 300cm

2.5cm by 1.5cm

$$\frac{500}{200}$$

$$\frac{500}{1} \cdot \frac{1}{200}$$

$$\frac{300}{200}$$

$$\frac{300}{1} \cdot \frac{1}{200}$$