

Name: AK

Period: _____

Date: _____

Review Problems

1. What is true about every point on a Perpendicular Bisector?

It is equidistant to the endpoints of the segment it bisects

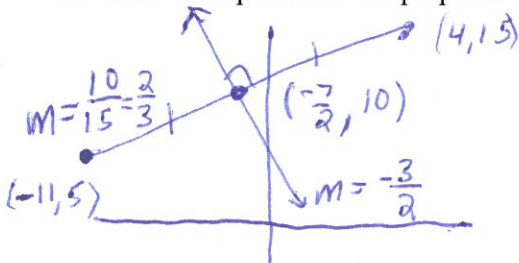


2. What is true about every point on an Angle Bisector?

It is equidistant to the sides of the angle
it ~~bisects~~ bisects.



3. Write the equation of the perpendicular bisector of the segment with endpoints (-11, 5) and (4, 15).



$$y = -\frac{3}{2}x + b$$
$$10 = -\frac{3}{2}\left(-\frac{7}{2}\right) + b$$
$$\frac{40}{4} = \frac{21}{4} + b$$
$$\frac{19}{4} = b$$

$$y = -\frac{3}{2}x + \frac{19}{4}$$

4) Can you make a triangle with the given side lengths?

13, 20, 7

No
Since 13+7 is
Not greater than
20.

3.2, 3.2, 0.1

Yes
 $3.2 + 0.1 > 3.2$

$\sqrt{1}, \sqrt{2}, \sqrt{3}$

Yes
 $\sqrt{1} + \sqrt{2} > \sqrt{3}$

3x, 4x, 10x

No
 $3x + 4x = 7x$, which
is not greater than
 $10x$.

5) Find the range of possible side lengths for the third side of a triangle given two sides in the form $__ < x < __$.

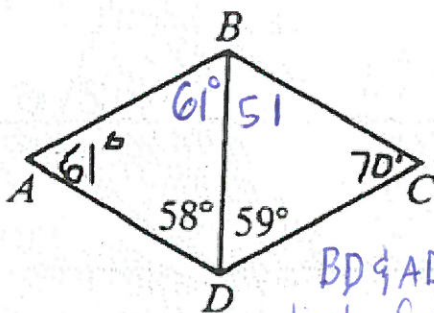
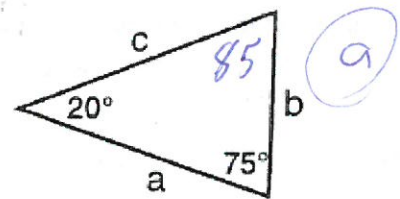
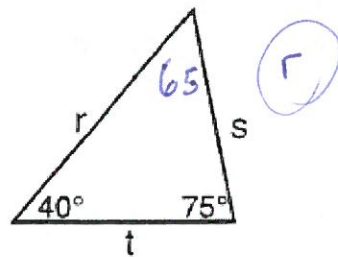
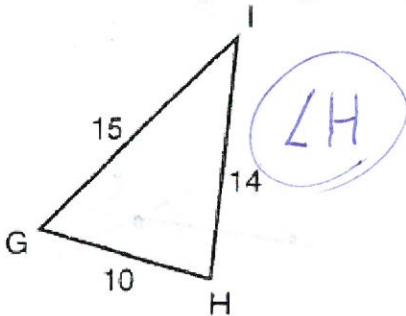
10, 15

$$5 < x < 25$$

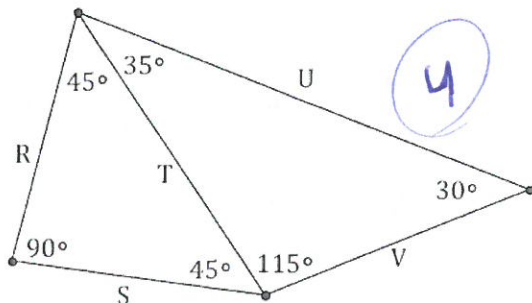
9, 9

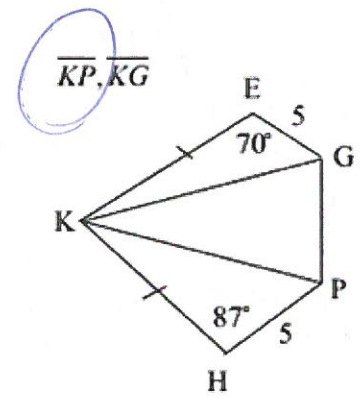
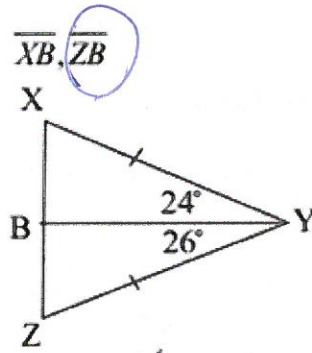
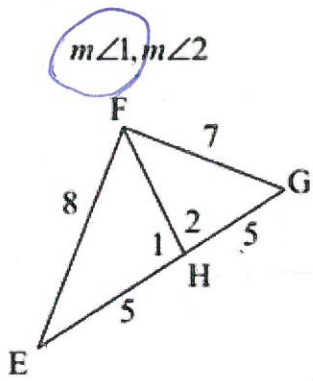
$$0 < x < 18$$

6) Which side or angle is largest? +?



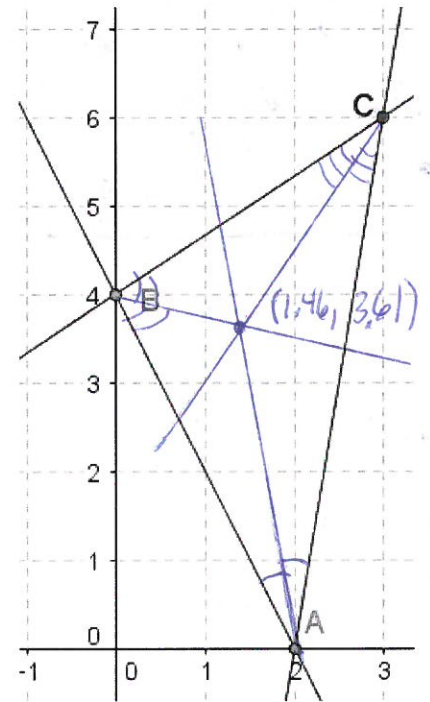
BD & AD are
tied for largest





8) The line segments AB, BC and AC represent three major highways on a map. A few venture capitalists want to build a mall that would be equidistant to all three highways. Approximate the location as an ordered pair for the mall that would be the same distance from all three highways using a protractor, or by opening up the Geogebra file on scvmath.org called "6.2 Review Problems Question 8.ggb" and using the tools on Geogebra.

Find the incenter which is the point of concurrency of the angle bisectors.
 (1.46, 3.61)



9) Starbucks has three coffee shops in Lower Manhattan. One is located on the corner of 4th Ave and 4th Street, the second is located on the corner of 8th Ave and 16th Street and the third is located on 2nd Ave and 14th street. Find an ideal address where Starbucks should put their coffee been storage facility so that it is equidistant to all three coffee shops by using a protractor and ruler or by opening up the Geogebra file called "6.2 Review Problems Question 9.ggb" and using the Geogebra tools.

Find the circumcenter which is the point of concurrency of the perpendicular bisectors.
 (6.75, 9.75)

