Section 1.6b Other Types of Equations

# Review of Negative Exponents

***LSU Video “Negative Exponents”*** *is available on the course website.*

If $a$ is a real number other than $0$ and $n$ is an integer, then .

# Review of Evaluating Expressions of the Form

***LSU Video “Rational Exponents”*** *(0:00 – 7:15) is available on the course website.*

**Definition of** **:** If $n$ is an integer greater than 1 and  is a real number, then ****.

# Review of Solving Quadratic Equations

Recall from section 1.4 that some quadratic equations can be solved by factoring and then using the zero-product property and that quadratic equations of the form  by using the square root property.

# Review of Solving Rational Equations

Recall from section 1.1 that a rational equation is an equation consisting of one or more rational expressions with any other expressions of the equation being polynomials. Here are some examples of rational equations.







To solve a rational equation multiply both sides of the equation by the LCD. Remember to check for extraneous solutions.

# Topic 5: Solving Radical Equations of the Form

To solve a radical equation of the form  raise each side of the equation to the appropriate power to eliminate the radical. When the index of the radical is even, be sure to check for extraneous solutions.

# Objective 2: Solving Equations that are Quadratic in Form (“Disguised Quadratics”)

Quadratic equations of the form are relatively straight-forward to solve since we know several methods for solving quadratics. Sometimes equations that are not quadratic can be made into a quadratic equation by using a **substitution**. Equations of this type are said to be *quadratic in form* or *“disguised quadratics”*. These equations typically have the form  after an appropriate substitution.

| Original Equation | Identify *u.* | Find . | Make the substitutions. |
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