Derivatives — Power rule

Name: _____ Date: _____

Find f'(x). Bring each power down in front, and take one off the power.

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

   $f'(x) = 2 \cdot 2x + 2$
   $= 4x + 2$

2. $f(x) = -3x^2 - 2x - 1$

3. $f(x) = 3x^2 + 2x + 3$

4. $f(x) = -2x^2 - 2x$

5. $f(x) = x^2 + 3$

6. $f(x) = -x^2 - 3x + 3$

Derivatives · Power rule — Answer key

1. $f(x) = 2x^2 + 2x + 2 \rightarrow f'(x) = 4x + 2$

2. $f(x) = -3x^2 - 2x - 1 \rightarrow f'(x) = -6x - 2$

3. $f(x) = 3x^2 + 2x + 3 \rightarrow f'(x) = 6x + 2$

4. $f(x) = -2x^2 - 2x \rightarrow f'(x) = -4x - 2$

5. $f(x) = x^2 + 3 \rightarrow f'(x) = 2x$

6. $f(x) = -x^2 - 3x + 3 \rightarrow f'(x) = -2x - 3$