

Derivatives

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Name _____

Date _____

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

1) $y = x^2 - 5$

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

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

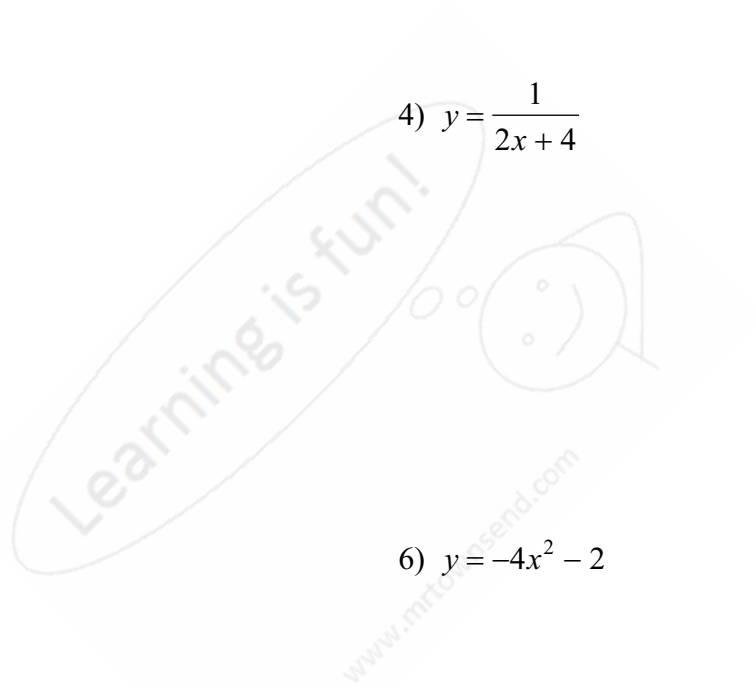
4) $y = \frac{1}{2x + 4}$

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

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

7) $y = 4x^2 + x + 5$

8) $y = 2x^2 + 4$



$$9) y = 5x^2 - 5x - 1$$

$$10) y = x^2 + 5x - 1$$

$$11) y = 4x^2 + 3x + 3$$

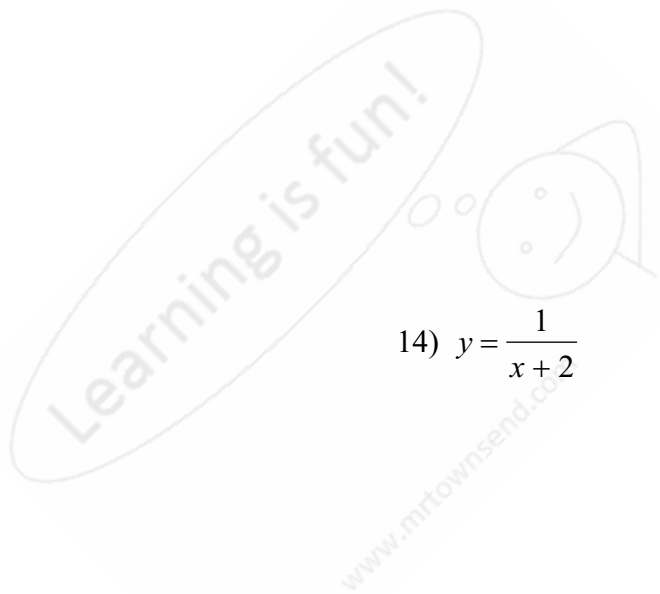
$$12) y = 2x - 2$$

$$13) y = \frac{1}{x-1}$$

$$14) y = \frac{1}{x+2}$$

$$15) y = -\frac{2}{2x+1}$$

$$16) y = 2x^2 - 3$$



Answers to Derivatives

$$1) \frac{dy}{dx} = 2x$$

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

$$3) \frac{dy}{dx} = -8x$$

$$4) \frac{dy}{dx} = -\frac{1}{2x^2 + 8x + 8}$$

$$5) \frac{dy}{dx} = -\frac{4}{4x^2 - 4x + 1}$$

$$6) \frac{dy}{dx} = -8x$$

$$7) \frac{dy}{dx} = 8x + 1$$

$$8) \frac{dy}{dx} = 4x$$

$$9) \frac{dy}{dx} = 10x - 5$$

$$10) \frac{dy}{dx} = 2x + 5$$

$$11) \frac{dy}{dx} = 8x + 3$$

$$12) \frac{dy}{dx} = 2$$

$$13) \frac{dy}{dx} = -\frac{1}{x^2 - 2x + 1}$$

$$14) \frac{dy}{dx} = -\frac{1}{x^2 + 4x + 4}$$

$$15) \frac{dy}{dx} = \frac{4}{4x^2 + 4x + 1}$$

$$16) \frac{dy}{dx} = 4x$$

