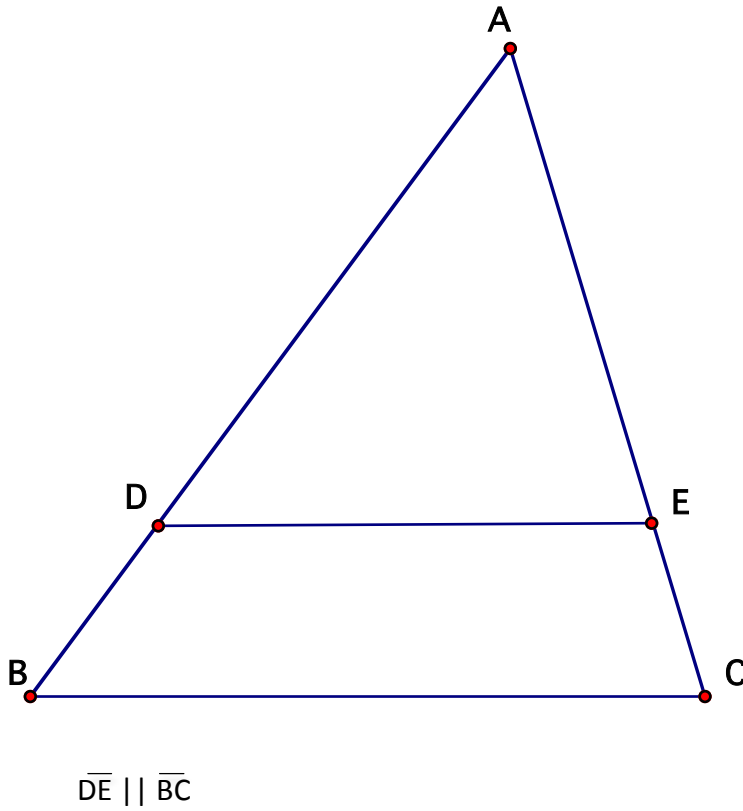


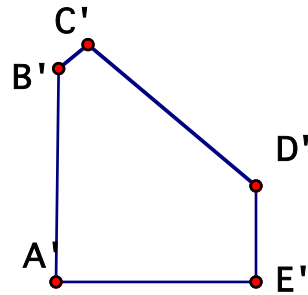
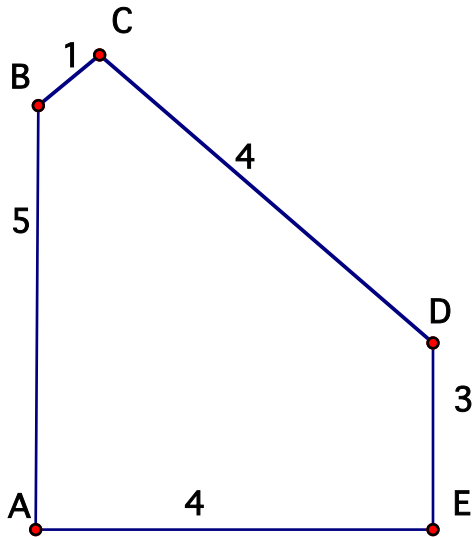
B4.2: Justification

Solve the following problems, using our definition of similarity of geometric figures to justify your solutions.

1. Suppose $\triangle ABC$ and $\triangle ADE$ are related as shown in the figure below. Show that $\triangle ABC$ and $\triangle ADE$ are similar.



2. In the two pentagons below, angles A , C , E , A' , C' and E' are all right angles.
- If the only additional information is that $m \angle B = m \angle B'$, are these two pentagons similar? Justify your answer.
 - If in addition to the information above, you know that $A'B' = 2.5$ units and $A'E' = 2$ units, are these two pentagons necessarily similar? Justify.



3. Suppose $\triangle ABC$ and $\triangle A'B'C'$ are related by $m \angle A = m \angle A'$, $m \angle B = m \angle B'$, and $m \angle C = m \angle C'$. Show that these triangles are similar.