

Alg II CC
Unit 3 – Lesson 2 – Quiz
Rational & Radicals

Name: _____ Pd. _____

Find the domain of each radical function.

1. $f(x) = \sqrt{x^2 + 4x - 5}$

2. $f(x) = \sqrt{2(x-1)}$

Find the inverse of each quadratic function.

3. $y = x^2 + 5x + 6$

4. $y = x^2 + 4$

5. Evaluate the expression: $2(\sqrt{12})^2 + 3\sqrt[3]{125}$

6. Describe the transformations applied from $f(x) = \sqrt{x}$ to $f(x) = 2\sqrt{x} - 5$.

Simplify. Assume that the value of each variable is positive. Give your answer in simplest radical form.

7. $(3x^5)^{\frac{1}{2}} \cdot \sqrt{4x^7}$

8. $\frac{\sqrt[3]{81x^{10}y^8}}{\sqrt[3]{3xy}}$

9. $(4\sqrt{2}+1)(\sqrt{2}-5)$

10. $(6-\sqrt{18})-(4+\sqrt{98})$

11. $5\sqrt{3}(\sqrt{6}-4\sqrt{8})$

12. $(25+5\sqrt{3})+(13-8\sqrt{3})$

13. $(4\sqrt{3}+5)(3-\sqrt{3})$

14. $\frac{18}{\sqrt{8}}$

15. $\frac{6}{\sqrt{5}-2}$