

7-1 Derivatives and Slopes of Tangent lines Refresher

Name: _____

Time> Start: _____ Finish: _____ Total Time = _____

Calculate the derivative of each function.

_____ 1. $f(x) = 10x^2 + 5x - 2$

_____ 2. $f(x) = -6x^3 + 5x - 1$

_____ 3. $f(x) = 3x^4 + x^2 - 2x$

_____ 4. $f(x) = -x^5$

_____ 5. $f(x) = \frac{5x^4}{2} + 3x^2$

_____ 6. $f(x) = -4x^{10} + 2x^4 - 5x^2 + 7x$

_____ 7. $f(x) = 2x^{-3} + 5x^{-1} - 11$

_____ 8. $f(x) = \frac{3}{x^3}$

_____ 9. $f(x) = \frac{4}{x^2} + \frac{1}{x} - 17$

Find the slope of the line tangent to the graph of the given function at the given point.

_____ 10. $f(x) = 2x^2 + 5x - 2$ at the point (2, 16).

_____ 11. $f(x) = -3x^2 + 1$ at the point (1, -2).

_____ 12. $f(x) = x^4 + 5x^2 - 1$ at the point (1, 5).

_____ 13. $f(x) = x^{-3}$ at the point (1, 1).

_____ 14. $f(x) = \frac{6}{x}$ at the point (1, 6).