Lesson 4 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, ... 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.)