Bell Ringer - Solve the equation.

$$2(-4m - 7) = -4(-3m + 5)$$

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$$-8m + -14 = 12m + -20$$

$$-12m \qquad -12m$$

$$-20m + -14 = -20$$

$$+14 \qquad +14$$

$$\frac{-20m}{-20} = \frac{-6}{-20}$$

$$m = \frac{6}{20} = \frac{3}{10}$$

Chapter 12-2 Adding and Subtracting Radicals

- If the same number is under the radical sign, then treat as a like term.
- May need to simplify the radical
    a) no perfect squares under the radical sign
    b) no radicals in the denominator

Simplify.

Treat the radical as a like term, and combine.

1) $4\sqrt{5} + 5\sqrt{5}$

$9\sqrt{5}$

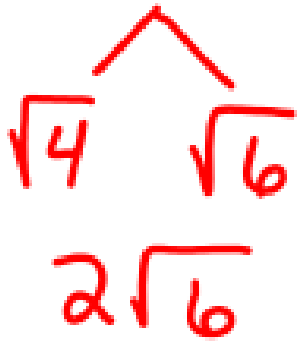
2) $3\sqrt{7} - 2\sqrt{7}$

$\sqrt{7}$ or $1\sqrt{7}$

Simplify.

Need to simplify the radical, then combine like terms.

3) $3\sqrt{6} + \sqrt{24}$



$$3\sqrt{6} + 2\sqrt{6} = 5\sqrt{6}$$

Simplify.

4) $8\sqrt{5} - \sqrt{125}$

5) $2\sqrt{7} - 5\sqrt{28}$

Simplify.

4) $8\sqrt{5} - \sqrt{125}$

$\sqrt{5}\ \sqrt{25}$

$5\sqrt{5}$

$8\sqrt{5} - 5\sqrt{5} = 3\sqrt{5}$

5) $2\sqrt{7} - 5\sqrt{28}$

$\sqrt{4}\ \sqrt{7}$

$5 \cdot 2 \cdot \sqrt{7}$

$10\sqrt{7}$

$2\sqrt{7} - 10\sqrt{7} = -8\sqrt{7}$

Simplify.

6) $4\sqrt{5} + \sqrt{125} - \sqrt{80}$

Simplify.

6) $4\sqrt{5} + \sqrt{125} - \sqrt{80}$

$\sqrt{5}\ \sqrt{25}$ $\quad$ $\sqrt{5}\ \sqrt{16}$

$5\sqrt{5}$ $\quad$ $4\sqrt{5}$

$$4\sqrt{5} + 5\sqrt{5} - 4\sqrt{5} = 5\sqrt{5}$$