Lesson 1: Scale Drawings

Classwork

Opening Exercise

Above is a picture of a bicycle. Which of the images below appears to be a well-scaled image of the original? Why?

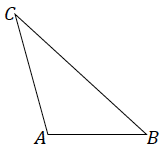






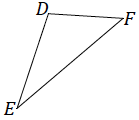
**Example 1**

Use construction tools to create a scale drawing of with a scale factor of .



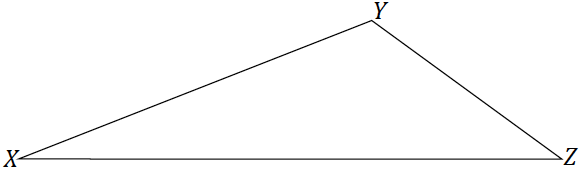
Exercise 1

Use construction tools to create a scale drawing of with a scale factor of . What properties does your scale drawing share with the original figure? Explain how you know.



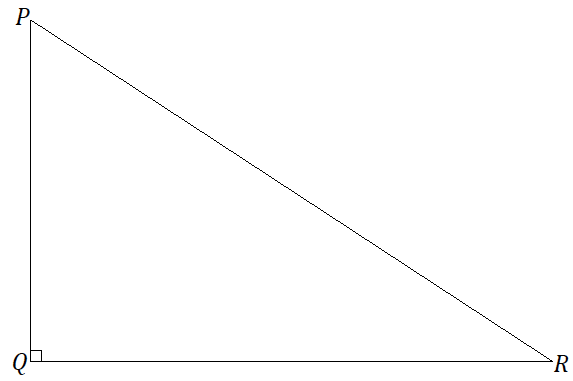
**Example 2**

Use construction tools to create a scale drawing of with a scale factor of .

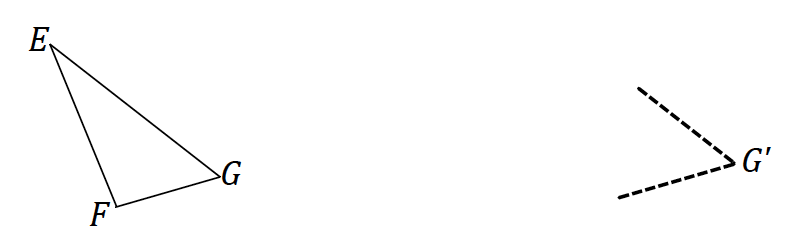


Exercises 2–4

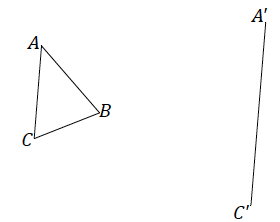
1. Use construction tools to create a scale drawing of with a scale factor of What properties do the scale drawing and the original figure share? Explain how you know.

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1. Triangle is provided below, and one angle of scale drawing is also provided. Use construction tools to complete the scale drawing so that the scale factor is . What properties do the scale drawing and the original figure share? Explain how you know.



1. Triangle is provided below, and one side of scale drawing is also provided. Use construction tools to complete the scale drawing and determine the scale factor.

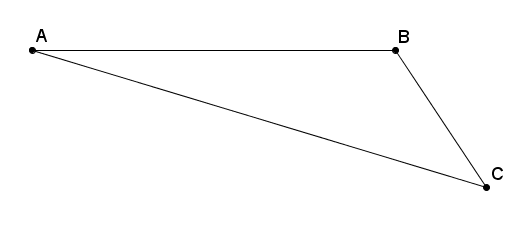


Problem Set

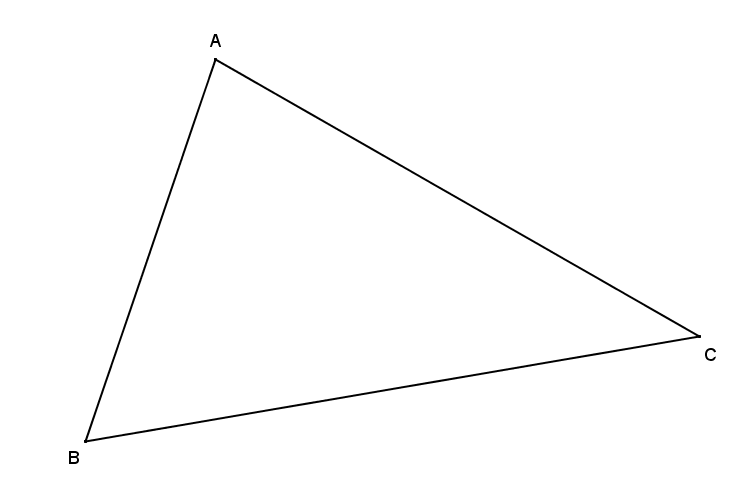
Lesson Summary

There are two properties of a scale drawing of a figure: corresponding angles are equal in measurement, and corresponding lengths are proportional in measurement.

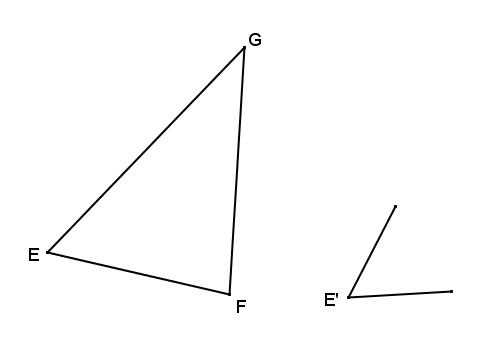
1. Use construction tools to create a scale drawing of with a scale factor of .

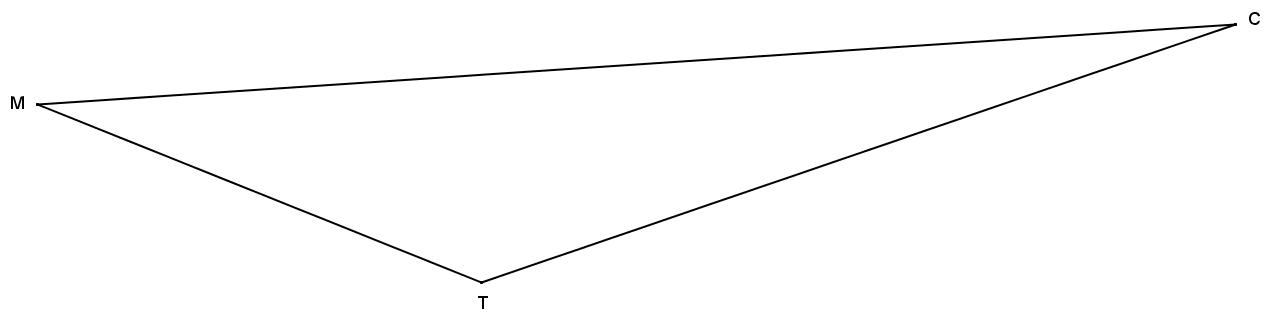


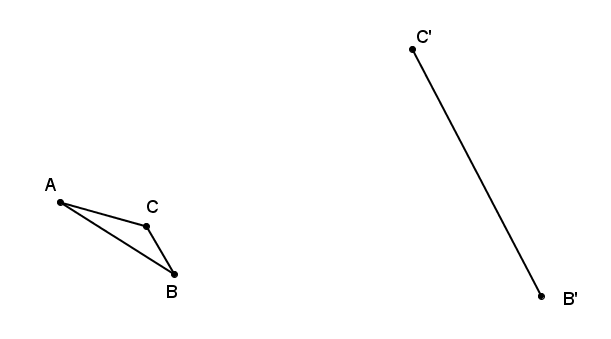
1. Use construction tools to create a scale drawing of with a scale factor of .



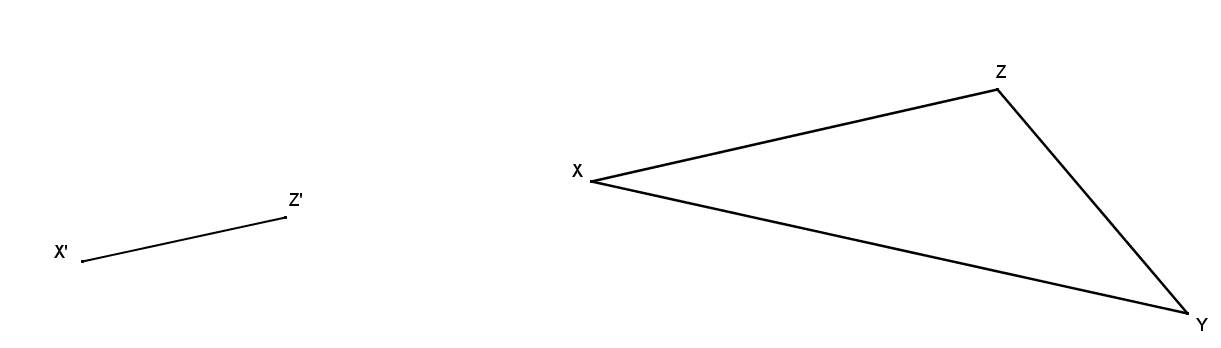
1. Triangle is provided below, and one angle of scale drawing is also provided. Use construction tools to complete a scale drawing so that the scale factor is .



1. Triangle is provided below, and one angle of scale drawing is also provided. Use construction tools to complete a scale drawing so that the scale factor is .
2. Triangle is provided below, and one side of scale drawing is also provided. Use construction tools to complete the scale drawing and determine the scale factor.



1. Triangle is provided below, and one side of scale drawing is also provided. Use construction tools to complete the scale drawing and determine the scale factor.



1. Quadrilateral is a scale drawing of quadrilateral with scale factor . Describe each of the following statements as always true, sometimes true, or never true, and justify your answer.
   1. where