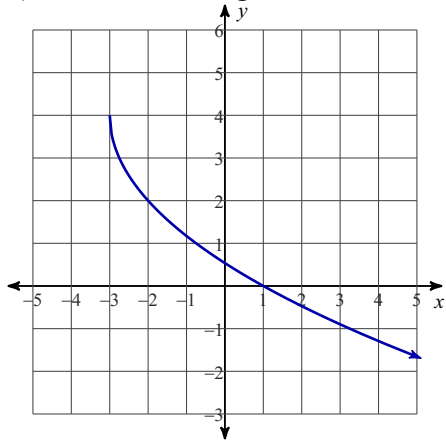
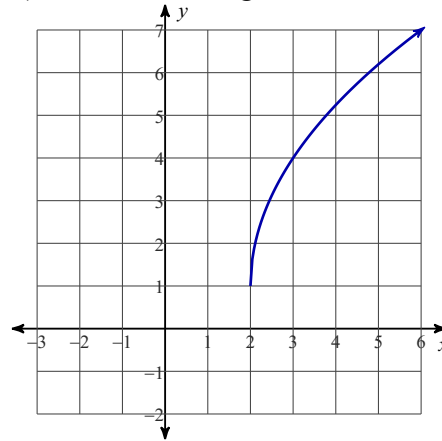


SM3 HW #1-3 (Abs Val., SQRT)

- 1) a) What is the equation of the graph?
- b) What is the domain?
- c) What is the range?



- 2) a) What is the equation of the graph?
- b) What is the domain?
- c) What is the range?



- 3) a) What is the domain?
- b) What is the range?
- c) What is the "endpoint"?

$$y = -4 + 2\sqrt{x - 3}$$

- 4) a) What is the domain?
- b) What is the range?
- c) What is the "endpoint"?

$$y = 5 - 2\sqrt{x + 1}$$

- 5) What is the vertex?

$$y = 4|x - 3| + 5$$

- 6) Describe the transformation of the absolute value parent function.

$$y = -3|x - 5| - 7$$

- 7) Describe what it means to say the a parent function has been vertically stretched by a factor of 2.

- 8) If there is no vertical stretch, what is the value of the vertical stretch factor?

- 9) Why do we say that there is no such thing as a negative vertical stretch factor?

- 10) The pattern we look for when determining how a parent function has been transformed is very similar for each function.

Square function:  $y = a(x - h)^2 + k$

Absolute Value function:  $y = a|x - h| + k$

Square root function:  $y = a\sqrt{x - h} + k$

Rewrite each of the above functions to show: reflect (x-axis), VSF-3, left 2, up 4:

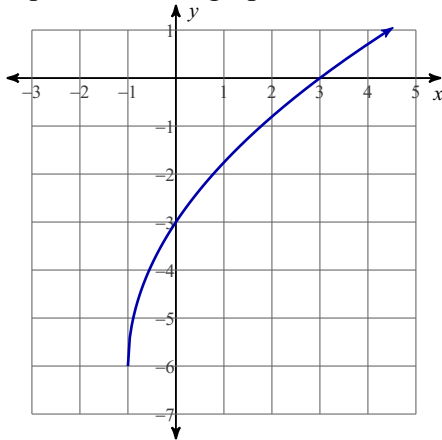
- a) square function:
- b) absolute value function
- c) square root function

**Write the slope-intercept form of the equation of the line through the given points.**

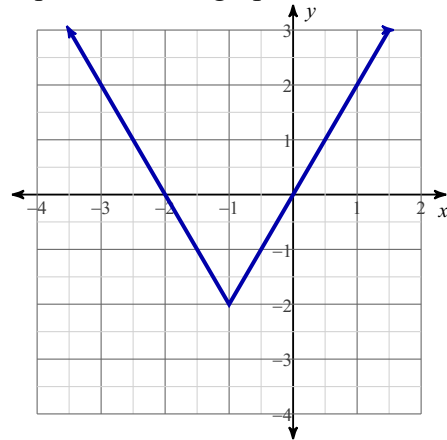
- 11) through: (5, -3) and (4, 2)

- 12) through: (2, -3) and (3, 3)

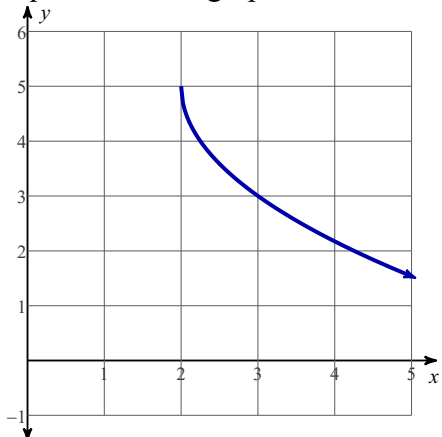
- 13) a) What is the endpoint? (b) What is the equation of the graph?



- 14) a) What is the vertex? (b) What is the equation of the graph?



- 15) a) What is the endpoint? (b) What is the equation of the graph?



- 16) a) What is the vertex? (b) What is the equation of the graph?

