Example 1

Determine whether the given values of x are solutions of the equation. Justify your answer. LCD=2X

$$\frac{5}{2x} - \frac{4}{\pi} = 3$$

$$2 \times (\frac{5}{2}) - 2 \times (\frac{4}{2}) = 3(2x)$$

 $5 - 2(4) = 6 \times$

(A)
$$x = -1/2$$

B)
$$x = 4$$

C) $x = 0$

D)
$$x = 1/4$$

Example 2

Solve the equation. Show all the work.

$$\frac{14.}{2} + \frac{6x}{7} = \frac{19}{14}$$

$$7x + 2(6x) = 19$$

$$7x + 12x = 19$$

$$19x = 19$$

Section P. 4 Part 3

Solving Equations Algebraically and Graphically

Objective: Given a radical and absolute Value equation, students will find its solutions algebraically, graphically and explain the process.

Study Problems pg 51 #69-70, 89-91 odd, 131-137 odd, 147-149.

Section P-4 Solve Equations

- 1.) I will be able to solve quadratic equations by factoring and completing the square.
- 2.) I will be able to solve a radical equation by combining fractions.
- 3) I will be able to solve absolute value equation by writing two equation.
- 4) I will be able to solve radical equations by simplifying the power to one.

Example#1

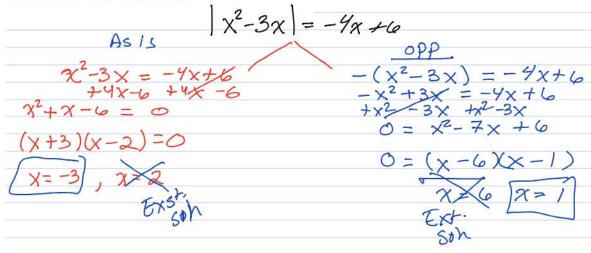
Solve for the variable.

$$\sqrt{x+1} - 3x = 1$$
 $+3x + 3x$
 $x+1 = 9x^2 + 3x + 3x + 1$

Check $\sqrt{0+1} - 3(0) = 1$
 $\sqrt{1+1} = 3x + 1$
 $\sqrt{1+1$

Example#2

Solve for the variable.



Example#3

Solve for the variable.

$$\frac{1}{2}x - 6 + 2 = 5$$

$$\frac{1}{2}x - 6 = 3$$

$$-(\frac{1}{2}x - 6) = 3$$

$$-(\frac{1}{2}x - 6) = 3$$

$$-1x + 6 = 3$$

$$2 \cdot \frac{1}{2}x = 9 \cdot 2$$

$$2 \cdot \frac{1}{2}x = -3 \cdot 2$$

$$2 \cdot \frac{1}{2}(18) - 6 + 2 = 5$$

$$131 + 2 = 5$$

$$3 + 2 = 5$$

$$5 = 5$$

$$1 - 3 + 2 = 5$$

$$5 = 5$$

Example#4

Solve for the variable.

$$\sqrt{x} - \sqrt{x-20} = 10$$

$$(-\sqrt{x-20})^{2} = (10 - \sqrt{x})^{2}$$

$$x-20 = (16 - \sqrt{x})(10 - \sqrt{x})$$

$$x-20 = 100 - 20/x + x$$

$$-x+20 + 20$$

$$-120 = -20/x$$

$$-12$$

Example#4

Solve for the variable.

$$(x-1)^{\frac{2}{3}} - 25 = 0$$

$$(x-1)^{\frac{2}{3}} = 25$$

$$(x-1)^{\frac{2}{3}} = (25)^{\frac{3}{3}}$$

$$x = 1 \pm 125$$

$$x = 1 \pm 125$$

$$x = 129 \quad x = 120$$