

VALENCIA COMMUNITY COLLEGE

Calculus for Bus. & So. Sc. MAC 2233

Review for Test -1

1) Suppose $f(x) = 3x^2 - 2x$, and $g(x) = 3 - 4x$ find

a) $f(6) =$

b) $f(6a) =$

c) $f(a - 5) =$

d) $f(g(x))$

e) The difference quotient of $f(x)$

2) Suppose $f(x) = \begin{cases} -10 & \text{if } x < -6 \\ 2 - 6x & \text{if } -6 \leq x \leq 4 \\ x^2 + 1 & \text{if } x > 5 \end{cases}$, Evaluate:

a) $f(-7) =$

b) $f(4) =$

c) $f(4.5) =$

3) Problems similar to #64-65, page 14.

4) Algebraic method to find the intersections, zeroes etc.

5) Problems similar to # 68-84 page 34

6) Problems similar to # 31-44 page 44

7) Factoring polynomials.

8) Solving linear and quadratic equations.

9) Addition and subtraction of rational expressions (fractions).

10 Limits: Numerical and Algebraic method.

11) Find the derivative of a function using the definition: $\lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$, Numerical and Algebraic method.