**Name: Date:**

**Topic: 5.2 Properties of Exponents and Radicals (Class Notes)**

**Essential Question:**

 Questions/Key Ideas Notes/Problems/Work

Properties of (a) Use exponent properties. (b) Find the reduced radical form.

Exponents

 $2m^{\frac{1}{3}}∙3m^{-\frac{3}{4}}$ $\left(3x^{\frac{2}{5}}\right)^{\frac{3}{5}}$

 $\frac{4x^{\frac{3}{5}}}{2x^{\frac{1}{3}}}$ $\frac{9a^{\frac{1}{4}}}{6\left(a^{2}\right)^{\frac{2}{3}}}$

Products of Radicals (a) Find the product. (b) Simplify.

 $2\sqrt{10x^{2}}∙3\sqrt{6x}$ $3\sqrt{5x^{3}}∙\sqrt[3]{10x^{5}}$

Questions/Key Ideas Notes/Problems/Work

Add/Subtract Radical Find the sum or difference. Find the reduced radical form.

Expressions

$2\sqrt{45}+\sqrt[3]{16}-\sqrt{125}+\sqrt[3]{2}$ $\sqrt{50}+3\sqrt{7}-4\sqrt{18}$

Multiply Binomial Find the product. Find the reduced radical form.

Radical Expressions

 $\sqrt{5}\left(6+\sqrt{15}\right)$ $\left(\sqrt{2x}+\sqrt{5}\right)(\sqrt{2x}-\sqrt{5})$

Divide Radical Find the quotient. Rationalize the denominator. Find the reduced radical form.

Expressions $\frac{3}{\sqrt{6}}$ $\frac{2}{\sqrt[3]{4}}$

 $\frac{4x+\sqrt{3}}{x+\sqrt{5}}$

Summary (Address EQ): (write in another sheet of paper, attach to notes)