



Basic Derivatives - Negative Integer Power as Division (with Rule) to Rewrite

1 Rewrite the function as a single power of x.

$$\frac{1}{x^n} = x^{-n}$$

$$f(x) = \frac{1}{x^3}$$

- | | | |
|--------------------|-----------|----------|
| A | B | C |
| $x^{-\frac{1}{3}}$ | $-x^{-3}$ | x^{-3} |
| D | | |
| x^3 | | |

2 Rewrite the function as a single power of x.

$$\frac{1}{x^n} = x^{-n}$$

$$f(x) = \frac{1}{x^1}$$

- | | | |
|-----------|----------|-----|
| A | B | C |
| $-x^{-1}$ | x^{-1} | x |
| | | |

3 Rewrite the function as a single power of x.

$$\frac{1}{x^n} = x^{-n}$$

$$f(x) = \frac{1}{x^2}$$

- | | | |
|--------------------|-------|-----------|
| A | B | C |
| $x^{-\frac{1}{2}}$ | x^2 | $-x^{-2}$ |
| D | | |
| x^{-2} | | |

4 Rewrite the function as a single power of x.

$$\frac{1}{x^n} = x^{-n}$$

$$f(x) = \frac{1}{x^4}$$

- | | | |
|-----------|-------|--------------------|
| A | B | C |
| x^{-4} | x^4 | $x^{-\frac{1}{4}}$ |
| D | | |
| $-x^{-4}$ | | |

5 Rewrite the function as a single power of x.

$$\frac{1}{x^n} = x^{-n}$$

$$f(x) = \frac{1}{x^5}$$

- | | | |
|--------------------|-------|-----------|
| A | B | C |
| x^{-5} | x^5 | $-x^{-5}$ |
| D | | |
| $x^{-\frac{1}{5}}$ | | |