# Section 3.3 - 3.4 worksheet         Name: _____
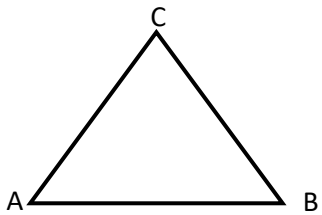
**In exercises 1 - 5, decide whether each statement is true or false.**

1. In a triangle, an altitude is shorter than either side from the same vertex.

2. In a triangle, an altitude is shorter than the median from the same vertex.

3. In a triangle, if a perpendicular bisector of a side and an altitude are the same line, then the triangle is isosceles.

4. Exactly one altitude lies outside of a triangle.

5. The intersection of the perpendicular bisectors of the sides always lies outside the triangle.

**In exercises 6-11, use your compass and straightedge to construct the following problems.**

6.  Construct the altitude $\overline{CD}$.                          7. Construct the altitude $\overline{BU}$.
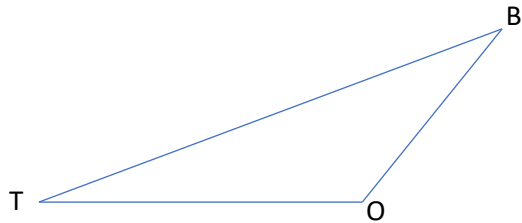
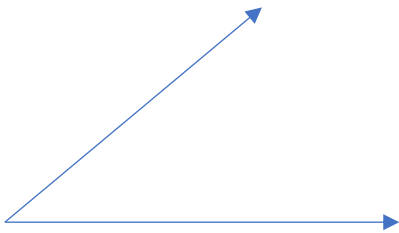8. Construct a perpendicular through the point on Line BC.

9. Construct a rectangle with side equal in length to $\overline{AB}$ and $\overline{CD}$.

A ———————————• B   C •——————————• D

10. Construct the angle bisector for the following angles.

11. Construct an isosceles right triangle and label it KJG with the right angle being J.

12. $BE$ bisects $\angle ABD$, find $x$ and $m\angle ABE$.



$2x + 10°$    $3x + 20°$
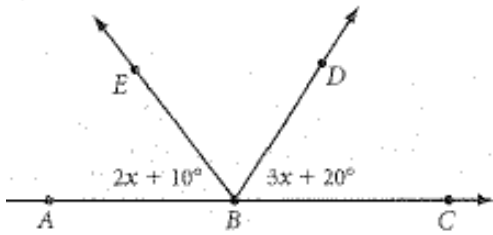
13. Complete each statement as fully as possible.



a. M is equidistant from lines _____

b.  P is equidistant from lines _____

c. Q is equidistant from lines _____

d. R is equidistant from lines _____