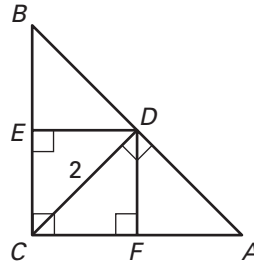


**Practice B**

For use with pages 272–278

Use the diagram shown.  $D$  is the circumcenter of  $\triangle ABC$ .

1. Find the length of  $\overline{DA}$ .
2. Find the length of  $\overline{AB}$ .
3. Explain why  $\triangle ADF \cong \triangle BDE$ .

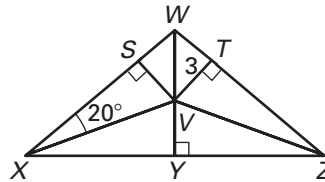


$$DC = 2$$

$$\overline{AC} \cong \overline{BC}$$

Use the diagram shown.  $V$  is the incenter of  $\triangle XWZ$ .

4. Find the length of  $\overline{VS}$ .
5. Find the  $m\angle VZX$ .
6. Explain why  $\triangle XSV \cong \triangle ZTV$ .



$$VT = 3$$

$$\overline{XW} \cong \overline{WZ}$$

$$m\angle WXV = 20^\circ$$

Complete the constructions described.

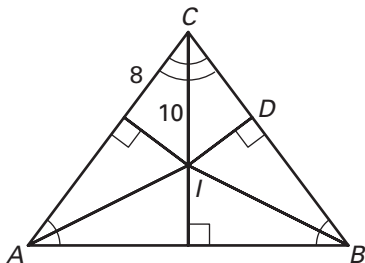
7. Draw a large acute scalene triangle  $\triangle ABC$ . Construct the perpendicular bisector of each side. Label the circumcenter  $D$ . Measure  $\overline{DA}$ ,  $\overline{DB}$ , and  $\overline{DC}$ .
8. Draw a large obtuse scalene triangle  $\triangle ABC$ . Construct the bisector of each angle. Label the incenter  $D$ . Measure the perpendicular distance from point  $D$  to each side of the triangle.

Complete the following sentences with *always*, *sometimes*, or *never*.

9. The perpendicular bisector of a triangle is ? the same segment as the angle bisector.
10. The angle bisectors of a scalene triangle ? intersect at a single point.
11. The angle bisectors of a right triangle ? intersect inside the triangle.
12. The perpendicular bisectors of a right triangle ? intersect inside the triangle.

Find the indicated measure in each exercise.

13. Find  $ID$ .



14. Find  $BD$ .

