



### Exploring angle measures

On page 1.3, you will find a model of a boat sail with the measures of the angles shown.

1. Drag points  $A$ ,  $C$ , or  $T$ . What do you notice about the angles when comparing  $\triangle CAT$  to  $\triangle ZAP$ ?

2. Drag point  $P$ . What do you notice about the angles?

Advance to page 1.6, which shows the same model sail but has the measures of the side lengths.

3. Drag points  $A$ ,  $C$ , or  $T$ . What do you notice about the side lengths when comparing  $\triangle CAT$  to  $\triangle ZAP$ ?

4. Drag point  $P$ . What do you notice about the side lengths? Are they ever the same?

5. When are  $\triangle CAT$  and  $\triangle ZAP$  similar triangles? Congruent triangles?