The Derivative and the Tangent Line Problem

1. Find the derivative by the limit process (similar to p.124 #11-24)

$$f(x) = 3 - x^2$$

2. Find the derivative by the limit process (similar to p.124 #11-24)

$$f(x) = \frac{1}{x-5}$$

3. Find the derivative by the limit process (similar to p.124 #11-24) NEXT TIME

$$f(x) = \sqrt{x-2}$$

4. Find the slope of the tangent line to the graph of the function at the given point (similar to p.124 #5-10)

$$f(x) = x^2 + 1, \quad (-3,10)$$

5. Find the equation of the tangent line at the given point (similar to p.124 #25-32)

$$f(x) = \sqrt{x+2}, \quad (7,3)$$