

Name _____

**Algebra II Graded Classwork: Solving Radical Equations, Rational Exponents,
Complex Numbers**

Show all work to receive full credit.

Solve.

1. $\sqrt{x+1}+2=4$

2. $2+\sqrt{4x-4}=6$

3. $3\cdot\sqrt[3]{5n-1}-3=0$

4. $\sqrt[3]{6n-5}+3=-2$

Write in radical form:

5. $7^{\frac{1}{3}}$

6. $x^{\frac{2}{3}}$

Write in exponential form:

7. $\sqrt[4]{x}$

8. $\sqrt[3]{6x^5}$

Simplify:

9. $a^{\frac{2}{3}} \cdot a^{\frac{1}{4}}$

10. $\frac{x^{\frac{5}{6}}}{x^{\frac{1}{6}}}$

11. $(x^{\frac{1}{2}})^{\frac{1}{2}}$

12. $\frac{b^{\frac{3}{4}} \cdot b^2}{b^{\frac{1}{4}}}$