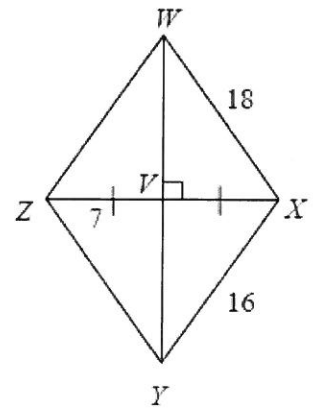


6.1 Practice Problems

- 1) The Perpendicular Bisector Theorem states that if a point is on the perpendicular bisector of a segment, then it is equidistant from the endpoints of the segment.
- 2) The Angle Bisector Theorem states that if a point is on the bisector of an angle, then the point is equidistant from the sides of the angle.

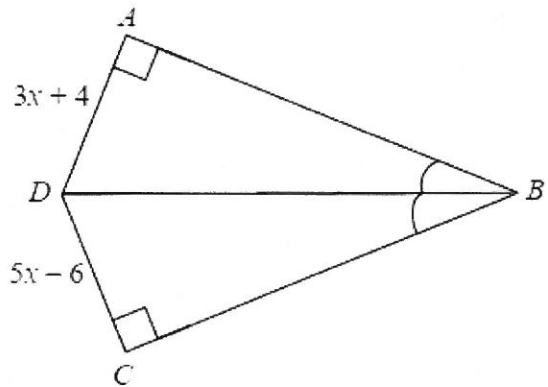
Use the figure at the right for exercises 3-6.

- 3) How is \overline{WY} related to \overline{ZX} ?
They are perpendicular bisectors
- 4) Find WZ
18
- 5) Find ZY
16
- 6) Find VX
7

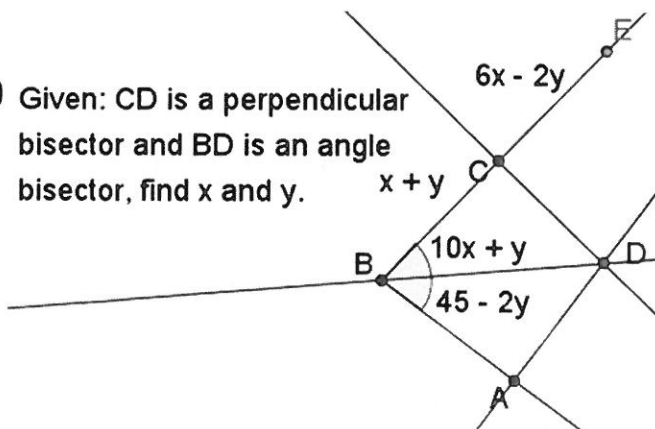


Use the figure at the right for exercises 10-12.

- 7) Find the value of x .
4
- 8) Find AD .
20
- 9) Find CD .
20



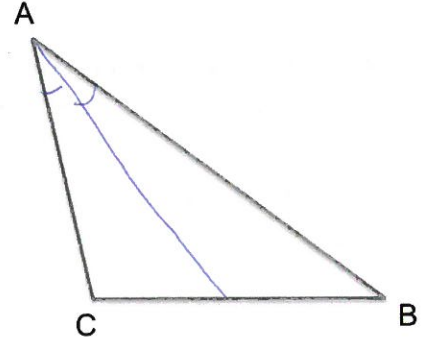
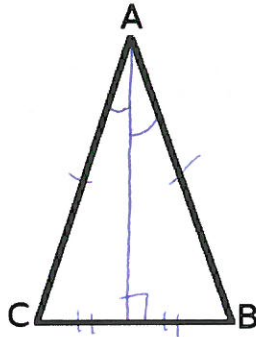
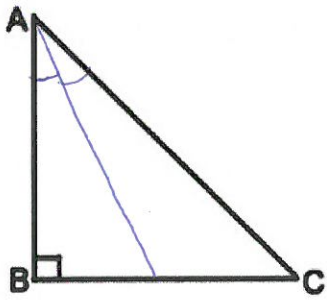
- 10) Given: CD is a perpendicular bisector and BD is an angle bisector, find x and y .



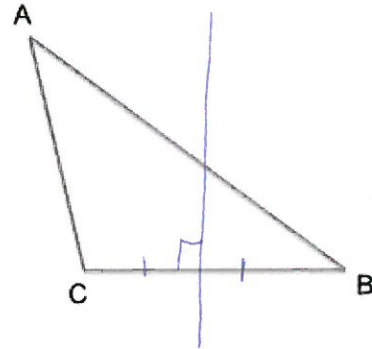
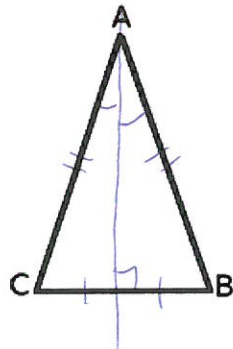
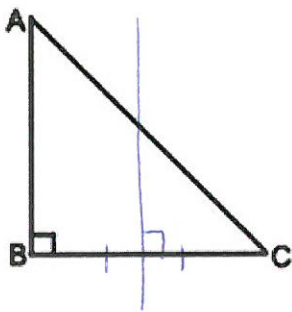
$$\begin{aligned}
 10x + y &= 45 - 2y \\
 10x + 3y &= 45 \\
 + 5x - 3y &= 0 \\
 \hline
 15x &= 45 \\
 x &= 3 \\
 x + y &= 6x - 2y \\
 5x - 3y &= 0 \\
 15 - 3y &= 0 \\
 -3y &= -15 \\
 y &= 5
 \end{aligned}$$

11) Construct each given segment on each triangle. Be sure to properly mark each picture.

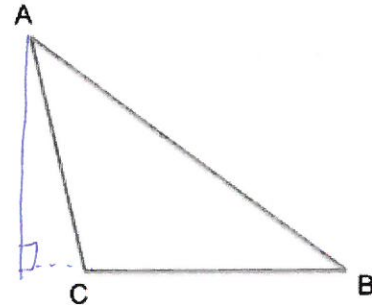
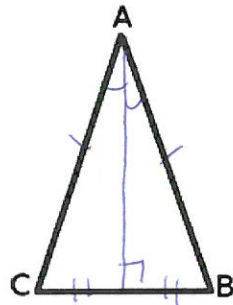
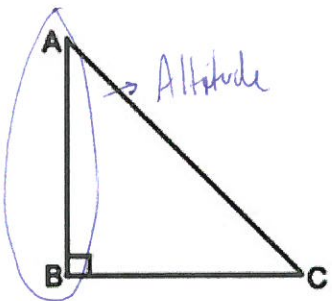
Angle Bisectors through angle A



Perpendicular bisectors of segment BC



Altitudes through angle A



Medians through angle A

