

pt 2 11-20 you must check in writing

Solving Radical Equations

solve $\sqrt{x-3} = 6$ ^{check}

$$x-3 = 36$$

$$x = 39$$

$$\sqrt{39-3} \stackrel{?}{=} 6$$

$\sqrt{36} = 6$
 $6 = 6$

Solve; check

$$\sqrt{x+1} + 3 = 2x$$

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

$$x+1 = 4x^2 - 12x + 9$$

$$x = 4x^2 - 12x + 8$$

$$0 = 4x^2 - 13x + 8$$

$$a=4 \quad b=-13 \quad c=8$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-(-13) \pm \sqrt{(-13)^2 - 4(4)(8)}}{2(4)}$$

$$x = \frac{13 \pm \sqrt{169 - 128}}{8}$$

$$x = \frac{13 \pm \sqrt{41}}{8}$$

$$x \approx 2.43 \text{ or } .82$$

$$\begin{array}{r} 32 \\ 1 \ 32 \\ 2 \ 16 \\ 4 \ 8 \end{array}$$

Check

$$x = 2.43$$

$$\sqrt{2.43+1} + 3 = 2(2.43)$$

$$\sqrt{3.43} + 3 = 4.86$$

$$4.85 = 4.86$$

$$\sqrt{.82+1} + 3 = 2(.82)$$

$$\sqrt{1.82} + 3 = 1.64$$

$$4.35 \neq 1.64$$