Algebra 2 NAME:_____

CHAPTER 7 PRACTICE QUIZ 7.5-7.6

Write the following expressions with roots

1. $5^{1/2}$

2. $x^{2/5}$

3. $x^{5/2}$

4. $10^{1/3}$

1._____

2._____

3._____

4._____

5. Simplify

a. x^{-6} b. $\left(\frac{16}{81}\right)^{-\frac{1}{2}}$ c. $x^{\frac{2}{5}} \cdot x^{\frac{1}{3}}$

5a._____

5b._____

5c._____

6. Solve and check for extraneous solutions

a. $5 + \sqrt{x} = 12$ b. $\sqrt{2x + 5} = 4$ c. $\sqrt{x - 1} = x - 7$

6a._____

6b._____

6c._____

BONUS

Simplify

*7. $27^{\frac{1}{3}} + 125^{\frac{1}{3}} + 16^{\frac{1}{2}} + 100^{\frac{1}{2}}$ *8. $(9^{\frac{1}{3}} \cdot x^{\frac{1}{2}})^{\frac{3}{2}}$

*7._____

*8._____

Selected Answers: 1.) $\sqrt{5}$ 3.) $\sqrt{x^5}$ *or* $x^2\sqrt{x}$ 5a.) $\frac{1}{x^6}$ 5c.) $x^{\frac{11}{15}}$ 6c.) x=10 (you get 5 and 10, but 5 doesn't work when you plug in) 7.) 22