Algebra 1 Name_____

Complex Radical Equations Bonus

Date_____ Period____

Solve each Radical Equation for 'x' after squaring away the bracket.

1) EXAMPLE: $2.82\sqrt{\frac{3x-7.35}{4.5}}+18.43=96.72$ I need to begin by getting the bracket by itself.

$-18.43 \quad -18.43$ I subtract 18.43 from both sides.

$2.82\sqrt{\frac{3x-7.35}{4.5}}=78.29$

$/2.82 \quad /2.82$ I divide both sides by -2.82.

$\left(\sqrt{\frac{3x-7.35}{4.5}}\right)^2=27.76^2$ The bracket by itself and I square it away.

$4.5\cdot\frac{3x-7.35}{4.5}=4.5\cdot 770.62$ I get rid of the divide by multiplying.

$3x-7.35+7.35=3467.79+7.35$ I get rid of the minus by adding.

$\frac{3x}{/3}=\frac{3475.14}{/3}$ I will deal with the times 3 by dividing.

$x=1158.38$

2) $\sqrt{x+6}+5=14$

3) $\sqrt{\frac{x}{7}}-4=2$

4) $29=3\sqrt{x-9}-1$

5) $2\sqrt{6x+6}=12$

6) $\sqrt{\frac{4x}{8}+2}+3=15$

7) $\frac{\sqrt{3x}-10}{4}=-1$

8) $6+3\sqrt{x-9}=30$

9) $\sqrt{4.2x-3}=5.8$

10) $\sqrt{3x-2.91}+10.42=20.86$

11) $3.6\sqrt{2.1x+16.3}+9.7=24.3$