Name : _____ Score : _____

Teacher : _____ Date : _____

Evaluate Derivatives

Find the value of the derivative at the given value. Round to the nearest ten-thousandth.

1) $y = \cos(x^2 + 10x + 25)$, at $x = \frac{5\pi}{4}$

2) $y = \frac{x^2 + 7x + 10}{x + 2}$, at $x = 4$

3) $y = \cos(x^2 + x - 20)$, at $x = \frac{\pi}{4}$

4) $y = x^2 + x - 6$, at $x = 1$

5) $y = \frac{x^2 - 2x + 1}{x - 2}$, at $x = -1$

6) $y = 2^{(x + 5)}$, at $x = -3$

7) $y = x + 1$, at $x = 7$

8) $y = x^2 - 9$, at $x = 6$

9) $y = \frac{x + 4}{x^3 - 3x^2 - 10x}$, at $x = -5$

10) $y = \sin(x - 3)$, at $x = \frac{3\pi}{2}$

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Evaluate Derivatives

Find the value of the derivative at the given value. Round to the nearest ten-thousandth.

1) $y = \cos(x^2 + 10x + 25)$, at $x = \frac{5\pi}{4}$

$\frac{dy}{dx} = 16.3063$

2) $y = \frac{x^2 + 7x + 10}{x + 2}$, at $x = 4$

$\frac{dy}{dx} = 1$

3) $y = \cos(x^2 + x - 20)$, at $x = \frac{\pi}{4}$

$\frac{dy}{dx} = -0.6405$

4) $y = x^2 + x - 6$, at $x = 1$

$\frac{dy}{dx} = 3$

5) $y = \frac{x^2 - 2x + 1}{x - 2}$, at $x = -1$

$\frac{dy}{dx} = 0.8889$

6) $y = 2^{(x + 5)}$, at $x = -3$

$\frac{dy}{dx} = 2.7726$

7) $y = x + 1$, at $x = 7$

$\frac{dy}{dx} = 1$

8) $y = x^2 - 9$, at $x = 6$

$\frac{dy}{dx} = 12$

9) $y = \frac{x + 4}{x^3 - 3x^2 - 10x}$, at $x = -5$

$\frac{dy}{dx} = -0.0024$

10) $y = \sin(x - 3)$, at $x = \frac{3\pi}{2}$

$\frac{dy}{dx} = -0.1411$