

Name: _____
AP Calc: Derivatives of e^u and $\ln u$ Homework

Date: _____
Ms. Loughran

For each of the following, find $\frac{dy}{dx}$.

1. $y = \ln 2x$

2. $y = x^3 \ln x$

3. $y = \sqrt{\ln x}$

4. $y = \cos(\ln x)$

5. $y = x^3 e^x$

6. $y = \frac{e^x - e^{-x}}{e^x + e^{-x}}$

7. $y = e^{x \tan x}$

8. $y = e^{(x - e^{3x})}$

9. $y = \ln(1 - x e^{-x})$