Name : _____ Score : _____

Teacher : _____ Date : _____

Evaluate Derivatives

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

1) $y = e^{(x + 1)}$, at $x = 4$

2) $y = x^3 + 12x^2 + 48x + 64$, at $x = -2$

3) $y = \frac{x + 4}{x^3 - 4x}$, at $x = 7$

4) $y = e^{(x)}$, at $x = 0$

5) $y = \frac{x + 2}{x^3 + 6x^2 - x - 30}$, at $x = 6$

6) $y = \cos(x^2 + 4x - 5)$, at $x = 2\pi$

7) $y = \sin(x^2 - x - 6)$, at $x = \frac{3\pi}{4}$

8) $y = \frac{x + 3}{x^3 - x^2 - 14x + 24}$, at $x = -1$

9) $y = x^2 - 7x + 12$, at $x = -7$

10) $y = \sin(x^2 - 9)$, at $x = \frac{-\pi}{4}$

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Teacher : _____ Date : _____

Evaluate Derivatives

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

1) $y = e^{(x + 1)}$, at $x = 4$

$\frac{dy}{dx} = 148.4132$

2) $y = x^3 + 12x^2 + 48x + 64$, at $x = -2$

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

3) $y = \frac{x + 4}{x^3 - 4x}$, at $x = 7$

$\frac{dy}{dx} = -0.0127$

4) $y = e^{(x)}$, at $x = 0$

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

5) $y = \frac{x + 2}{x^3 + 6x^2 - x - 30}$, at $x = 6$

$\frac{dy}{dx} = -0.0066$

6) $y = \cos(x^2 + 4x - 5)$, at $x = 2\pi$

$\frac{dy}{dx} = -1.3091$

7) $y = \sin(x^2 - x - 6)$, at $x = \frac{3\pi}{4}$

$\frac{dy}{dx} = -3.5035$

8) $y = \frac{x + 3}{x^3 - x^2 - 14x + 24}$, at $x = -1$

$\frac{dy}{dx} = 0.0417$

9) $y = x^2 - 7x + 12$, at $x = -7$

$\frac{dy}{dx} = -21$

10) $y = \sin(x^2 - 9)$, at $x = \frac{-\pi}{4}$

$\frac{dy}{dx} = 0.793$