Name _____

9-3 Additional Practice

Rewriting Radical Expressions

Compare each pair of radical expressions. Write *equivalent* or *not equivalent* for each pair.

1. $\sqrt{48}$ and $4\sqrt{3}$

2. $\sqrt{75}$ and $7\sqrt{5}$

3. $-2\sqrt{90}$ and $-\sqrt{360}$

Write an expression that removes any perfect square factors in the radicand. Assume all variables are positive.

4. $\sqrt{150}$

5. $4\sqrt{80}$

6. $-27\sqrt{72}$

7. $\sqrt{180a^4b^5c^6}$

8. $mnp\sqrt{240m^5n^8p^5}$

9. $4ab^2\sqrt{525a^7b^{14}c}$

Write an expression for each product that removes any perfect squares in the radicand. Assume all variables are positive.

10. $-8y\sqrt{8x^4z^3} \cdot 5x\sqrt{50y^2z^5}$

11. $\frac{2}{3}\sqrt{54a^3b^4} \cdot 12\sqrt{200b^6c^7}$

12. $4\sqrt{20} \cdot 12\sqrt{56}$

13. A right triangle has legs of length $4x$ and $20x$. What is an expression for the hypotenuse of the right triangle?

14. Why does the expression in a radicand need to be positive?