

G.G.46 Investigate, justify, and apply theorems about proportional relationships among the segments of the sides of the triangle, given one or more lines parallel to one side of a triangle and intersecting the other two sides of the triangle

In $\triangle ABC$, \overline{DE} is drawn parallel to \overline{AC} . Model this drawing using dynamic geometry software. Using the measuring tool, determine the lengths AD , DB , CE , EB , DE , and AC . Use these lengths to form ratios and to determine if there is a relationship between any of the ratios. Drag the vertices of the original triangle to see if any of the ratios remain the same. Write a proof to establish your work.

