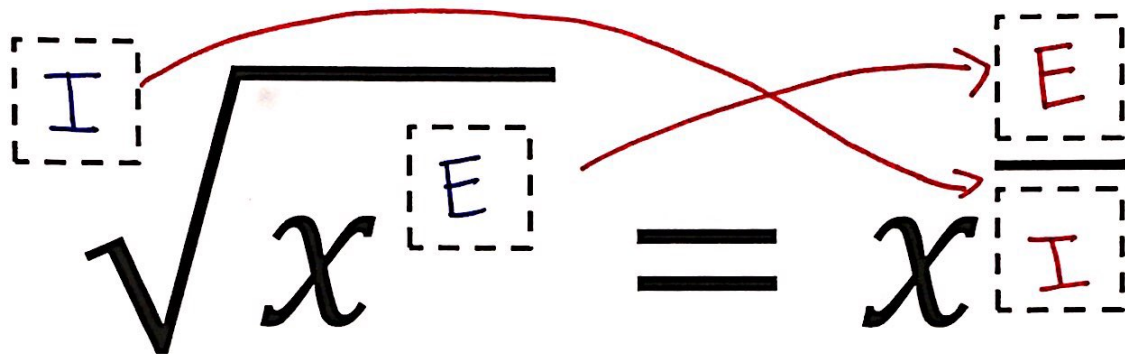


6-2b Rational Exponents

Converting between Radical Form and Rational Exponent Form.

"EOI - Exponent Over Index"



EXAMPLES:

Write in rational exponent form.

1. $\sqrt[5]{d}$
 $d^{\frac{1}{5}}$

2. $\sqrt[3]{b^2}$
 $b^{\frac{2}{3}}$

3. $\sqrt[4]{m^3}$
 $m^{\frac{3}{4}}$

Write each expression in radical form.

4. $(\sqrt[3]{12})^3$
 $\sqrt[3]{12^3} = 12^{\frac{3}{2}}$

5. $\sqrt[3]{5^1}$
 $5^{\frac{1}{3}}$

6. $(\sqrt[4]{7})^6$
 $7^{\frac{6}{4}} = 7^{\frac{3}{2}}$

Write each expression in radical form.

7. $\frac{1}{(7x)^{\frac{2}{3}}}$
 $\frac{1}{(7x)^{\frac{2}{3}}} = \frac{1}{\sqrt[3]{(7x)^2}}$

8. $(3x)^{-\frac{1}{4}}$
 $\frac{1}{\sqrt[4]{(3x)^1}}$

9. $(9a)^{\frac{4}{5}}$
 $\sqrt[5]{(9a)^4}$

Simplify.

10. $36^{\frac{1}{2}}$
 $\sqrt{36}$
 6

11. $4096^{\frac{2}{3}}$
 256

12. $13^{\frac{1}{4}}$
 $\sqrt[4]{13}$