

## SM3 HW #2-4 (Zeroes of vertex form)

- 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:

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

**For problems 3 through 16****a) Convert to intercept form****b) List the zeroes.**

3)  $x^2 + 11x + 28 = 0$

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

5)  $2x^2 + 5x = 0$

6)  $5x^2 - 32x + 12 = 0$

7)  $x^2 - 8x - 23 = 0$

8)  $x^2 + 10x + 4 = 0$

9)  $x^2 + 4x - 20 = 0$

10)  $x^2 + 12x - 54 = 0$

11)  $x^2 + 4x - 97 = 0$

12)  $x^2 - 4x - 51 = 0$

13)  $x^2 + 6x - 81 = 0$

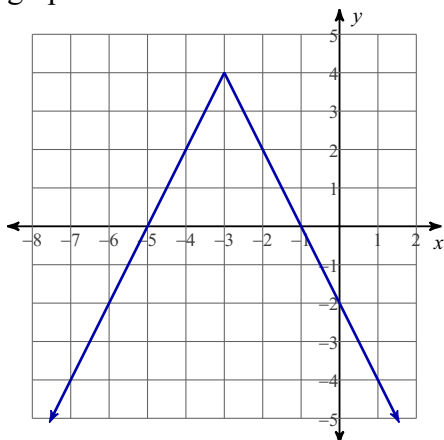
14)  $x^2 + 8x + 13 = 0$

15)  $x^2 - 14x - 83 = 0$

16)  $x^2 + 20x - 83 = 0$

- 17) 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 measured to be 983 F.
- Find the base "B" equation that models the situation.
  - Convert your equation to a base 'e' exponential decay function.
  - What will be the temperature after 3 minutes?

- 18) What is the equation represented by the graph?



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

