

8.3 Scale Diagrams

A _____ is a reproduction of an object. It is either _____ or _____ than the original, but it has the _____ (ie. It is _____). Each dimension of the figure is multiplied by the same _____.

Scales can be stated several ways:

As a _____ eg. 1 cm = 50 km

As a _____ eg. $\left(\frac{1 \text{ cm}}{50 \text{ km}}\right)$

As a _____ eg. (1: 5 000 000)

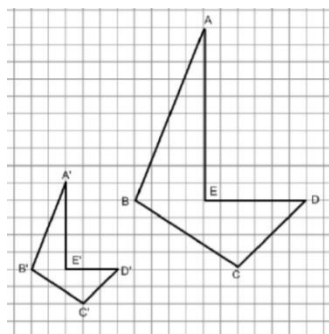
As a _____ eg.



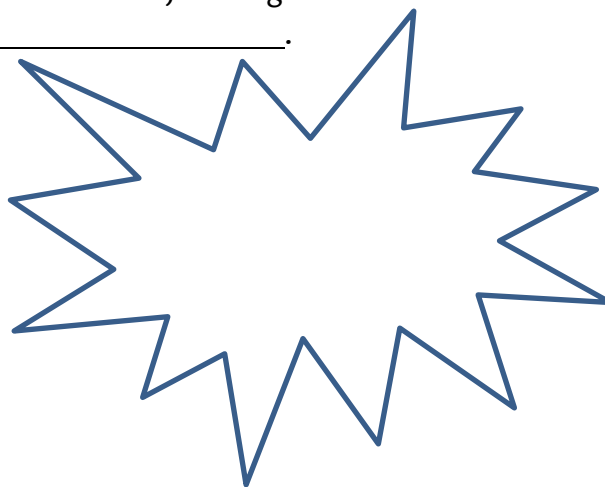
If the image length is _____ than the object length then the scale factor is _____ and we have an _____.

If the image length is _____ than the object length then the scale factor is _____ and we have a _____.

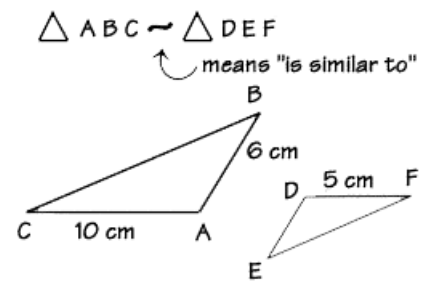
Scale is ALWAYS written in the form of:



Find the scale factor from the diagram:



These two triangles are similar. Find the length of DE.



Surveyors are using a measuring device called a tight-chain to determine boundaries of plots of land. Two surveyors determine that a proposed building site is rectangular, measuring 175 m x 50 m. To make a scale drawing of the site, they use a scale of 1 : 2500.

What are the dimensions of the scale drawing of the building site in **centimetres**?

A doll house is $\frac{1}{10}$ of the actual size of a house. If a chair in the dollhouse is 2.75 cm tall, how tall is the actual chair that it models?



Ex. A tree casts a shadow 3.2 m long. At the same time a 1.7 m tall man standing near the tree casts a shadow 0.8 m long. Determine the height of the tree to the nearest tenth.