

14.2 – Multiplying Radicals

$$1. \sqrt{5} \cdot \sqrt{6} = \frac{\sqrt{30}}{\sqrt{30}}$$

$$\begin{array}{r} 3 \overline{)30} \\ \underline{21} \\ 9 \\ \underline{9} \\ 0 \end{array}$$

No pairs!

$$2. \sqrt{3} \cdot \sqrt{8} = \frac{2\sqrt{6}}{\sqrt{24}}$$

$$\begin{array}{r} 2 \overline{)24} \\ \underline{4} \\ 20 \\ \underline{18} \\ 2 \\ \underline{2} \\ 0 \end{array}$$

$$3. 5\sqrt{7} \cdot 6\sqrt{2} = \frac{30\sqrt{14}}{30\sqrt{14}}$$

$$\begin{array}{r} 2 \overline{)14} \\ \underline{4} \\ 10 \\ \underline{10} \\ 0 \end{array}$$

No pairs!

$$4. -2\sqrt{6} \cdot 5\sqrt{8} = \frac{-40\sqrt{3}}{-10\sqrt{48}}$$

$$\begin{array}{r} 2 \overline{)48} \\ \underline{4} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

$$\begin{array}{r} 2 \overline{)12} \\ \underline{4} \\ 8 \\ \underline{6} \\ 2 \\ \underline{2} \\ 0 \end{array}$$

$$5. (-6\sqrt{2})(-8\sqrt{2}) = \frac{96}{48\sqrt{4}} = \frac{96}{48 \cdot 2}$$

$$6. (\sqrt{5})^2 = \frac{5}{5}$$

$$7. (3\sqrt{2})^2 = \frac{18}{(3)^2 \cdot (\sqrt{2})^2}$$

$$9 \cdot 2$$