

Name: \_\_\_\_\_

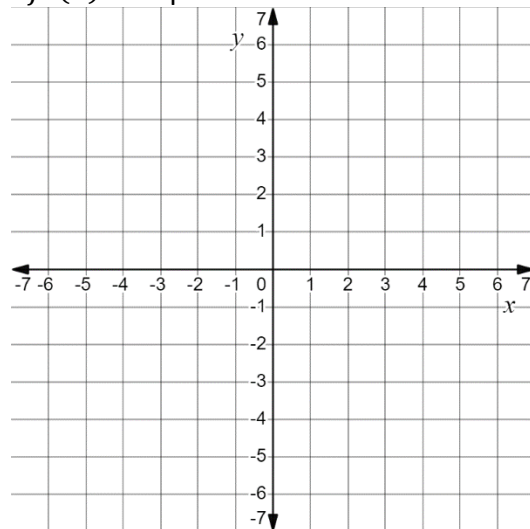
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**Learning Goal 3.1**

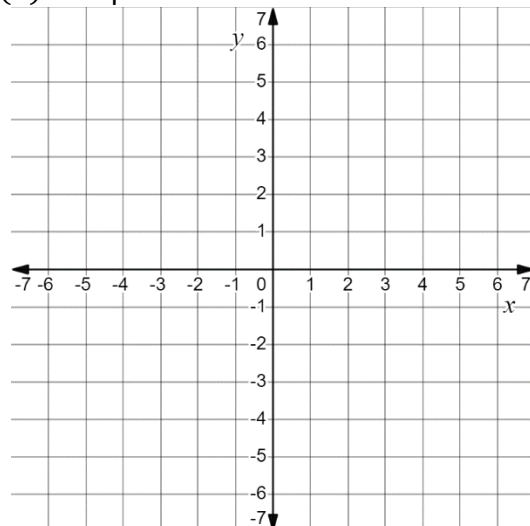
Using all basic derivative rules.

**Derivative****Derivative Function**

**Example** Given the function  $f(x) = 2x + 1$ , determine the equation of  $f'(x)$ . Graph both functions.

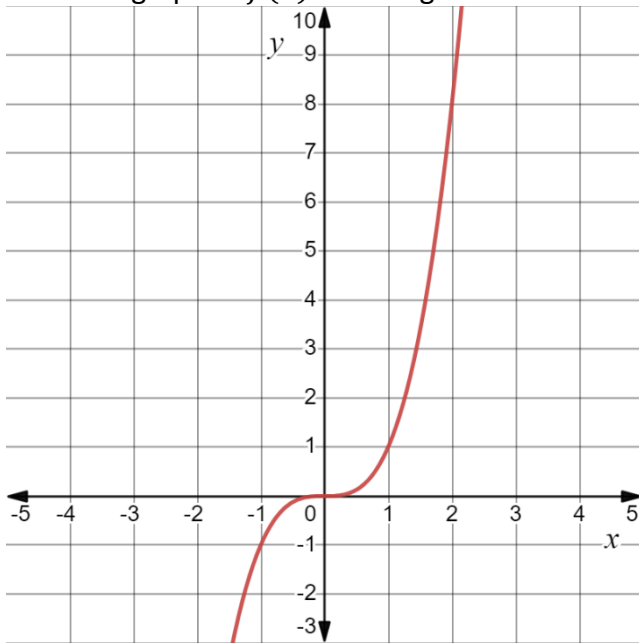


**Example** Given the function  $f(x) = x^2$ , determine the equation of  $f'(x)$ . Graph both functions.

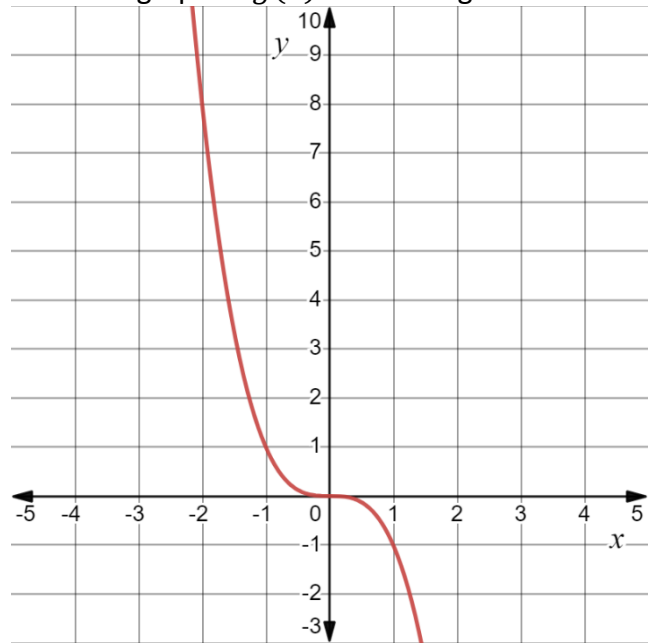


**Example** Sketch the graph of  $f'(x)$  when

a. The graph of  $f(x) = x^3$  is given.



b. The graph of  $g(x) = -x^3$  is given.



**Example** Below is the sketch of a function  $y = f(x)$ . Sketch the graph of its derivative  $y = f'(x)$ .

