Name:_____ Hour: _____ Date: _____

QUICK REVIEW – Sections 6.1 – 6.2

Goals: #1 - I can interchange an expression between rational and radical notation, and evaluate the expression (using a calculator).

#2 - I can evaluate a rational or radical expression (without using a calculator).

#3 - I can solve equations using n^{th} roots.

#4 - I can simplify a numerical expression using properties of radicals and rational exponents.

#5 - I can simplify a variable expression using properties of radicals and rational exponents.

#6 - I can add and subtract expressions with radicals and rational exponents.



Let's keep practicing!: Evaluate the expression without using a calculator.

1.) $8^{2/3}$

2.) $81^{-3/2}$

3.) $-125^{4/3}$

4.) $(-32)^{3/5}$

Evaluate the expression using a calculator. Round answers to the nearest <u>hundredth</u>.

5.) $\sqrt[9]{-230}$

6.) $25^{-1/3}$

7.) $\left(\sqrt[4]{187}\right)^3$

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Solve the equation. Round your answer to two decimal places when necessary.

8.) $3x^5 + 18 = -12$

9.) $(x + 4)^4 = 21$

Simplify the expression. Assume all variables are positive.

10.) $x^{2/3} \bullet x^{1/4}$

11.) $\left(\sqrt{x} \bullet \sqrt[3]{x}\right)^6$

12.) $\sqrt[5]{\frac{3}{4}}$

13.) $\sqrt[4]{80} + 3\sqrt[4]{405}$

14.) $\sqrt[5]{6xy^3z^2} \bullet \sqrt[5]{16x^5yz^8}$

15.) $\frac{\sqrt[4]{96x^3y^6}}{\sqrt[4]{4y^2}}$

16.) $\sqrt[3]{\frac{6x^6}{5}}$