

4.1 Enlargements and Reductions

MathLinks 9, pages 130–138

Key Ideas Review

Choose from the following terms to complete #1.

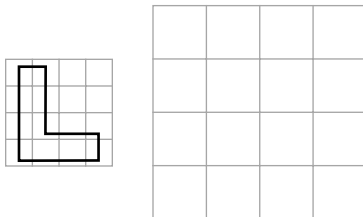
constant enlargement larger reduction scale factor smaller

1. a) A scale factor greater than 1 indicates a(n) _____, which results in an image that is the same shape but proportionally _____ than the original.
- b) A scale factor less than 1 indicates a(n) _____, which results in an image that is the same shape but proportionally _____ than the original.
- c) The _____ is the _____ amount by which all dimensions of an object are enlarged or reduced in a scale drawing.

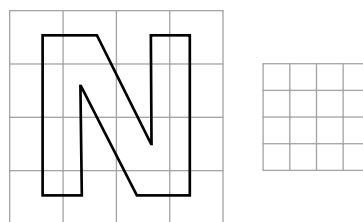
Check Your Understanding

2. Draw an enlargement of each figure using a scale factor of 2.
3. Draw a reduction of each letter using a scale factor of 0.5.

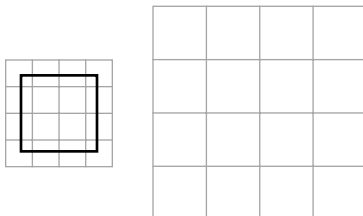
a)



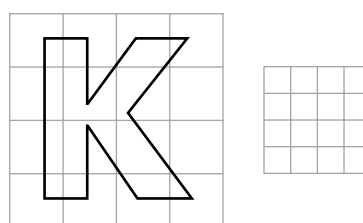
a)



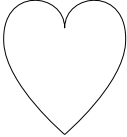
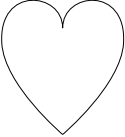
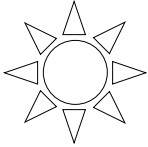
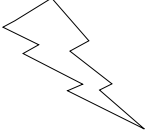
b)



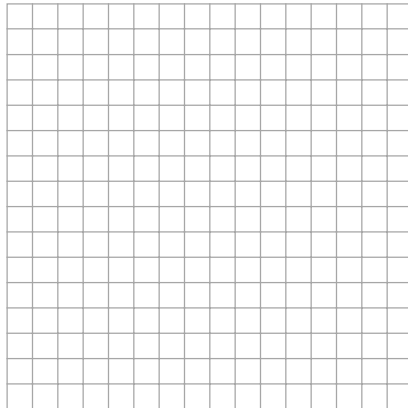
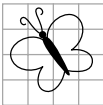
b)



4. For each image in column A, state whether the image in column B has a scale factor
- greater than 1
 - less than 1
 - equal to 1

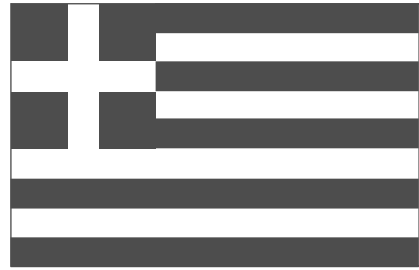
	A	B
a) _____		
b) _____		
c) _____		

5. a) Draw an enlargement of the butterfly using a scale factor of 4.

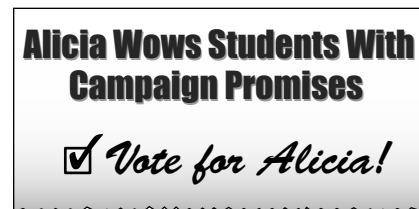


- b) Explain how you know that your drawing is correct.

6. Draw an image of the flag of Greece using a scale factor of $\frac{1}{4}$.



7. Alicia copied a headline from the school newspaper and included it on her election poster.



- a) Is the headline on the poster an enlargement or a reduction of the headline in the newspaper?
- b) What is the scale factor? How do you know?