

Name \_\_\_\_\_

## 5-2 Reteaching

### Bisectors in Triangles

1. Write the letter of each figure beside its definition.

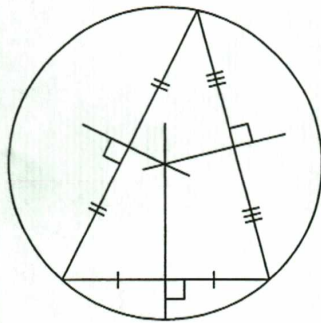
The **circumcenter** is the point of concurrency of the perpendicular bisectors of a triangle.

The **circumscribed circle** is centered at the circumcenter and contains the vertices of a triangle.

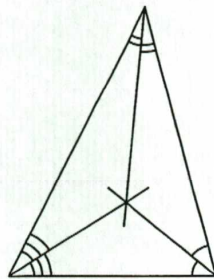
The **incenter** is the point of concurrency of the angle bisectors of a triangle.

The **inscribed circle** is centered at the incenter, and the sides of the triangle touch the circle.

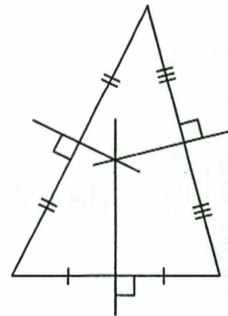
A.



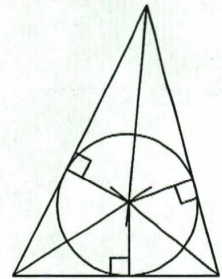
B.



C.



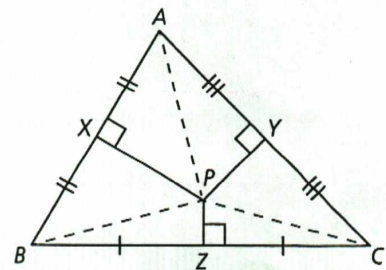
D.



2. Timothy says  $PX = PY = PZ$ .

a. What mistake did Timothy likely make?

b. From what points is  $P$  equidistant? Explain your reasoning.



3. Complete the sentences below to find the value of  $x$ .

$\overline{AP}$ ,  $\overline{BP}$ , and  $\overline{CP}$  are the \_\_\_\_\_ of  $\triangle ABC$ .

So  $P$  is the \_\_\_\_\_ of  $\triangle ABC$ .

The incenter is equidistant from the \_\_\_\_\_ of  $\triangle ABC$ , so  $PS =$  \_\_\_\_\_.

Therefore,  $x =$  \_\_\_\_\_.

