

Introduction to Rational Exponents - EXAMPLES

Write each expression in exponential form.

1) $\sqrt{3}$

2) $(\sqrt[3]{6})^5$

3) $\sqrt{2n}$

4) $\frac{1}{\sqrt{3x}}$

Write each expression in radical form.

5) $3^{\frac{1}{5}}$

6) $10^{-\frac{1}{4}}$

7) $(2x)^{-\frac{7}{4}}$

8) $(4r^2)^{\frac{1}{3}}$

Simplify.

9) $343^{\frac{5}{3}}$

10) $343^{-\frac{5}{3}}$

11) $(k^6)^{\frac{2}{3}}$

12) $(9n^2)^{\frac{3}{2}}$

13) $(81v^4)^{-\frac{3}{2}}$

14) $(81n^{12})^{\frac{3}{4}}$

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Write each expression in exponential form.

1) $\sqrt{3}$

$3^{\frac{1}{2}}$

2) $(\sqrt[3]{6})^5$

$6^{\frac{5}{3}}$

3) $\sqrt{2n}$

$(2n)^{\frac{1}{2}}$

4) $\frac{1}{\sqrt{3x}}$

$(3x)^{-\frac{1}{2}}$

Write each expression in radical form.

5) $3^{\frac{1}{5}}$

$\sqrt[5]{3}$

6) $10^{-\frac{1}{4}}$

$\frac{1}{\sqrt[4]{10}}$

7) $(2x)^{-\frac{7}{4}}$

$\frac{1}{(\sqrt[4]{2x})^7}$

8) $(4r^2)^{\frac{1}{3}}$

$\sqrt[3]{4r^2}$

Simplify.

9) $343^{\frac{5}{3}}$

16807

10) $343^{-\frac{5}{3}}$

$\frac{1}{16807}$

11) $(k^6)^{\frac{2}{3}}$

k^4

12) $(9n^2)^{\frac{3}{2}}$

$27n^3$

13) $(81v^4)^{-\frac{3}{2}}$

$\frac{1}{729v^6}$

14) $(81n^{12})^{\frac{3}{4}}$

$27n^9$