

Name: _____
AP Calc AB: Derivatives of a^x and $\log_a x$ Homework

Date: _____
Ms. Loughran

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

1. $y = x^3 \log_2(3 - 2x)$

2. $y = x[\log_2(x^2 - 2x)]^3$

3. $y = \frac{x^2}{1 + \log x}$

4. $y = \frac{\log x}{1 + \log x}$

5. $y = \frac{e^x}{\ln x}$

6. $y = 2^x$

7. $y = 3^{-x}$

8. $y = \pi^{\sin x}$

9. $y = \pi^{x \tan x}$

10. $y = e^{\cos x}$