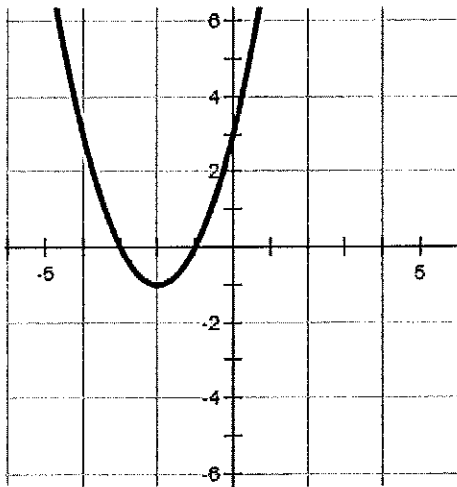
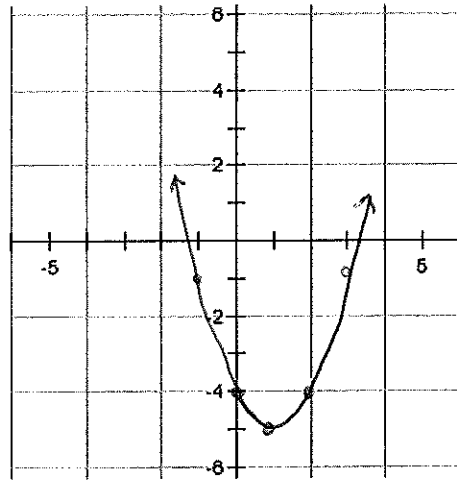


Directions: After completing the first section for each function it is now time to practice what you have discovered. Given following information about the function, state the equation and description of the graph. Finally, write a description of the linear transformation that has taken place.

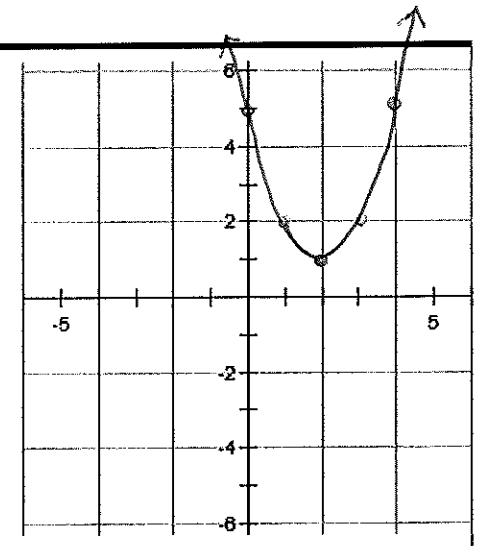
PART 1: Quadratic Function



Equation: $y = (x + 2)^2 - 1$
 Description: A quadratic function moved 2 units left and one unit down.

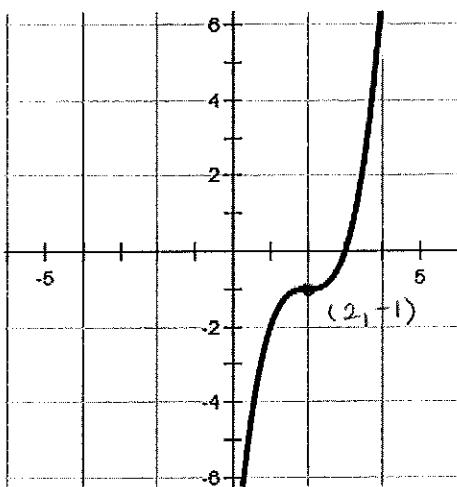


Equation: $f(x) = (x - 1)^2 - 5$
 Description: A quadratic function moved right one unit and down five units

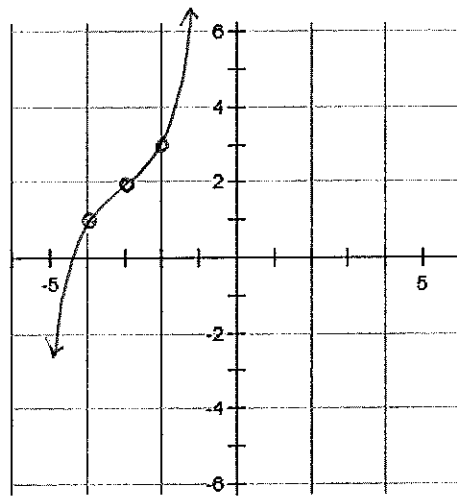


Equation: $y = (x - 2)^2 + 1$
 Description: A quadratic function shifted horizontally to the right 2 units and shifted vertically up 1 unit.

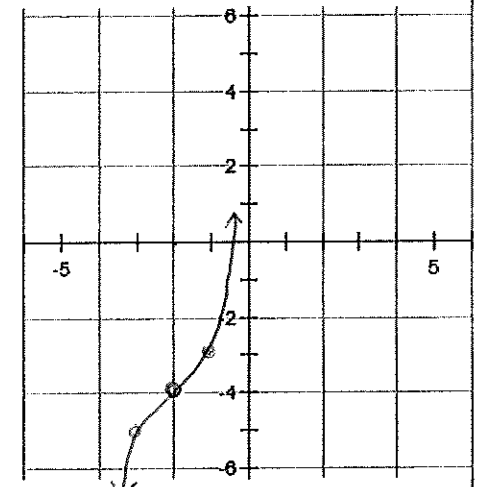
PART 2: Cubic Function



Equation: $y = (x - 2)^3 - 1$
 Description: A cubic function shifted down 1 unit and right 2 units



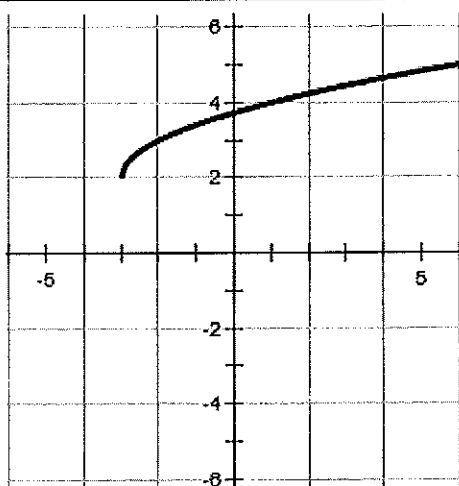
Equation: $f(x) = (x + 3)^3 + 2$
 Description: A cubic function shifted left 3 and up 2.



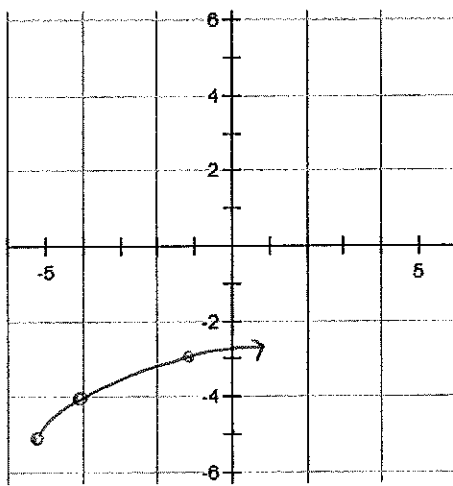
Equation: $y = (x + 2)^3 - 4$
 Description: A cubic function shifted horizontally to the left 2 units and shifted vertically down 4 units.

Directions: After completing the first section for each function it is now time to practice what you have discovered. Given following information about the function, state the equation and description of the graph. Finally, write a description of the linear transformation that has taken place.

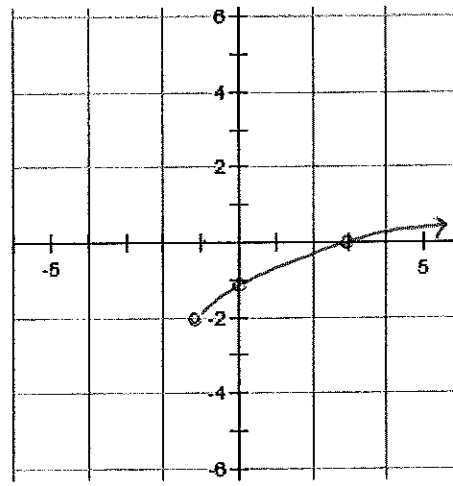
PART 3: Square Root Function



Equation: $y = \sqrt{x+3} + 2$
 Description: A square root function shifted left 3 and up 2.

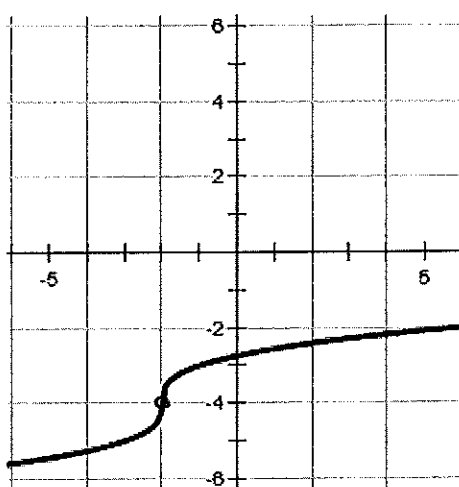


Equation: $f(x) = (x+5)^{1/2} - 5$
 Description: A square root function shifted left 5 and down 5

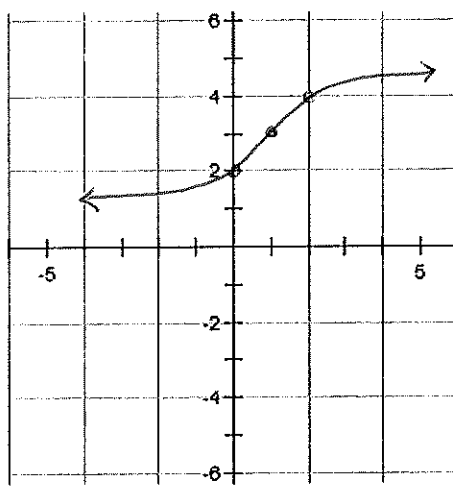


Equation: $y = \sqrt{x+1} - 2$
 Description: A square root function shifted vertically down 2 units and shifted to the left 1 unit.

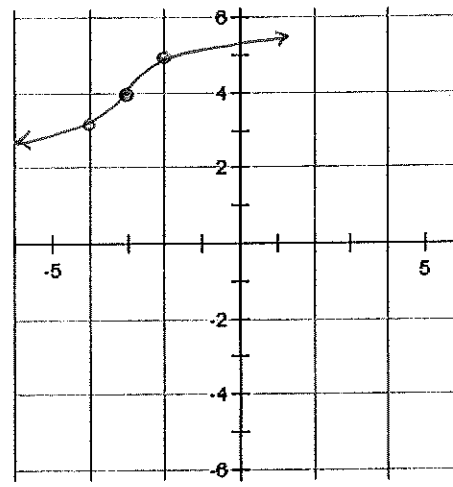
PART 4: Cube Root Function



Equation: $y = (x+2)^{1/3} - 4$
 Description: A cube root function shifted left 2 units and down 4 units.



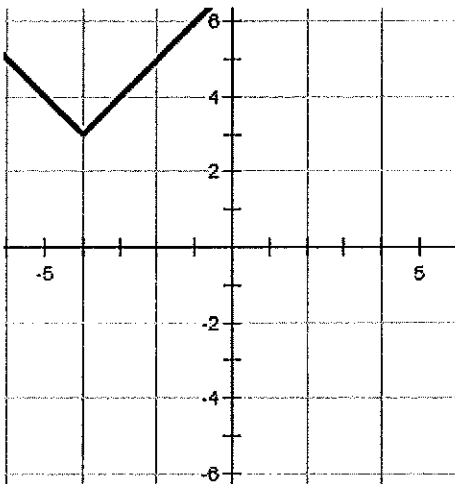
Equation: $f(x) = (x-1)^{1/3} + 3$
 Description: A cube root function shifted right 1 unit and up 3 units.



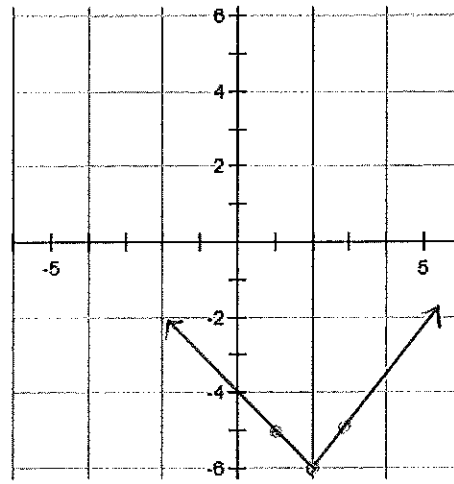
Equation: $f(x) = \sqrt[3]{x+3} + 4$
 Description: A cube root function shifted horizontally to the left 3 units and shifted vertically up 4 units.

Directions: After completing the first section for each function it is now time to practice what you have discovered. Given following information about the function, state the equation and description of the graph. Finally, write a description of the linear transformation that has taken place.

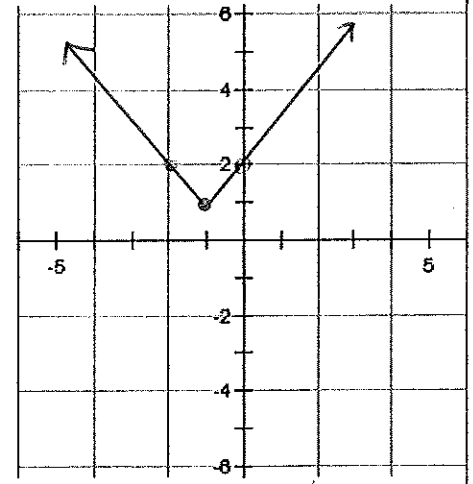
PART 5: Absolute Value Function



Equation: $y = |x + 4| + 3$
 Description: an absolute value function shifted left 4 and up 3

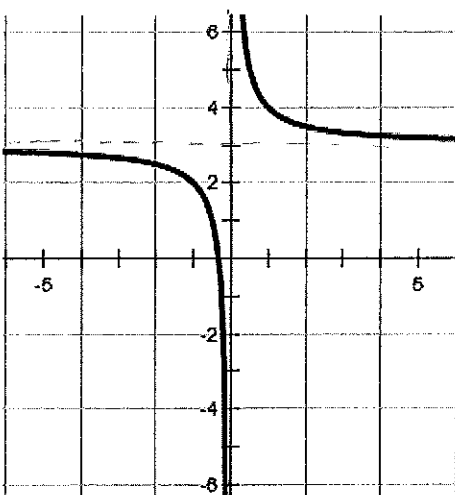


Equation: $f(x) = |x - 2| - 6$
 Description: an absolute value function shifted right 2 and down 6.

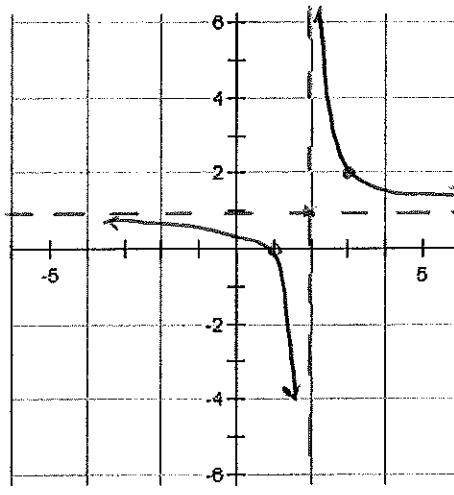


Equation: $y = |x + 1| + 1$
 Description: An absolute value function shifted up 1 unit & shifted horizontally to the left 1 unit.

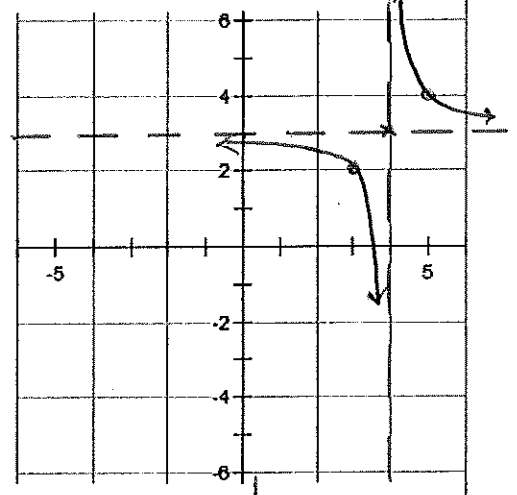
PART 6: Reciprocal Function



Equation: _____
 Description: a reciprocal function shifted up 3



Equation: $f(x) = (x - 2)^{-1} + 1$
 Description: a reciprocal function shifted right 2 and up 1



Equation: $y = \frac{1}{x - 4} + 3$
 Description: A reciprocal function shifted horizontally to the right 4 units and shifted vertically up 3 units.