Algebra/Trigonometry Section 1.2 Name:_____

Complete the table. Use the resulting solution to sketch a graph of the equation.

1. $y = 5 - x^2$

x	-2	-1	0	1	2
y					

Find the x- and y-intercepts of the graph of the equation

2. $y^2 = x + 1$

Find any the x- and y-intercepts of the graph using algebra and then check your answers by using a graphing utility.

3. $y = x^2 + x - 2$

Use intercepts and symmetry to sketch a graph of the equation.

4. $y = |x - 6|$
5. $y = -x^2 - 2x$

Find the standard form of the equation of the specified circle.

6. Center: $(-7, -4)$; radius: 7
7. Endpoints of a diameter: $(0,0)$, $(6,8)$

Find the center and radius of the circle and graph the equation.

8. $\left(x - \frac{1}{2}\right)^2 + \left(y - \frac{1}{2}\right)^2 = \frac{9}{4}$

Word problem

9. The resistance y in ohms of 1000 feet of solid copper wire at 77 degrees Fahrenheit can be approximated by the model $y = \frac{10770}{x^2} - 0.37, \quad 5 \leq x \leq 100$ where x is the diameter of the wire in mils (0.001 in.). Use the model to estimate the resistance when $x = 50$.

Solve the equations.

10. $\frac{3x}{2} + \frac{1}{4}(x - 2) = 10$
11. $3 = 2 + \frac{2}{z+2}$
12. $\frac{4}{x-1} + \frac{6}{3x+1} = \frac{15}{3x+1}$
13. $(x + 2)^2 - x^2 = 4(x + 1)$

Solve the equations for x.

14. $5 + ax = 12 - bx$

Surface Area.

15. The surface area S of a regular pyramid is $S = x^2 + \frac{1}{2}(4x)(18)$. Find the length x of the sides of the base of the pyramid if the surface area is 576 square feet.