Differentiating logarithms and composite logarithms

Name: _____ Date: _____

6 questions | 16 marks

1. Differentiate $\ln(7x)$, retaining its domain. [2 marks]

2. Differentiate $\log_3(2x+5)$. [2 marks]

3. Differentiate $(\ln x)^2$. [2 marks]

4. Differentiate $y = \ln(x^2 - 9)$ and state the domain. [3 marks]

5. Find the stationary point of $f(x) = \ln x - \frac{x}{2}$ and classify it. [4 marks]

6. Find the tangent to $y = \ln(2x - 1)$ at $x = 1$. [3 marks]