Advanced Algebra
Unit 10 Assignment #2
Draw the following on graph paper.
Use your pictures to help you answer the questions.

1. **Graph each circle and state the radius.**

a) $x^2 + y^2 = 25$ b) $x^2 + y^2 = 36$

c) $x^2 + y^2 = 5$ d) $x^2 + y^2 = 6$

2. Use the graph of **1a** to name the points at which the line $x + y = 5$ will intersect the circle $x^2 + y^2 = 25$

3. At what points will the line $y = -x$ intersect the unit circle $x^2 + y^2 = 1$

4. At what points will the line $x - y = 6$ intersect the circle $x^2 + y^2 = 36$

Find the distance between the following points.

5. $(3, 7) (6, 3)$ 6. $(4, 7) (8, 1)$

7. (0, 12) (5, 0)   8. (-3, 0) (0, 4)
9. (-3, 8) (-1, 6)

10. Find the distance from the origin out to point (3, -4)

11. Find the distance from the origin out to point (12, -5)

12. Find X so the distance between (X, 2) and (1, 5) is $\sqrt{13}$

13. Find Y so the distance between (7, Y) and (3, 3) is 5

Formulas:

$$a^2 + b^2 = c^2$$

$$Distance \sqrt{(x2 - x1)^2 + (y2 - y1)^2}$$