

Solving Radical Equations

11/2/15

4.7

Lesson 19 Part 1

Warm-up

Foil

1) $(3 - \sqrt{x})(3 + \sqrt{x})$

2) $(2 - \sqrt{x + 1})(2 + \sqrt{x + 1})$

A **Radical Equation** is an equation with a variable in a radical.

An **Extraneous Answer** is a solution that does not satisfy the original equation.

I do:

Solve for x

$$x = \sqrt{x + 7} + 5$$

Isolate the radical	
Square both sides	
Simplify	
Check for extraneous answers	

I Try:

$$\sqrt{x + 10} = 5 - \sqrt{x - 3}$$

Isolate the radical	
_____ both sides	
Simplify	
Check for extraneous answers	

We Try:

$$4 = \sqrt[3]{x + 2} + 8$$

Isolate the radical	
_____ both sides	
Simplify	
Check for extraneous answers	

You Try with your partner on whiteboards:

Left Talk, Right Write

$$\sqrt{8n - 5} - 1 = 2$$

Isolate the radical	
_____ both sides	
Simplify	
Check for extraneous answers	

You Try with your partner on whiteboards:
Right Talk, Left Write

$$\sqrt{9x - 4} = \sqrt{7x - 20}$$

Isolate the radical	
_____ both sides	
Simplify	
Check for extraneous answers	

You Try SOLO:

$$4\sqrt{3m^2 - 15} = 4$$

Isolate the radical	
_____ both sides	
Simplify	
Check for extraneous answers	

You Try SOLO:

$$\sqrt{x + 2} - 7 = \sqrt{x + 9}$$

Isolate the radical	
_____ both sides	
Simplify	
Check for extraneous answers	