Power Rule

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Derivative Rules:

- $\frac{d}{dx}c = 0$
- $\frac{d}{dx}\Big(f(x) \pm g(x)\Big) = \frac{df(x)}{dx} \pm \frac{dg(x)}{dx}$
- $\frac{d}{dx}x^n = nx^{n-1}$ for all $n \in \mathbb{R}$
- $\frac{d}{dx}cf(x) = c\frac{d}{dx}f(x)$

1. Find the derivative of $f(x) = 2x^3 + x - 7$

2. Find the derivative of $f(x) = -x^5 + x^2 - 3x + 2$

3. Find the derivative of $f(x) = 3x^4 + 4x^2 + 2x + 1$

4. Find the derivative of $f(x) = 7x^6 - x^5 + 2x^3 + x^2 - x + 5$

5. Find the derivative of $f(x) = x^{3/2} - x^2 + 2x^{-2}$

6. Find the derivative of $f(x) = \sqrt{x} - \dfrac{2}{x^3}$

7. Find the derivative of $f(x) = x^{\pi}$