Simplify each.

1. $5\sqrt{18} + 6\sqrt{12} - \sqrt{8} - 2\sqrt{27}$

$9 \cdot 2 \quad 4 \cdot 3 \quad 4 \cdot 2 \quad 9 \cdot 3$

$15\sqrt{2} + 12\sqrt{3} - 2\sqrt{2} - 6\sqrt{3}$

$13\sqrt{2} + 6\sqrt{3}$

2. $10\sqrt[3]{54} + \sqrt{8} - 2\sqrt[3]{16} + 5\sqrt{32}$

$10\sqrt[3]{27 \cdot 2} + \sqrt{4 \cdot 2} - 2\sqrt[3]{8 \cdot 2} + 5\sqrt{16 \cdot 2}$

Sec 7-2

Multiplying and Dividing Radical Expressions

Simplify each.

1. $\sqrt{5} \cdot \sqrt{5} = 5$

2. $3\sqrt{7} \cdot 4\sqrt{7}$

$12 \cdot 7 = 84$

3. $\sqrt{11} \cdot 2\sqrt{3}$

$2\sqrt{33}$

4. $2\sqrt{3}(7\sqrt{2} + 5\sqrt{3})$

$14\sqrt{6} + 30$

If $\sqrt[n]{a}$ and $\sqrt[n]{b}$ are real #'s, then

$\sqrt[n]{a} \cdot \sqrt[n]{b} = \sqrt[n]{ab}$

Sec 7-2: Multiplying and Dividing Radical Expressions.

$\sqrt{5a} \cdot \sqrt{20a^7}$

$\sqrt{100a^8} = 10a^4$

$\sqrt{100} \cdot \sqrt{a^8}$

$\sqrt{2} \cdot \sqrt{3} = \sqrt{6}$

$\sqrt[3]{3} \cdot \sqrt[3]{4} = \sqrt[3]{12}$

$\sqrt[3]{2} \cdot \sqrt[3]{3}$

Simplify each. Assume that all variables are positive.

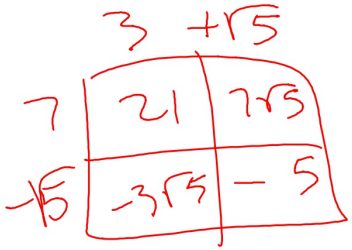
1. $\sqrt{6ab^3} \cdot \sqrt{2a^6b^5}$

2. $\sqrt[3]{2m^5n} \cdot \sqrt[3]{4m^8n^3} \cdot \sqrt[3]{3mn^7}$

Expand each.

1. $(3+\sqrt{5})(7-\sqrt{5})$

$16+4\sqrt{5}$



2. $(5-\sqrt{2})(6+\sqrt{3})$