

Lesson 11.3

- Objectives: To solve equations by writing them in quadratic form.
To solve equations that are quadratic in form by substitution.
To solve application problems using equations that are quadratic in form.

Solving Equations that are in Quadratic Form

An equation is quadratic in form if it can be written as a quadratic equation $au^2 + bu + c = 0$, where $a \neq 0$ and u is a variable or an expression.

Solve using substitution

Solve:

1. $x - 8\sqrt{x} + 15 = 0$ Let $u = \underline{\hspace{2cm}}$

3. $x^4 - 10x^2 + 9 = 0$ let $u =$ _____

4. $2\left(\frac{x+2}{2}\right)^2 + \left(\frac{x+2}{2}\right) - 3 = 0$ let $u =$ _____

5. $x^{\frac{1}{2}} - 4x^{\frac{1}{4}} + 3 = 0$

Set up an equation and use it to solve:

1. The average speed of a car is 10 miles per hour more than the average speed of a bus. The bus takes 1 hour longer than the car to travel 200 miles. Find how long it takes the car to travel 200 miles.

CW

Homework Math XL 11.3 due in one week

And Final review # ____ - # ____