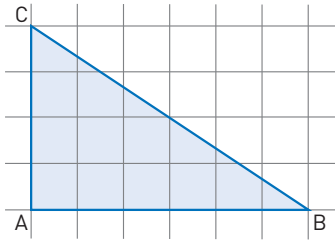


YOU & MATHS Different triangles Draw two right triangles that are equivalent but not congruent.

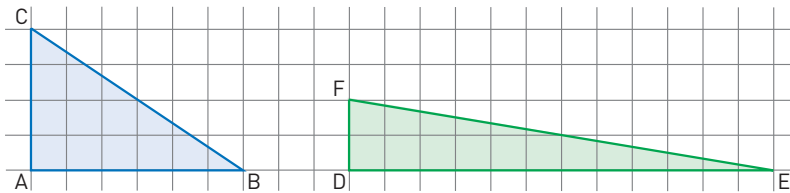
Let us draw a right triangle ABC such that:

$$\overline{AB} \geq \overline{AC}.$$



Let us draw a right triangle DEF such that:

$$\overline{DF} = \frac{1}{2} \cdot \overline{AC} \text{ and } \overline{DE} = 2 \cdot \overline{AB}.$$



The two triangles ABC and DEF are equivalent because:

$$\frac{1}{2} \cdot \overline{DF} \cdot \overline{DE} = \frac{1}{2} \cdot \frac{1}{2} \cdot \overline{AC} \cdot 2 \cdot \overline{AB} = \frac{1}{2} \cdot \overline{AC} \cdot \overline{AB}.$$

The two triangles are not congruent because DF is shorter than each of the sides of ABC :

$$\overline{DF} < \overline{AC} \leq \overline{AB} < \overline{BC}.$$