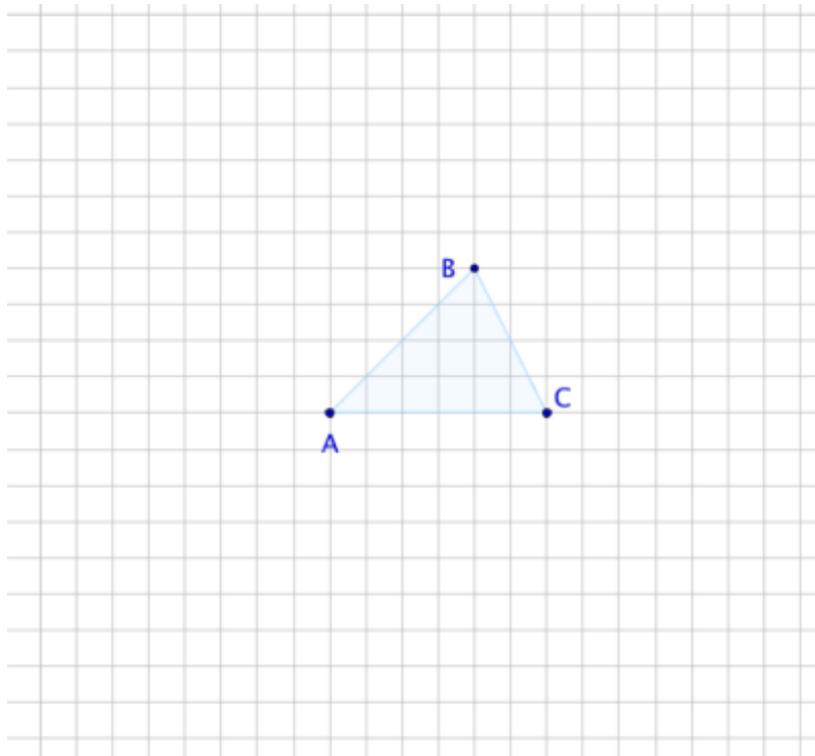


## 8.G.A.3 Effects of Dilations on Length, Area, and Angles

### Task

Consider triangle  $ABC$ .



- a. Draw a dilation of  $ABC$  with:
  - i. Center  $A$  and scale factor 2.
  - ii. Center  $B$  and scale factor 3.
  - iii. Center  $C$  and scale factor  $\frac{1}{2}$ .

b. For each dilation, answer the following questions:

- i. By what factor do the base and height of the triangle change? Explain.
- ii. By what factor does the area of the triangle change? Explain.
- iii. How do the angles of the scaled triangle compare to the original? Explain.



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