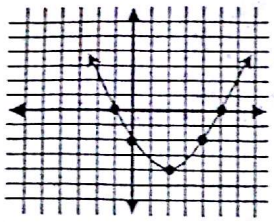
Increasing/Decreasing/Constant, etc KEY

For the following functions state the following: a) domain b) range, c) intervals of increasing, decreasing, constant, d) any maximums or minimums, e) any X- and Y- intercepts

1.



a. D = $(-\infty, \infty)$

b. R = $[-4, \infty)$

c. Increasing: $(2, \infty)$

Decreasing: $(-\infty, 2)$

Constant: none

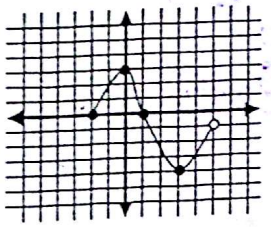
d. Maximum (none)

Minimum $(2, -4)$

e. X- int $(-1, 0), (5, 0)$

Y- int $(0, -2)$

2.



a. D = $[-2, 5)$

b. R = $[-4, 3]$

c. Increasing: $(-2, 0) \cup (3, 5)$

Decreasing: $(0, 3)$

Constant: none

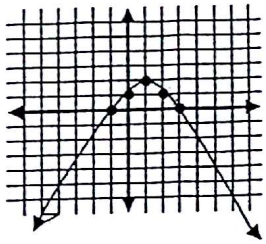
d. Maximum ($0, 3$)

Minimum ($3, -4$)

e. X- int $(-2, 0), (1, 0)$

Y- int $(0, 3)$

3.



a. D = $(-\infty, \infty)$

b. R = $(-\infty, 2]$

c. Increasing: $(-\infty, 1)$

Decreasing: $(1, \infty)$

Constant: none

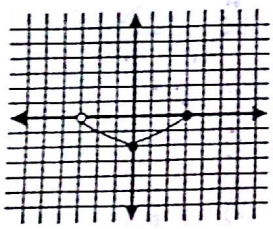
d. Maximum ($1, 2$)

Minimum (none)

e. X- int $(-1, 0), (3, 0)$

Y- int $(0, 1)$

4.



a. D = $(-3, 3]$

b. R = $[-2, 0]$

c. Increasing: $[0, 3]$

Decreasing: $(-3, 0]$

Constant: none

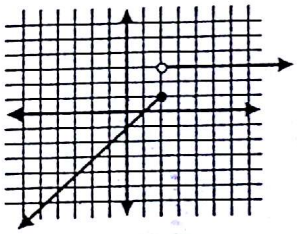
d. Maximum ($3, 0$)

Minimum ($0, -2$)

e. X- int $(3, 0)$

Y- int $(0, -2)$

5.



a. D = $(-\infty, \infty)$

b. R = $(-\infty, 3]$

c. Increasing: $(-\infty, 2)$

Decreasing: none

Constant: $(2, \infty)$

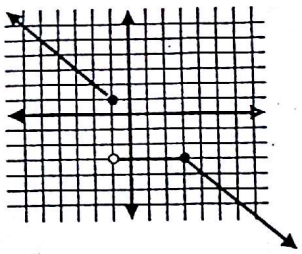
d. Maximum (none)

Minimum (none)

e. X- int $(1, 0)$

Y- int $(0, -1)$

6.



a. D = $(-\infty, \infty)$

b. R = $(-\infty, -3] \cup [1, \infty)$

c. Increasing: none

Decreasing: $(-\infty, -1) \cup (3, \infty)$

Constant: $(-1, 3)$

d. Maximum (none)

Minimum (none)

e. X- int none

Y- int $(0, -3)$