Name: Unit 7 Notes & Resources
Solving Radical Equations Class Work Solve radical equations.
For Tasks A through C, answer each question with your group.
Task A Task B $\sqrt{2x-4} \neq 12 = 9$ Adjust $\sqrt{2x-4} \neq 12 = 9$ Adjust $\sqrt{3x+5} + 5 = 9$ $\sqrt{3} + 5 = 9$ \sqrt
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\frac{\text{Task C}}{\sqrt[4]{(x-1)^{3/3}}} = \frac{\sqrt[4]{3}}{\sqrt[4]{3}} = \sqrt[4]{3$
x-1=(320) x-1=34 x-1=81 x=82 x=82 x=82 x=82 x=82 x=82 x=82
ス=-8/3 Check: 4+2(音・音)な
$4+2(-8)^{2/3}$ = $12(x=-8)$
A solution that does not work when plugged back in is called extraneous.

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Unit 7 Notes & Resources

Solving Radical Equations Class Work

y Objective: You will be able to solve radical equations.



For Tasks A through C, answer each question with your group.

- $\ensuremath{\mathcal{Y}}$ How would you approach solving the problem?

$$\sqrt{2x-4}-12=0$$

$$\sqrt[3]{3x+5}-4=0$$

Task C

$$\sqrt[4]{(x-1)^3} = 27$$

Task D

$$4 - 2(3x)^{\frac{2}{3}} = 12$$

solving radical equations

Practice! Solve each equation. Be sure to check for extraneous solutions. Please complete all work on a blank sheet of paper.

1.
$$\frac{\left(\sqrt[3]{(3x-8)^2}\right)}{-7} = -7$$

2.
$$\sqrt[4]{5x-2} = 4$$

$$\sqrt[5]{(2x+5)^2} = 144$$

4.
$$\frac{\sqrt{(x-3)^5}}{3} = 81$$

$$5. \ \frac{\sqrt{(2x-3)^5}}{2} = 16$$

6.
$$\frac{\left(\sqrt[7]{(5x-1)^3}\right)}{-8} = -\frac{1}{8}$$

7.
$$\frac{\sqrt[3]{(2x+5)^5}}{4} = 256$$

8.
$$4\sqrt{2x} - 1 = 23$$

9.
$$2*\sqrt[3]{(4x-3)^4} = 1250$$

10.
$$4-2(3x)^{\frac{1}{3}}=12$$

11.
$$-2(3x)^{\frac{6}{5}} - 8 = -136$$

$$2(x+1)^{\frac{2}{3}} = 162$$

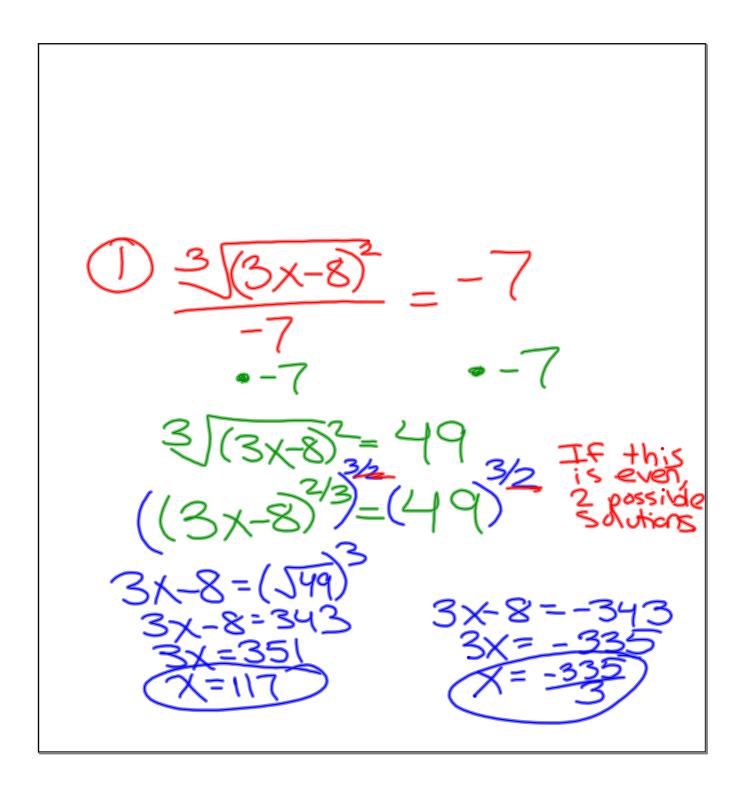
Challenge Yourself! Assuming no extraneous solutions will arise, solve for a.

$$(a+b)^{\frac{3}{4}} - (c-d)^{\frac{1}{2}} = 0$$

Homework: p. 388-390

#1-31 odd, 35-49 odd, 52, 60, 62, & 63

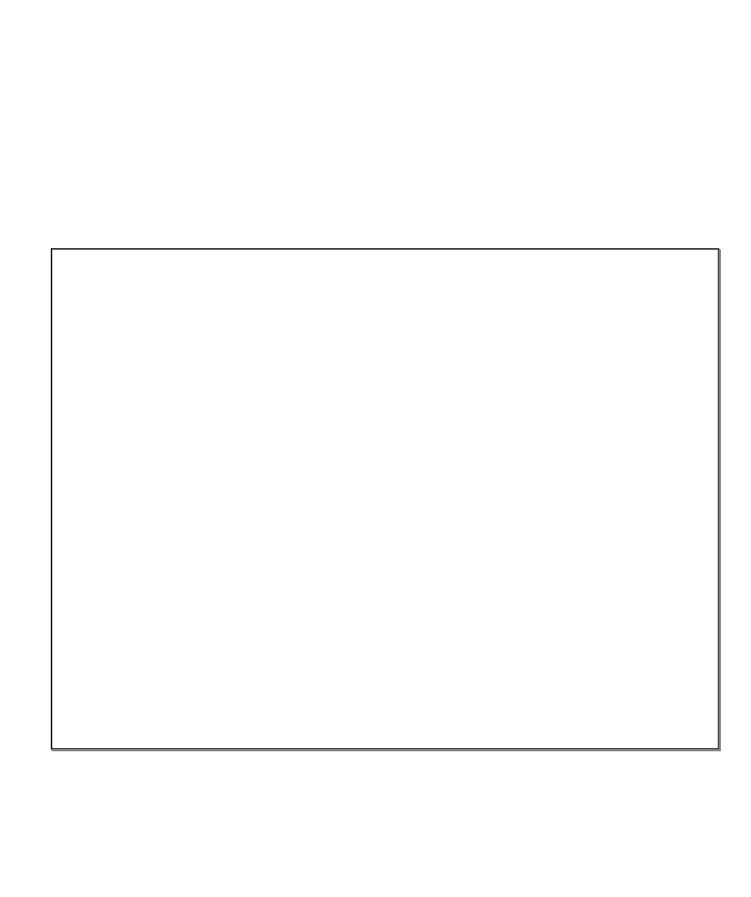
These problems are challenges, but you still must try them! © #51 and 61



All problems on the back of the solving radical equations worksheet and page 388 #1, 5, 7, 9, 13, 15, 17, 25, 29, 37, 41, 60, 62, 63, 85, and 88 (due Friday)

solving radical equations

TI	hrowback Problems: #85, 88, and 89



solving radical equations