

Show all work and circle/box your final answer. All answers must be simplified unless stated otherwise.

1. (*6 points*) Find the derivative of the following functions: (Do not simplify)

(a) $\frac{4x + 12}{2x^3 + 1}$

(b) $(x^2 + 5)\sin(x) - \cot x$

2. (*4 points*) Find the equation of the line tangent to the curve $y = 2 - x^3$ at $(1, 1)$