

Unit 4: Scale Factors & Similarity

4.1 Enlargements & Reductions

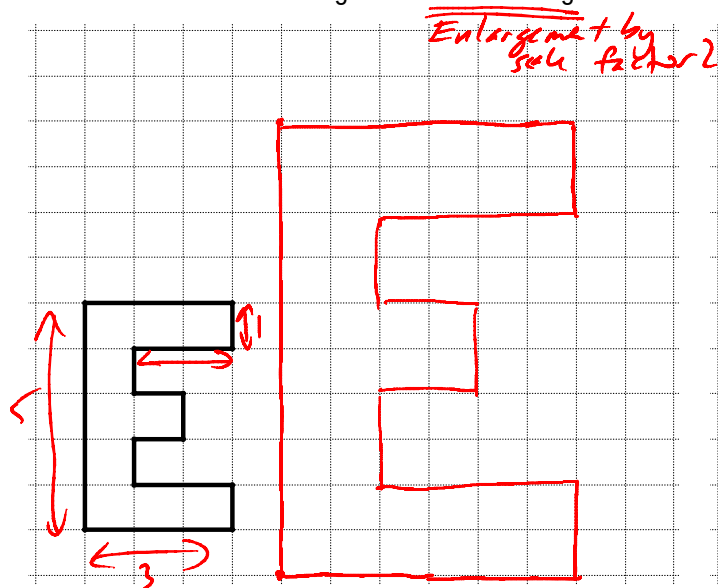
Enlargements and reductions can be drawn using grid paper or a scale factor.

Enlargement: an increase in the dimensions of an object (2D or 3D) by a constant multiplying factor * scale factor greater than 1

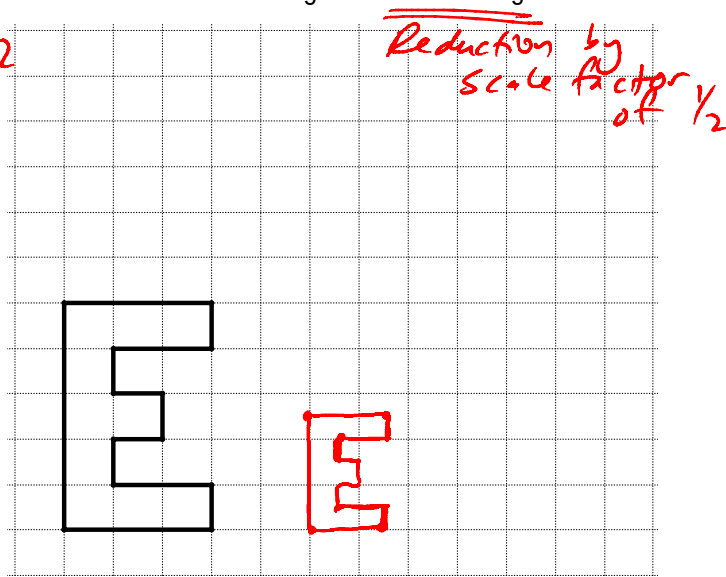
Reduction: a decrease in the dimensions of an object (2D or 3D) by a constant multiplying factor * scale factor between 0 and 1

Scale Factor: the constant multiplier by which all dimensions are enlarged or reduced

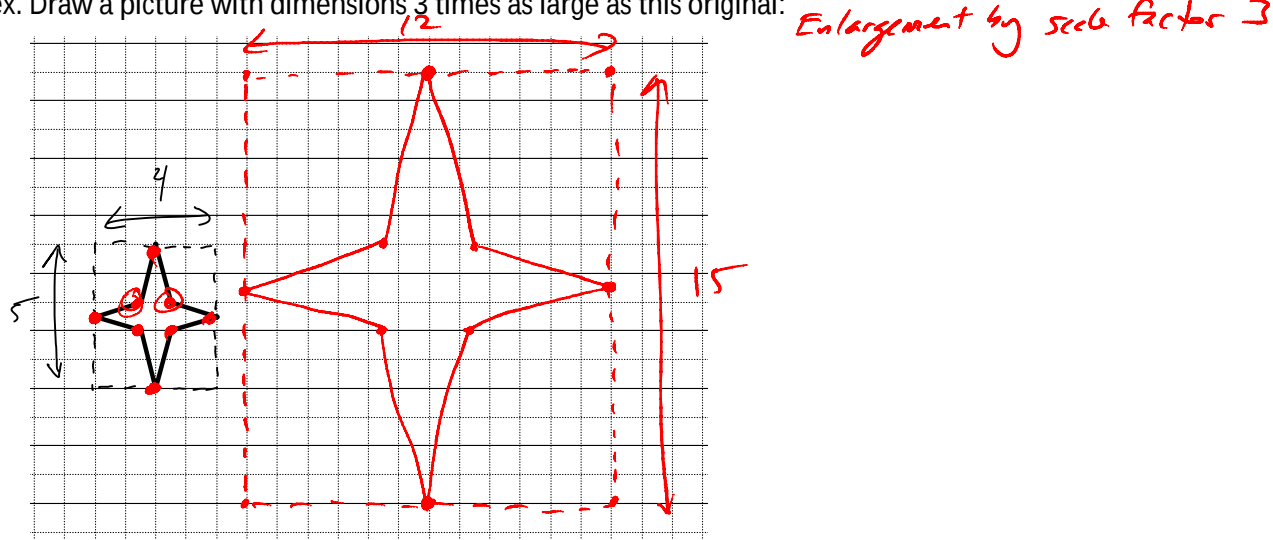
ex. Make the following letter twice as large:



ex. Make the following letter half as large:



ex. Draw a picture with dimensions 3 times as large as this original:



Use the following vocabulary words to fill in the blanks below:

- constant/enlargement/reduction/scale factor/smaller/larger

A scale factor greater than 1 indicates a(n) enlargement, which results in an image that is the same shape but proportionally larger than the original.

A scale factor less than 1 indicates a(n) reduction, which results in an image that is the same shape but proportionally smaller than the original.

The scale factor is the constant amount by which all dimensions of an object are enlarged or reduced in a scale drawing.