Day #42 Homework

1. The vertices of a triangle are $A(0, 7)$, $B(2, -1)$, and $C(5, 4)$. What type of triangle is $\triangle ABC$? Show your work and give a reason for your answer based on that work.

2. Point X is a point on the x – axis. If the distance between point X and the point $(9, 2)$ is $2\sqrt{5}$ what is/are the possible coordinates of X?

3. The distance between points $A(-3, -2)$ and $B(5, y)$ is $\sqrt{89}$. What is/are the possible values of y?

4. The center of a circle is a point on the y – axis. If the circle also passes through the point (4, 1) and the radius is $4\sqrt{2}$, what is the center of the circle?

5. Find the distance between the point $(1, -3)$ and the line defined by the equation $x + 3y - 12 = 0$. Draw a picture of the situation and explain and show your work as to how you arrived at your answer.