

Calculus Practice: Definition of Derivative 1b

Use the definition of the derivative to find the derivative of each function with respect to x .

1) $y = -5x + 5$

2) $y = 4x - 5$

3) $y = 4x^2 + 1$

4) $f(x) = x^2 + 1$

$$5) y = 5x^2 + x + 2$$

$$6) y = -x^2 + 5x + 4$$

$$7) f(x) = \sqrt{-x+1}$$

$$8) y = \sqrt{5x+4}$$

$$9) y = -\frac{1}{x+2}$$

$$10) y = \frac{2}{x-1}$$

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Use the definition of the derivative to find the derivative of each function with respect to x .

1) $y = -5x + 5$

$$\frac{dy}{dx} = -5$$

2) $y = 4x - 5$

$$\frac{dy}{dx} = 4$$

3) $y = 4x^2 + 1$

$$\frac{dy}{dx} = 8x$$

4) $f(x) = x^2 + 1$

$$f'(x) = 2x$$

$$5) y = 5x^2 + x + 2$$

$$\frac{dy}{dx} = 10x + 1$$

$$6) y = -x^2 + 5x + 4$$

$$\frac{dy}{dx} = -2x + 5$$

$$7) f(x) = \sqrt{-x+1}$$

$$f'(x) = -\frac{1}{2\sqrt{-x+1}}$$

$$8) y = \sqrt{5x+4}$$

$$\frac{dy}{dx} = \frac{5}{2\sqrt{5x+4}}$$

$$9) y = -\frac{1}{x+2}$$

$$\frac{dy}{dx} = \frac{1}{x^2 + 4x + 4}$$

$$10) y = \frac{2}{x-1}$$

$$\frac{dy}{dx} = -\frac{2}{x^2 - 2x + 1}$$