## Algebra II Worksheet #1 Unit 7 Selected Solutions

Find PQ for each of the following. Round your answer to the nearest tenth.

2. P(9,1); Q(2,5); PQ = \_\_\_\_\_  
PQ = 
$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$
 PQ =  $\sqrt{(2 - 9)^2 + (5 - 1)^2}$   
 $x_1 = 9$   $y_1 = 1$  PQ =  $\sqrt{(-7)^2 + (4)^2} = \sqrt{49 + 16}$   
 $x_2 = 2$   $y_2 = 5$  PQ =  $\sqrt{65} \approx 8.1$ 

For each of the following circles, write its equation in (a) standard form and (b) general form.



Find the center and the radius measure of the circle described by each of the following equations.

¥

0

15. 
$$x^{2}+y^{2}+10x - 4y + 28 = 0$$
  
 $x^{2}+10x + y^{2}-4y = -28$   
 $x^{2}+10x + 25 + y^{2}-4y + 4 = -28 + 25 + 4$   
 $(x+5)^{2}+(y-2)^{2} = 1$   
 $(x-h)^{2}+(y-k)^{2} = r^{2}$   
 $h = -5$ ;  $k = 2$ ;  $r = 1$   
Center (h, k) Radius: r  
Center (-5, 2) Radius: 1 I also graphed the circle.