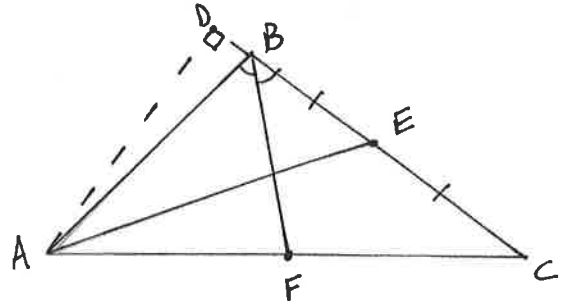


1. Name the following from the diagram.

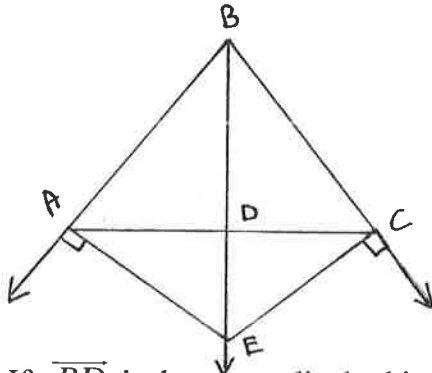
Median: \_\_\_\_\_

Altitude: \_\_\_\_\_

Angle Bisector: \_\_\_\_\_



2. Use the diagram below to fill in the blanks.



A. If  $\overline{BD}$  is the perpendicular bisector of  $\overline{AC}$ , then \_\_\_\_\_  
by the \_\_\_\_\_.

B. If  $AE = EC$ , then \_\_\_\_\_  
by the \_\_\_\_\_.

C. If  $DC = DA$ , then  $D$  is the \_\_\_\_\_ of  $\overline{AC}$  and  $\overline{BD}$  is a  
\_\_\_\_\_ of  $\triangle ABC$ .

D. If  $\overline{AB} \cong \overline{BC}$ , then  $\angle A \cong \angle C$  by the \_\_\_\_\_.

E. If  $\overline{BD}$  is both an \_\_\_\_\_ and a \_\_\_\_\_,  
Then  $\triangle ABC$  is an \_\_\_\_\_ triangle.

3. In the diagram,  $\overline{RX}$  is the angle bisector of  $\angle R$ . Find  $QX$  and  $m\angle QRP$ .  
Provide a reason for any equation you write. Show all work to justify your answers.

$$QX = y^2 - 2y$$

$$PX = 5y + 30$$

$$m\angle QRP = 3x^2 - 2$$

$$m\angle XRP = 8x - 9$$

