

MCS22 Homework 16

Find the derivative of each function.

1. $f(x) = \ln(\sin x)$

7. $f(x) = \ln\left(\frac{4}{x}\right)$

2. $f(x) = \sqrt{\ln x}$

8. $f(x) = x^2 \ln(3x)$

3. $f(x) = e^x \cdot \ln x$

9. $f(x) = \cos(\ln x)$

4. $f(x) = e^{\ln(7x)}$

10. $f(x) = \ln(\ln x)$

5. $f(x) = \ln e^{5x}$

11. $f(x) = \frac{x^4}{\ln x}$

6. $f(x) = \frac{2 \ln x}{x^2}$

12. $f(x) = (\ln x)^7$