Accuplacer Study Modules

TOPIC: **Evaluating Rational Exponents**

Khan Academy Link: https://www.khanacademy.org/math/algebra-home/algebra/rational-exponents-and-radicals

Sample Problem:

Evaluate $8^{\frac{5}{3}}$.

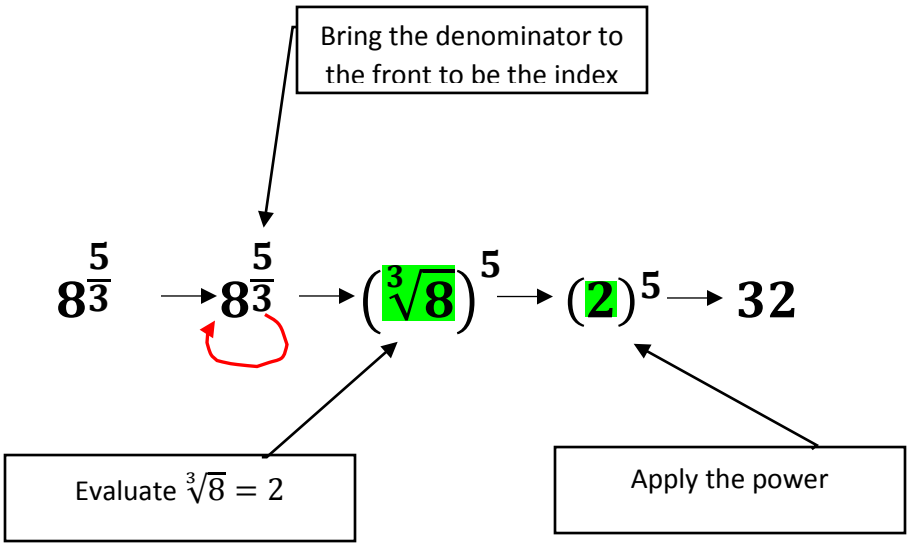
A rational exponent is a power whose exponent is a fraction. It is very easy to evaluate rational exponents by first rewriting them as radicals.

Step One: Bring the denominator of the exponent to the front to become the index of the radical (the little number that sits on the outside of the radical. Note that this number is not being multiplied by the radical but is instead the *nth* root.

Step Two: Evaluate the radical using the index.

Step Three: Apply the exponent.

Example:



Note: $\sqrt[2]{9} = \sqrt{9}$

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Instructions: Evaluate each rational exponent by first rewriting as a radical.

1. $25^{\frac{3}{2}}$	2. $16^{\frac{7}{4}}$
3. $27^{\frac{4}{3}}$	4. $100^{\frac{5}{2}}$