Math-3A   Name_____   ID: 1
SM3-A HW #2-7 (convert to vertex form)   Date_____   Period____

1) Determine the slope intercept form equation that passes through: $(-1, 5)$ and $(2, -5)$

2) State the Domain and Range of the function in interval form:

$$y = -3\sqrt{x + 6} - 3$$

a) Convert to intercept form
b) List the x-intercepts.

3) $x^2 + 11x + 28 = 0$ 4) $x^2 - 7x + 10 = 0$

a) Convert the following equations to vertex form.

b) Solve the resulting equations by taking square roots.

5) $x^2 - 8x - 23 = 0$ 6) $x^2 + 10x + 4 = 0$

7) $x^2 + 4x - 20 = 0$ 8) $x^2 + 12x - 54 = 0$

9) $x^2 + 4x - 97 = 0$ 10) $x^2 - 4x - 51 = 0$
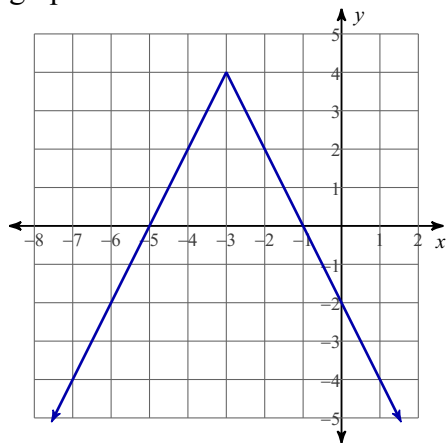
11) $x^2 + 6x - 81 = 0$

12) $x^2 + 8x + 13 = 0$

13) A piece of iron was heated to a temperature of 1500 F. It was then put into an oil bath that was at 100 F. After 1 minute the temperature of the iron was measure to be 983 F.
   a) Find the base "B" equation that models the situation.
   b) Convert your equation to a base 'e' exponential decay function.
   c) What will be the temperature after 3 minutes?

14) What is the equation represented by the graph?

15) What is the equation represented by the graph? The graph passes through (-1, 4) and (0, -2).