

Warm - Up  
April 15th

Simplify (by using distributive property)

$$(4 + \sqrt{6})(4 + \sqrt{6})$$

$$\begin{array}{ccccccc} 4 \cdot 4 & + & \cancel{4\sqrt{6}} & + & \cancel{-4\sqrt{6}} & + & \sqrt{6} \cdot \sqrt{6} \\ \hline F & & O & & I & & L \end{array}$$

$$16 - 6 = \boxed{10}$$

## Quotients and Square Roots

p. 120

**Property – Quotient Property for Square Roots**

English: If all radicands are non-negative, and the denominator is not 0, then a quotient of square roots can be rewritten as the square root of a quotient.

Example:  $\frac{\sqrt{28}}{\sqrt{7}} = \sqrt{\frac{28}{7}} = \sqrt{4} = 2$

**Simplify**

$$\frac{\sqrt{54}}{\sqrt{6}}$$

$$\sqrt{\frac{54}{6}}$$

$$\sqrt{9}$$

$$3$$



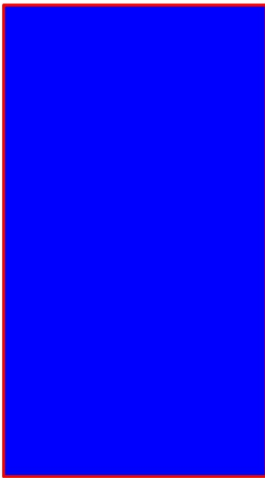
**Simplify**

$$\frac{\sqrt{175}}{\sqrt{7}}$$

$$\sqrt{\frac{175}{7}}$$

$$\sqrt{25}$$

$$5$$



Simplify

$$\frac{\sqrt{4} \cdot \sqrt{6}}{\sqrt{3}}$$

$$= \frac{\sqrt{24}}{\sqrt{3}} = \frac{\sqrt{8} \cdot \sqrt{3}}{\sqrt{3}}$$
$$\sqrt{\frac{24}{3}}$$

$$\sqrt{8} = \sqrt{4} \cdot \sqrt{2}$$

$$\boxed{2\sqrt{2}}$$

**Simplify**

$$\frac{2\sqrt{72}}{\sqrt{6}} = \frac{2\sqrt{36} \cdot \sqrt{2}}{\sqrt{6}} = \frac{12\sqrt{2}}{\sqrt{6}}$$

$$2\frac{\sqrt{72}}{\sqrt{6}}$$

$$\frac{12\sqrt{2}}{\sqrt{3} \cdot \sqrt{2}}$$

$$2\sqrt{\frac{72}{6}}$$

$$2\sqrt{12}$$

$$2\sqrt{4}\sqrt{3}$$

$$2(2)\sqrt{3}$$

$$4\sqrt{3}$$



**Homework (due Wednesday)**

Due { p.120 (1-8) 4.4.1  
p.119 (29-37) 4.3.5