1. Differentiate
2. Y = 3x +
3. Y = 1 / (x-3)^3
4. y = (x^4 – x)^3 (3x + 2)^4
5. Y = (1 + x - x^3)^4
6. Compute the following limits.
7. Use limits to compute f”(3) where f (x) = x^2 – 2x +3.
8. a. What is the average rate of change of f(x) given f(x) = -6/x from [1,2] and [1,4].

b. What is the instantaneous rate of change of f(x) when x = 1.

1. Write the equation of the tangent line to the curve y = x^3 – 2x^2 +5 at x = 2.