Name: _____ Period: _____ Date: _____

Roots and Radical Expressions Exit Quiz

Part A Instructions: Choose the option that completes the sentence or answers the question.

1. **If _n_ times _k_ is k^n, then $\sqrt[n]{k^n}$ is:**
   a. _n_
   b. _k_
   c. k^n
   d. None of these

2. **The expression inside the radical sign is known as:**
   a. index
   b. quotient
   c. dividend
   d. radicand

3. **Which of these will not give a real root?**
   a. $\sqrt[2]{1}$
   b. $\sqrt[2]{16}$
   c. $\sqrt[2]{-100}$
   d. $\sqrt[2]{4}$

4. **Which of the following is the product property of radicals?**
   a. $\sqrt[n]{a^n} = a$
   b. $\sqrt[n]{ab} = \sqrt[n]{a} \times \sqrt[n]{b}$
   c. $\sqrt[n]{\dfrac{a}{b}} = \dfrac{\sqrt[n]{a}}{\sqrt[n]{b}}$
   d. All of these.

Part B Instructions: Answer the question below.

Simplify the following expression.

$$\sqrt[4]{\frac{81x^4}{625y^4}} \times \sqrt[2]{\frac{25y^2}{9x^2}}$$

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