Compute the derivative of each of the following 8 functions. You do not need to simplify. You do not need to show steps. Calculators are not allowed. **No partial credit will be awarded.** Be very careful with notation, signs, parentheses, etc. Please circle or box your final answer for each question.

1. \( f(x) = \ln \left( 3 \cos (4x^7 + 3) \right) \)

2. \( f(x) = \tan(5x)e^{\sec(x)} \)

3. \( f(x) = (3x + e)^{35} \)

4. \( f(x) = -ex^{10} + e^x + \frac{\sec(2)}{\sqrt{x}} \)
5. \( f(x) = \left( \frac{-4x^8 - 4x}{x^3 + 4} \right) \sin(x) \)

6. \( f(x) = \sqrt{-\frac{2}{x^{11}} - 4x} \)

7. \( f(x) = \cos^2(2x) + \cot^3(x) \)

8. \( f(x) = \frac{e^{2x} \sqrt{x}}{\ln(x)} \)