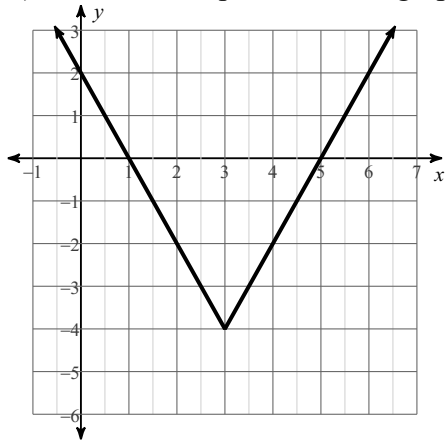


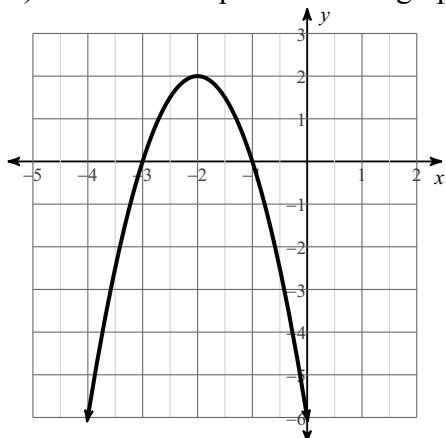
SM3 HW #1-7 (Analyze Functions)

Date _____ Period _____

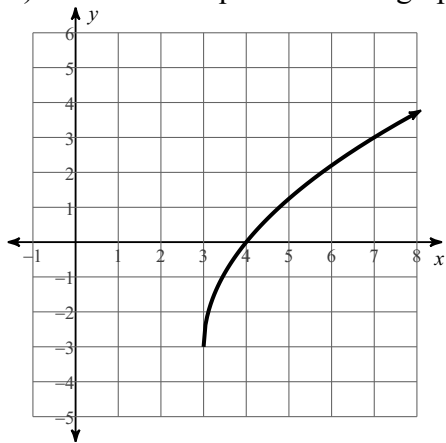
- 1) a) Where is the function increasing?
- b) Where is the function decreasing?
- c) Where is the function positive?
- d) Is the function even, odd, or neither?
- e) Where are the extrema and what type are they?
- f) How is it related to its parent function?
- g) What is the end behavior? (use "infinity notation")
- h) What is the domain?
- i) What is the range?
- j) What is the average rate of change between $x = 1$ and $x = 3$?
- k) What is the equation of the graph?



- 2) a) Where is the function increasing?
- b) Where is the function decreasing?
- c) Where is the function positive?
- d) Is the function even, odd, or neither?
- e) Where are the extrema and what type are they?
- f) How is it related to its parent function?
- g) What is the end behavior? (use "infinity notation")
- h) What is the domain?
- i) What is the range?
- j) What is the average rate of change between $x = -2$ and $x = -1$?
- k) What is the equation of the graph?



- 3) a) Where is the function increasing?
- b) Where is the function decreasing?
- c) Where is the function positive?
- d) Is the function even, odd, or neither?
- e) Where are the extrema and what type are they?
- f) How is it related to its parent function?
- g) What is the end behavior? (use "infinity notation")
- h) What is the domain?
- i) What is the range?
- j) What is the average rate of change between $x = 3$ and $x = 4$?
- k) What is the equation of the graph?



- 4) a) Where is the function increasing?
- b) Where is the function decreasing?
- c) Where is the function positive?
- d) Is the function even, odd, or neither?
- e) Where are the extrema and what type are they?
- f) How is it related to its parent function?
- g) What is the end behavior? (use "infinity notation")
- h) What is the domain?
- i) What is the range?
- j) What is the average rate of change between $x = -2$ and $x = 0$?
- k) What is the equation of the graph?

