Name

8-7B Lesson Master

Questions on SPUR Objectives
See pages 521–523 for objectives.

SKILLS Objective D

In 1–4, evaluate the expression.

1. $\sqrt{18} \cdot \sqrt{2}$

2. $\sqrt{16 \cdot 25 \cdot 225}$

3. $\frac{\sqrt{99}}{\sqrt{11}}$

4. $\frac{\sqrt{7^3}}{\sqrt{7}}$

In 5–7, simplify. Give the exact value. Assume all variables are positive.

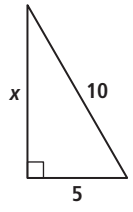
5. $\sqrt{72}$

6. $3\sqrt{160}$

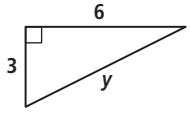
7. $\sqrt{\frac{12}{9}}$

In 8 and 9, write the exact value of the unknown in simplified form.

8.



9.



10. A bowling ball manufacturer created a clear resin ball that can contain any colored figure. The maximum length of the figure can be found by the expression $2\sqrt{\frac{s}{4\pi}}$ where s represents the surface area of the ball. What is the length of the figure that can be placed in a ball with a surface area of 72.25π square inches?

11. Find the exact value of the area of a triangle with a base of $4\sqrt{3}$ inches and a height of $\sqrt{6}$ inches.

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In 12–23, simplify. Give the exact value. Assume all variables are positive.

12. $\sqrt{48a^2b^2}$

13. $\sqrt{56c^2d^5}$

14. $-\sqrt{250e^3f^6}$

15. $-2\sqrt{40x}$

16. $5\sqrt{32y^7}$

17. $3\sqrt{112m^4n^8p^5}$

18. $\sqrt{\frac{216h^5}{24h^7}}$

19. $-\frac{\sqrt{147j^9k^2}}{\sqrt{12j^5k^2}}$

20. $\sqrt{\frac{128s^4t^3}{50t}}$

21. $\frac{\sqrt{85xy^{10}}}{\sqrt{5x^5y^{-2}}}$

22. $4\sqrt{12n} \cdot \sqrt{12n}$

23. $\sqrt{20d^4e^3} \cdot \sqrt{5d^2e}$