

## 5.2 Dividing Radical Expressions (part 2)

Simplify:

$$1) \frac{20 \pm \sqrt{50}}{10}$$

$$2) \frac{\sqrt{24}}{\sqrt{32}}$$

\*\*\*\*can't leave a radical in the denominator

### Process

- 1.) simplify each radical
- 2.) radical in denominator? → Multiply by that radical, top + bottom
- 3.) simplify again

### Example:

$$a.) \frac{6\sqrt{7}}{5\sqrt{2}}$$

$$b.) \frac{12\sqrt{8}}{3\sqrt{243}}$$

$$\text{c.) } \frac{1}{5} \sqrt{\frac{3}{11a}}$$

$$\text{d.) } \frac{4\sqrt{20}}{2\sqrt{5}}$$

**Two terms in the denominator:**

If there are two terms in the denominator, multiply the numerator and denominator by the conjugate of the denominator:

ie  $a + b$  and  $a - b$  are conjugates

$$\text{e.) } \frac{2}{\sqrt{5}-\sqrt{3}}$$

$$\text{f.) } \frac{7}{2\sqrt{6}+\sqrt{2}}$$

$$g.) \frac{3-\sqrt{6}}{\sqrt{10}-7\sqrt{8}}$$

$$h.) \frac{9\sqrt{100}}{\sqrt{50}}$$

$$i.) \frac{2\sqrt{5}}{-\sqrt{30}}$$

$$j.) \frac{3\sqrt{12}}{\sqrt{2a}}$$

$$k.) \frac{3}{\sqrt[3]{6}}$$

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