Lesson 6.2 Practice: Properties of Rational Exponents and Radicals

School Launch · Algebra II · Unit 6: Radicals and Rational Exponents · Worksheet A

Calculator for decimals

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. Simplify (assume $x > 0$): $x^{\frac{1}{2}} \cdot x^{\frac{1}{3}}$. EASY

2. Simplify: $5\sqrt{12} + 4\sqrt{27}$. EASY

3. Give the domain and range of $f(x) = \sqrt{x - 3} - 6$, and its starting point. EASY

4. Simplify (assume $x > 0$): $x^{\frac{2}{3}} \cdot x^{\frac{7}{6}}$. MEDIUM

5. Simplify (assume $x > 0$): $x^{\frac{2}{3}} \cdot x^{\frac{5}{6}}$. MEDIUM

6. Simplify (assume $x > 0$): $x^{\frac{3}{3}} \cdot x^{\frac{3}{6}}$. MEDIUM

7. Simplify (assume $x > 0$): $x^{\frac{6}{3}} \cdot x^{\frac{4}{6}}$. MEDIUM

8. Simplify (assume $x > 0$): $x^{\frac{3}{3}} \cdot x^{\frac{4}{6}}$. HARD

9. Simplify (assume $x > 0$): $x^{\frac{4}{3}} \cdot x^{\frac{2}{6}}$. HARD

10. Simplify (assume $x > 0$): $x^{\frac{6}{3}} \cdot x^{\frac{5}{6}}$. HARD