Name:_____ Date:_____ Block:_____

<u>***Section 7-2:***</u> *Multiplying and Simplifying Radical Expressions*

Multiplication and Radicals

➢ To multiply two radicals together you MUST make sure the two radicals have the same

_____.

EXAMPLES:

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1) $\sqrt{2} * \sqrt{8}$ 2) $\sqrt[3]{3} * \sqrt[3]{9}$ 3) $7\sqrt{4} * 6\sqrt{5}$ 4) $\sqrt{x+5} * \sqrt{x-5}$

4) $\sqrt{2a} * \sqrt{2a}$ 5) $4\sqrt[3]{3a} * 7\sqrt[3]{9a^2}$ 6) $\sqrt[5]{\dfrac{x}{3}} * \sqrt[5]{\dfrac{7}{y}}$ 8) $\sqrt[6]{x-2} * \sqrt[6]{x+2}$

Simplifying by Factoring [NO DECIMALS]

TWO METHODS:

           FINDING a perfect-square   FACTORING

                 $\sqrt{162}$ $\sqrt{162}$

Examples:

       1) $\sqrt{8}$ 2) $\sqrt{27}$ 3) $6\sqrt{32}$

Section 7-2: *Multiplying and Simplifying Radical Expressions*

LET'S GET RADICAL and add in some variables….

FINDING a perfect-square

$$\sqrt{8x^3}$$

FACTORING

$$\sqrt{8x^3}$$

EXTRA EXAMPLES:

$$a) \sqrt{2x^2 - 4x + 2}$$

$$b) \sqrt{(x+y)^3}$$

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Simplify by factoring

16) $\sqrt{20}$

18) $\sqrt{175y^6}$

20) $\sqrt[3]{108m^5}$

22) $\sqrt[4]{80}$

24) $\sqrt[4]{243x^8y^{10}}$

26) $\sqrt[6]{(a+b)^7}$