

Accuplacer Study Modules

TOPIC: Evaluating Rational Exponents

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

1. $25^{\frac{3}{2}}$

$$\begin{aligned} & \sqrt{25^3} \\ & \downarrow \\ & \sqrt{25^3} \\ & \downarrow \\ & 5^3 \\ & \downarrow \\ & 125 \end{aligned}$$

2. $16^{\frac{7}{4}}$

$$\begin{aligned} & \sqrt[4]{16^7} \\ & \downarrow \\ & 2^7 \\ & \downarrow \\ & 128 \end{aligned}$$

3. $27^{\frac{4}{3}}$

$$\begin{aligned} & \sqrt[3]{27^4} \\ & \downarrow \\ & 3^4 \\ & \downarrow \\ & 81 \end{aligned}$$

4. $100^{\frac{5}{2}}$

$$\begin{aligned} & \sqrt{100^5} \\ & \downarrow \\ & \sqrt{100^5} \\ & \downarrow \\ & 10^5 \\ & \downarrow \\ & 100,000 \end{aligned}$$