

2.7 Derivatives of $\cos x$, $\sin x$, e^x , and $\ln x$

Calculus

Name: _____

CA #1

Find the derivative of each function.

1. $f(x) = 8 \sin x + 2e^x$

2. $f(x) = 5e^x - \cos x + 3x^2$

3. $f(x) = 6 \ln x - 2 \cos x + e$

4. $f(x) = 4^x - 2 \sin x - \frac{1}{x}$

5. $f(x) = 3 \cos x + 2 \log_4 x + 5e^x$

Find the value of the derivative at the given point.

6. If $f(x) = 6 \ln x + x^2$, find $f'(3)$

7. If $f(x) = 2 \sin x - \cos x$, find $f'\left(\frac{\pi}{4}\right)$

8. If $f(x) = 3 \cos x + 9e^x$, find $f'(0)$

9. If $f(x) = 4 \ln x - 3e^x + e$, find $f'(1)$

1. $f'(x) = 8 \cos x + 2e^x$	2. $f'(x) = 5e^x + \sin x + 6x$	3. $f'(x) = \frac{x}{6} + 2 \sin x$
4. $f'(x) = 4^x \ln 4 - 2 \cos x + \frac{1}{x^2}$	5. $f'(x) = -3 \sin x + \frac{x \ln 4}{2} + 5e^x$	6. 8
7. $\frac{2}{3\sqrt{2}}$	8. 9	9. $4 - 3e$

Answers to 2.7 CA #1