

You may only use your textbook, your notes, and your calculator on these problems. You may not use any outside resources, including tutors or solution manuals. Remember that the purpose of these quizzes is to see if you understand what you have learned on your homework, and also to tell you what you still need to study for the upcoming exam.

Find the derivative- you do not need to use the definition of a derivative but make sure you show all your work.

1. (2 points) $h(x) = 3x^4 - \frac{5}{x} + 4e^x - \sin x$

2. (2 points) $m(x) = \frac{x^2 - 1}{x^3 + 4x + 3}$

3. (2 points) $g(x) = 4x^2 \tan(x)$

4. (2 points) $f(x) = \cos(\sqrt{x^2 + 3e^x + 4})$

5. (2 Points) Find the equation of the tangent line of $6x^2 + 3xy + y^2 - 17y - 6 = 0$ at $(-1, 0)$