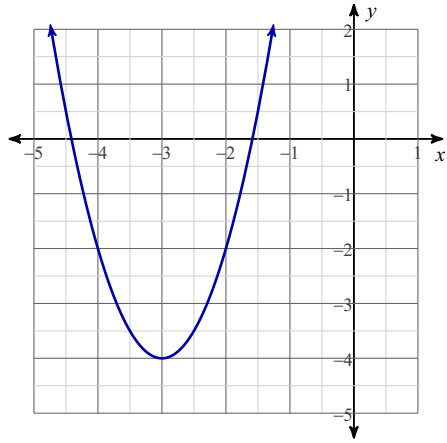
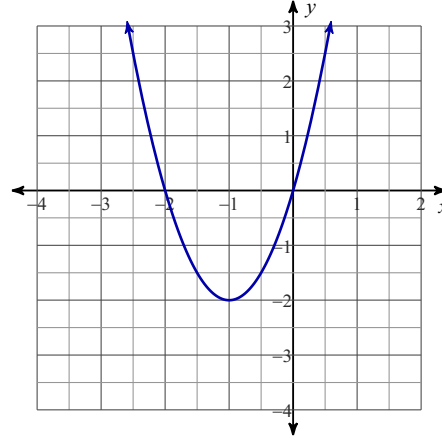


SM3-A HW #3-9 (Review Quadratics and Lines)

- 1) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



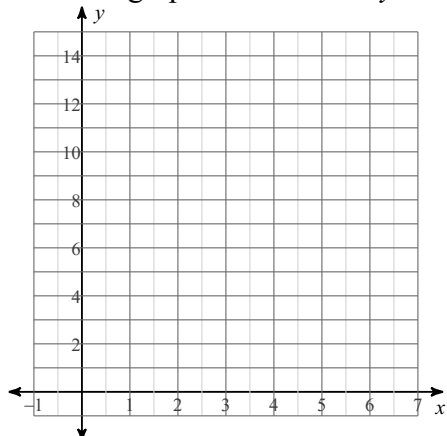
- 2) a) What is the intercept form equation of the graph?
 b) What are the zeroes of the function?



- 3) Compare the following equation to the parent function for quadratics $y = x^2$.
 a) Give the location of the vertex (x,y).
 b) Identify the transformations that have been applied to the parent function.
 $y = -3(x - 1)^2 + 4$

- 4) a) Convert the following standard form quadratic equations into intercept form.
 b) What are the x-intercepts
 $y = 2x^2 + 8x - 24$

- 5) a) What is the vertex of the graph?
 b) Convert to intercept form.
 c) What are the x-intercepts (ordered pairs)
 d) Use the VSF, and whether the function has been reflected across the x-axis to graph the function. $y = -3x^2 + 18x - 15$



6) Convert the following vertex form quadratic equation into standard form.

$$y = -2(x - 4)^2 + 5$$

7) Convert the following standard form linear equation into slope intercept form.

$$5x - 4y = 20$$

8) Write the equation of a line that passes through: $(-5, 2)$, and is perpendicular to $y = \frac{2}{5}x + 25$

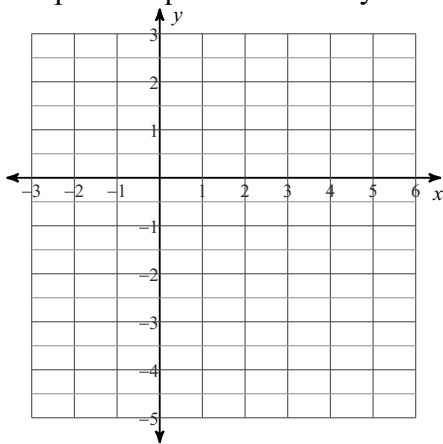
9) Find the zeroes:

$$y = 2x^2 - 24$$

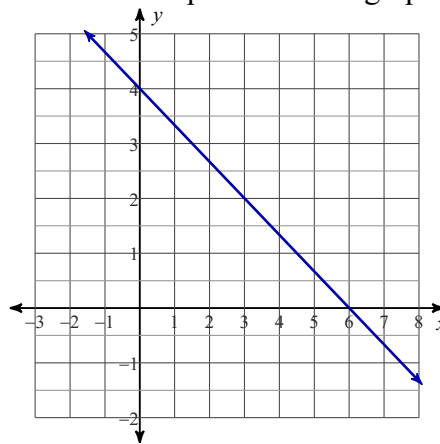
10) Find the zeroes:

$$y = (x - 4)^2 - 6$$

11) Graph the equation: $2x - 5y = 10$



12) What is the equation of the graph?



13) Find the product:

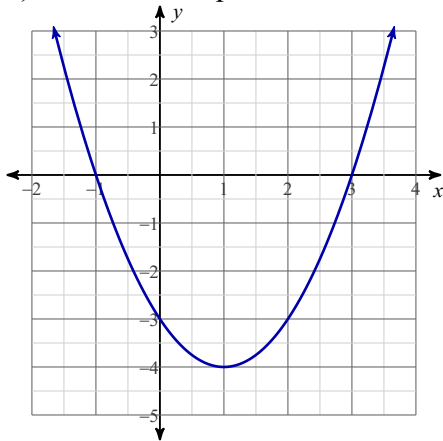
$$(2x - 5)(2x + 5)$$

14) $y = x^2 - 64$

a) Convert to intercept form.

b) Find the zeroes:

- 15) For the following function:
- What is the domain of the function?
 - What is the range of the function?
 - What is the equation of the graph in vertex form?
 - What is the equation of the graph in intercept form?
 - What is the equation in standard form?



For problems 16-17:

- Convert the equation to intercept form by factoring.
- What are the x-intercepts?
- Find the vertex using the method I taught in the notes.
- Write the vertex form equation.

16) $y = x^2 - 8x - 20$

17) $y = x^2 + 12x - 28$

18) $y = 3x^2 + 7x - 6$

19) $y = 6x^2 - 7x - 5$

a) Convert to intercept form by factoring

a) Convert to intercept form by factoring

b) List the x-intercepts

b) List the x-intercepts