

Radicals & Rational Exponents

$$\left(\sqrt[n]{x}\right)^m = x^{m/n}$$

c) $(-1012)^{8/5}$ d) $(-128)^{-2/5}$

a) $(\sqrt[3]{23})^5$ b) $(\sqrt[5]{-124})^4$

Example 3 Evaluate an expression with a calculator

c) $16^{-1/4}$

d) $8^{4/3}$

a) $36^{3/2}$

b) $64^{-1/6}$

Example 2 Evaluate an expression without a calculator

Example 1

Change between radical notation and rational exponent notation

Rewrite the expression using rational exponent notation.

1. $(\sqrt[5]{63})^3$

2. $(\sqrt[3]{-25})^4$

3. $(\sqrt[6]{124})^7$

Rewrite the expression using radical notation.

4. $(-57)^{4/3}$

5. $13^{3/2}$

6. $204^{5/8}$