



## Basic Derivatives - Positive Fractional Power with Coefficient as Radical (with Rule) to Rewrite

1 Rewrite the function as a single power of x.

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

$$f(x) = -7\sqrt[3]{x^4}$$

A  $-7x^{-\frac{4}{3}}$     B  $-7x^{\frac{3}{4}}$     C  $-7x^3$     D  $-7x^{\frac{4}{3}}$

2 Rewrite the function as a single power of x.

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

$$f(x) = -2\sqrt[3]{x^4}$$

A  $-2x^{\frac{3}{4}}$     B  $-2x^{\frac{4}{3}}$     C  $-2x^{-\frac{4}{3}}$     D  $-2x^3$

3 Rewrite the function as a single power of x.

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

$$f(x) = -8\sqrt[3]{x^2}$$

A  $-8x^{-\frac{2}{3}}$     B  $-8x^{\frac{2}{3}}$     C  $-8x^{\frac{3}{2}}$     D  $-8x^3$

4 Rewrite the function as a single power of x.

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

$$f(x) = 2\sqrt{x^5}$$

A  $2x^{-\frac{5}{2}}$     B  $2x^2$     C  $2x^{\frac{2}{5}}$     D  $2x^{\frac{5}{2}}$

5 Rewrite the function as a single power of x.

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

$$f(x) = 9\sqrt[3]{x^4}$$

A  $9x^3$     B  $9x^{\frac{3}{4}}$     C  $9x^{\frac{4}{3}}$     D  $9x^{-\frac{4}{3}}$

6 Rewrite the function as a single power of x.

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

$$f(x) = 9\sqrt{x^5}$$

A  $9x^{\frac{5}{2}}$     B  $9x^2$     C  $9x^{-\frac{5}{2}}$     D  $9x^{\frac{2}{5}}$

7 Rewrite the function as a single power of x.

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

$$f(x) = 5\sqrt{x^3}$$

A  $5x^{-\frac{3}{2}}$     B  $5x^{\frac{3}{2}}$     C  $5x^{\frac{2}{3}}$     D  $5x^2$

8 Rewrite the function as a single power of x.

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

$$f(x) = -9\sqrt[3]{x^2}$$

A  $-9x^{-\frac{2}{3}}$     B  $-9x^3$     C  $-9x^{\frac{3}{2}}$     D  $-9x^{\frac{2}{3}}$