Name

8-8A Lesson Master

Questions on SPUR Objectives
See Student Edition pages 574–577 for objectives.

SKILLS Objective E

In 1–8, find all real solutions. Be sure to check for extraneous solutions.

1. $\sqrt[5]{g} = 3$ _____

2. $\sqrt[4]{t} + 7 = 5$ _____

3. $\sqrt[3]{3x + 4} = 7$ _____

4. $\sqrt[3]{3z} + 4 = 7$ _____

5. $2(\sqrt[6]{a} + 5) = 10$ _____

6. $\frac{\sqrt[8]{p} - 7}{6} = -1$ _____

7. $5\sqrt[3]{n} + 12 = 2\sqrt[3]{n}$ _____

8. $\sqrt{3y + 2} = 3\sqrt{y + 2}$ _____

9. Find two points on the line $x = 3$ that are seven units away from the point $(8, -2)$.

_____

USES Objective I

10. The volume of a sphere is given by $V = \frac{4}{3}\pi r^3$. An art student makes a metal sphere 3 cm in diameter, and wants to make a second sphere with exactly twice the volume. What will be the radius for the sphere that she wants to make?

_____

11. The formula $v = \sqrt{2mK}$ relates the velocity v of an object to its mass m and kinetic energy K. Solve this formula for K.

_____

12. Isaiah is a geometry student. His grades on the first four tests of the semester were 88, 72, 85, and 90. He wants to earn an 85 for the semester.

    a. What grade does he need on the last test if his teacher calculates grades using an average (arithmetic mean)?

    _____

    b. His geometry teacher feels that it is only appropriate to calculate geometry grades using a geometric mean. What grade does he need on the last test if his teacher calculates grades using a geometric mean?

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