Solve Radical Equations (cont.)

$-5\sqrt{x+1} + 12 = 2$

$-12 \quad -12$

$\frac{-5\sqrt{x+1}}{-5} = \frac{-10}{-5}$

$(\sqrt{x+1})^2 = 2^2$

$x+1 = 4$

$x = 3$

$-5\sqrt{4} + 12 = 2$

$-10 + 12 = 2$ ✓

$x = \sqrt{4x-3}$

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

$x^2 = 4x - 3$

$-4x+3 \quad -4x \quad +3$

$x^2 - 4x + 3 = 0$

$(x-3)(x-1) = 0$

$x = 3, 1$

$3 = \sqrt{4(3)-3}$

$3 = \sqrt{9}$ ✓

$1 = \sqrt{4(1)-3}$

$1 = \sqrt{1}$ ✓

$x - 3 = \sqrt{x-1}$

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

$(x-3)(x-3) = x-1$

$x^2 - 3x - 3x + 9 = x - 1$

$x^2 - 6x + 9 = x - 1$

$-x \quad +1 \quad -x+1$

$x^2 - 7x + 10 = 0$

$(x-5)(x-2) = 0$

$x = 5, \cancel{2}$ extraneous

$5 - 3 = \sqrt{5-1}$

$2 = \sqrt{4} = 2$ ✓

$2 - 3 = \sqrt{2-1}$

$-1 = \sqrt{1}$

$-1 = 1$

principle $\sqrt{}$ only

p. 456/ # 3 - 8, 13 - 20, 32, 33, 56 - 58 due Mon

p. 456/ # 23 - 28, 34 - 38, (45 Extra Credit), 60, 61

due Tues