

5.2 Multiplying and Dividing Radical Expressions part 1

Multiply coefficients, multiply radicands (if they have same index). Simplify when possible.

Example 1: Simplify completely:

a.) $2\sqrt{3}(5\sqrt{7})$

b.) $6\sqrt{10}(3\sqrt{15})$

c.) $-8(9\sqrt{45})$

d.) $3\sqrt[3]{16}(-2\sqrt[3]{81})$

$$\text{e.) } 3\sqrt{2}(5\sqrt{7} - 4\sqrt{6})$$

$$\text{f.) } (8\sqrt{10} - 2\sqrt{3})(3\sqrt{5} + \sqrt{7})$$

$$\text{g.) } (\sqrt{10} - 2\sqrt{12})(5\sqrt{3} + \sqrt{5})$$

$$\text{h.) } (-2\sqrt{7})(5\sqrt[3]{10})$$

$$\text{i.) } (12\sqrt{24} - 3\sqrt{32})^2$$

$$\text{j.) } (3\sqrt{a} + 2\sqrt{5})(\sqrt{6a} - 7\sqrt{10})$$