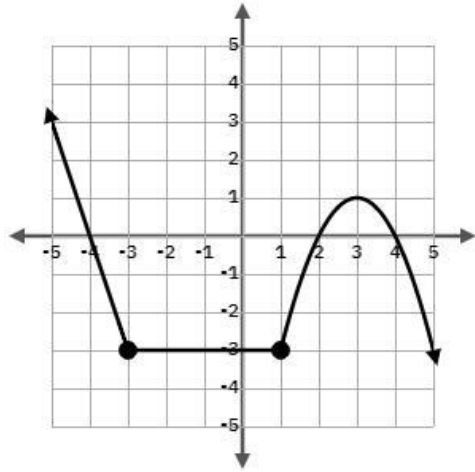


For numbers 1 and 2, state the domain, range, the x-intercept(s), and the intervals on which the function is positive or negative and increasing or decreasing or constant.

1.



Domain: $(-\infty, \infty)$

Range: $(-\infty, \infty)$

Zeros/x-intercepts: $x = -4, 2, 4$

Positive: $(-\infty, -4) \cup (2, 4)$

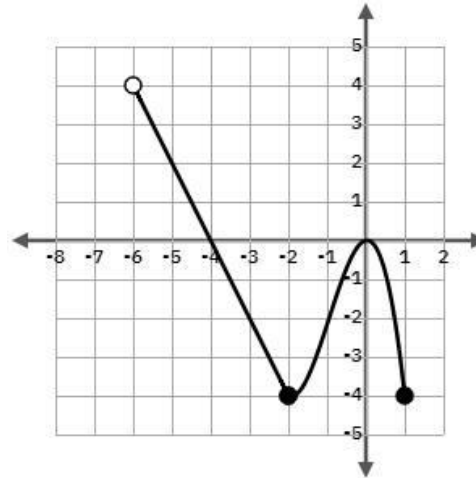
Negative: $(-4, 2) \cup (4, \infty)$

Increasing: $(1, 3)$

Decreasing: $(-\infty, -3) \cup (3, \infty)$

Constant: $(-3, 1)$

2.



Domain: $(-6, 1]$

Range: $[-4, 4)$

Zeros/x-intercepts: $x = -4, 0$

Positive: $(-6, -4)$

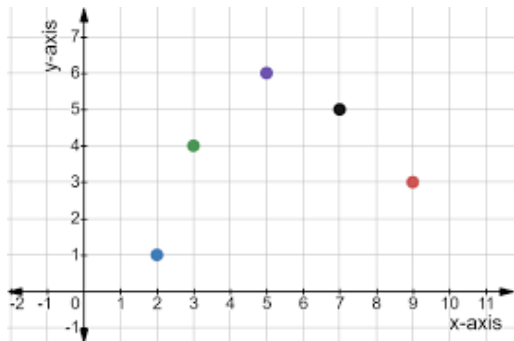
Negative: $(-4, 0) \cup (0, 1)$

Increasing: $(-2, 0)$

Decreasing: $(-6, -2) \cup (0, 1)$

Constant: None

3. Decide whether the following is discrete or continuous. Then list the domain and range.



Type of Graph: Discrete

Domain: $x = 2, 3, 5, 7, 9$

Range: $y = 1, 3, 4, 5, 6$

4. Decide whether the following represents a function. Then list the domain and range.

$\{(-3, 1); (2, 5); (5, 1); (-1, -6); (0, 4)\}$

Function: Yes

Domain: $x = -3, -1, 0, 2, 5$

Range: $y = -6, 1, 4, 5$

$\{(4, -3); (6, -4); (0, 5); (4, 1); (-2, 7)\}$

Function: No ; $x=4$ repeats

Domain: $x = -2, 0, 4, 6$

Range: $y = -4, -3, 1, 5, 7$