A1 S2 w12d2 10.4 Solving Radical Equations

Alg 1 Tues Week 12 Warm Up

Academic Recovery this week for Chap 9 Test

1. Skill 18: Solve a Quadratic Equation using the Quadratic Formula: $3x^2 + 2x = 1$

answers rounded to the nearest hundredth_____ answer as simplified radicals_____

2. Simplify:

a. $\sqrt{2} \cdot \sqrt{14}$

b. $\dfrac{\sqrt{21}}{\sqrt{3}}$

c. $\sqrt{5}(\sqrt{2} + 3\sqrt{5})$

d. $\dfrac{\sqrt{5}}{\sqrt{3}}$

e. $4\sqrt{2} - 7\sqrt{2}$

f. $\sqrt{28} - 5\sqrt{7}$

g. $(\sqrt{6} + \sqrt{3})(\sqrt{2} - \sqrt{2})$

A1 S2 w12d2 10.4 Solving Radical Equations

Notes 10.4 Solving Radical Equations

Problem 1 **Solving by Isolating the Radical**

What is the solution of $\sqrt{x} + 7 = 16$?

Got It? **1.** What is the solution of $\sqrt{x} - 5 = -2$?

Problem 3 **Solving With Radical Expressions on Both Sides**

What is the solution of $\sqrt{5t - 11} = \sqrt{t + 5}$?

Got It? **3.** What is the solution of $\sqrt{7x - 4} = \sqrt{5x + 10}$?

Problem 4 **Identifying Extraneous Solutions**

What is the solution of $n = \sqrt{n + 12}$?

Problem 5 **Identifying Equations With No Solution**

What is the solution of $\sqrt{3y} + 8 = 2$?

Got It? **5. a.** What is the solution of $6 - \sqrt{2x} = 10$?

b. Reasoning How can you determine that the equation $\sqrt{x} = -5$ does not have a solution without going through all the steps of solving the equation?

A1 S2 w12d2 10.4 Solving Radical Equations

HW p 636: 7, 9, 11, 13, 19, 21, 33, 35

Solve each radical equation. Check your solution.

7. $\sqrt{x} + 3 = 5$

9. $\sqrt{z} - 1 = 5$

11. $\sqrt{2b} + 4 = 8$

13. $\sqrt{3a + 1} = 7$

Solve each radical equation. Check your solution.

19. $\sqrt{3x + 1} = \sqrt{5x - 8}$

21. $\sqrt{7v - 4} = \sqrt{5v + 10}$

Solve each radical equation. Check your solution. If there is no solution, write *no solution*.

33. $\sqrt{3b} = -3$

35. $-2\sqrt{2r + 5} = 6$