

$$\sqrt{6} \cdot \sqrt{8} = \sqrt{48}$$

$$\sqrt{4} \sqrt{3} \sqrt{4} \sqrt{3} = 4\sqrt{3}$$

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

$$\sqrt{7} \cdot \sqrt{7} = \sqrt{49} = 7$$

$$\sqrt{9} \cdot \sqrt{9} = \sqrt{81} = 9$$

$$(\underline{5}\sqrt{5})(\underline{3}\sqrt{2})$$

$$5 \cdot 3 \quad \sqrt{5} \cdot \sqrt{2}$$

$$\underline{15\sqrt{10}}$$

$$(3\sqrt{10})(4\sqrt{2})$$

$$12\sqrt{20}$$

$$12\sqrt{4}\sqrt{5}$$

$$12 \cdot 2\sqrt{5}$$

$$\underline{24\sqrt{5}}$$

$$(3\sqrt{10})(4\sqrt{2})$$

$$(\underline{3}\sqrt{2}\sqrt{5})(\underline{4}\sqrt{2})$$

$$12\sqrt{4}\sqrt{5}$$

$$12 \cdot 2\sqrt{5}$$

$$\underline{24\sqrt{5}}$$

4 Simplify.

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

$$6\sqrt{5} + 3\sqrt{15} - 4\sqrt{3} - 2\sqrt{9}$$

$-2(3)$

$$6\sqrt{5} + 3\sqrt{15} - 4\sqrt{3} - 6$$

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

$$25\sqrt{9} + 30\sqrt{3} - 30\sqrt{3} - 36$$

$25(3)$

$$75 - 36$$

$$39$$

conjugate

$$x-2 \quad x+2$$

$$3x+4 \quad 3x-4$$

rationalize the denominator

$$\frac{5}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{5\sqrt{3}}{\sqrt{9}} = \frac{5\sqrt{3}}{3}$$

$$\sqrt{\frac{13}{2}} = \frac{\sqrt{13}}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{26}}{\sqrt{4}} = \frac{\sqrt{26}}{2}$$

$$\sqrt{\frac{10}{2}} = \sqrt{5}$$

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

$$\frac{\sqrt{8}}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{16}}{\sqrt{4}} = \frac{4}{2} = 2$$

45-45-90

hyp = leg $\sqrt{2}$ 

$$\frac{\sqrt{2}}{\sqrt{2}} \cdot \frac{1.5}{\sqrt{2}} = \frac{x\sqrt{2}}{\sqrt{2}}$$

$$\frac{1.5\sqrt{2}}{2} = x$$

Simplify

(conjugate of denom)

$$\frac{1-\sqrt{3}}{5+\sqrt{3}} \cdot \frac{5-\sqrt{3}}{5-\sqrt{3}} \quad \begin{array}{l} -x-5x \\ -6x \end{array}$$

$$= \frac{5 - \cancel{1\sqrt{3}} - 5\sqrt{3} + \cancel{\sqrt{9}}^3}{25 - \cancel{5\sqrt{3}} + \cancel{5\sqrt{3}} - \cancel{\sqrt{9}}^3}$$

$$= \frac{8 - 6\sqrt{3}}{25 - 3} = \frac{8 - 6\sqrt{3}}{22} \stackrel{\div 2}{=} \left(\frac{4 - 3\sqrt{3}}{11} \right)$$

$$5B. \frac{3-2\sqrt{5}}{6+\sqrt{5}} \cdot \frac{6-\sqrt{5}}{6-\sqrt{5}}$$

$$= \frac{18 - 3\sqrt{5} - 12\sqrt{5} + \cancel{2\sqrt{25}}^{+10 \cancel{18}}}{36 - \cancel{6\sqrt{5}} + \cancel{6\sqrt{5}} - \cancel{\sqrt{25}}^5}$$

$$= \frac{28 - 15\sqrt{5}}{36 - 5} = \left(\frac{28 - 15\sqrt{5}}{31} \right)$$

p. 413-414

18-19, 22-23, 34-36, 38-46

~~47-48~~ 49, 52-53, 55, 57,

60, 62-63,

72-79 (no calculator)