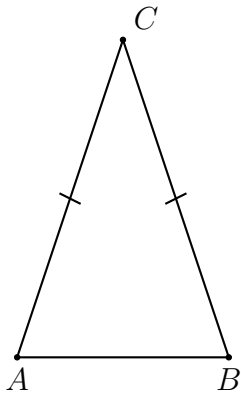


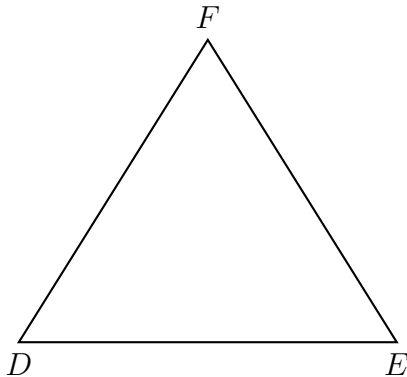
**Classwork assessment: Isosceles base theorem**

Show each step, justify each by writing the name of a theorem to the right.

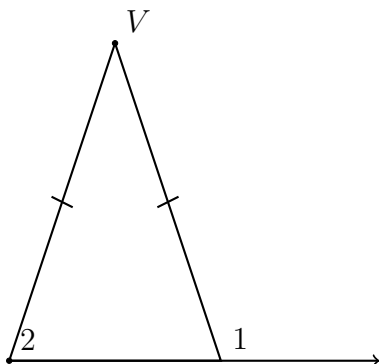
1. Given  $\triangle ABC$ .  $\overline{AC} \cong \overline{BC}$ ,  $m\angle A = 55$ . Find  $m\angle C$ .



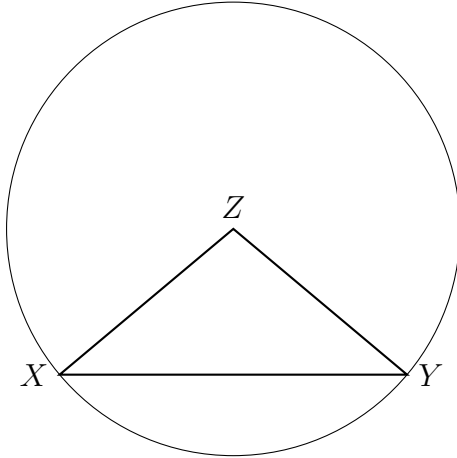
2. Given  $\triangle DEF$ .  $\overline{DF} \cong \overline{EF}$ ,  $m\angle F = 72$ . Find  $m\angle D$ .



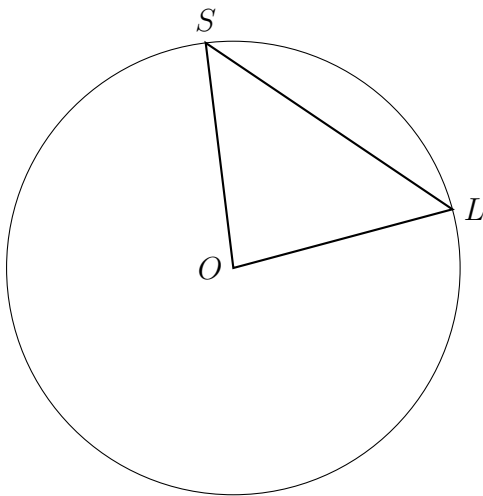
3. Given the triangle shown with congruent sides marked.  $m\angle 1 = 110$ . Find  $m\angle 2$   
Spicy: Find the measure of the vertex angle.



4. Given circle  $Z$  with inscribed  $\triangle XYZ$ .  $m\angle Z = 100$ . Find  $m\angle Y$ .



5. Given circle  $O$  with inscribed  $\triangle SLO$ .  $m\angle S = x + 7$ . Find  $m\angle O = 2x - 2$ . Find  $x$ .  
For full credit, check your answer.



6. Writing to learn: Why do we write down the theorems that justify each step to solve a problem?