Curated Practice Problem Set

Unit 3 Lesson 4 Cumulative Practice Problems

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

2. Select **all** expressions that are equal to $64^{\frac{3}{2}}$.

    A. 96

    B. 8^3

    C. 512

    D. 4^2

    E. $\sqrt{64^3}$

    F. $\sqrt[3]{64}^2$

3. Write the expression $17^{\frac{4}{3}}$ using radicals.

4. An arithmetic sequence k starts $4, 13, \ldots$. Explain how you would calculate the value of the 5,000th term.

    (From Unit 1, Lesson 8.)

5. Select **all** items equivalent to $\sqrt{24}$.

    A. the area of a square with side length 24 units

    B. the side length of a square with area 24 square units

    C. the positive number x, where $x \cdot x = 24$

    D. the positive number y, where $y = 24 \cdot 24$

    E. the edge length of a cube with volume 24 cubic units

    F. the volume of a cube with edge length 24 units

    (From Unit 3, Lesson 2.)

6. Which expression is equivalent to $23^{\frac{1}{2}}$?

    A. $\frac{1}{23}$

    B. $\frac{1}{\sqrt{23}}$

    C. 11.5

    D. $\sqrt{23}$

    (From Unit 3, Lesson 3.)