1.Determine if the following relations are functions:

a) {(2,3), (2,4), (3,5)}

b) {(a,b), (b,c), (c,c)}

c) {(-1,0), (0,1), (1,2), (2,3)}

2. Identify the domain and range of the relation:

{(1,2) , (2,4), (3,6), (4,8)}

3. Evaluate the given functions:

a. f(x) = $x^2 + 2x$ find f(3)

b. g(x) = $(2x + 12)/(x^3 + 5x)$ find g(-3)

c. Given, h(x) = 8 - 3x, solve for x when h = -1

4.Find the average rate of change of f(x) = x^2 from x_1 =2 to x_2 = 4.

5.Find the average rate of change of f(x) = $-\ x^3\ -\ 1$ from x_1 = -1 to x_2 = 3.

6. Find the domain and range of following functions:

a. f(x) = $2x^3\ -\ x$

b. f(x) = $\sqrt{7 - x}$

c. f(x) = $(x + 1) / (2 - x)$