Name: KEY

Section 2.4 – Proficiency Check

Multiply the following Radicals:

Emerging	Proficient
$\sqrt{12} \cdot 3\sqrt{6} \cdot \sqrt{14}$ $\sqrt{3}\sqrt{4} \cdot 3\sqrt{3}\sqrt{2} \cdot \sqrt{2}\sqrt{7}$ $3 \cdot 2 \cdot 3 \cdot 2$ $36\sqrt{7}$	$\sqrt[3]{24} \cdot -3\sqrt[3]{4} \cdot 2\sqrt[3]{18}$ $\sqrt[3]{8}\sqrt[3]{3} \cdot (-3)\sqrt[3]{4} \cdot 2\sqrt[3]{2}\sqrt[3]{9}$ Multiply what you can to make perfect cubes $\sqrt[3]{8} = 2 \quad \sqrt[3]{9}\cdot\sqrt[3]{3} = \sqrt[3]{27} = 3 \quad \sqrt[3]{4}\cdot\sqrt[3]{2} = \sqrt[3]{8} = 2$ $2 \cdot 3 \cdot 2 \cdot 2 \cdot (-3)$ -72

Rationalize the Denominator

Proficient	Proficient
cube root need 3 identical factors $\frac{4}{\sqrt[3]{5}} \cdot \frac{\sqrt[3]{5}}{\sqrt[3]{5}} \cdot \frac{\sqrt[3]{5}}{\sqrt[3]{5}}$ $\frac{4\sqrt[3]{25}}{5}$	use conjugate $\frac{3}{(2-\sqrt{3})} \cdot \frac{(2+\sqrt{3})}{(2+\sqrt{3})}$ $\frac{3(2+\sqrt{3})}{(2-\sqrt{3})(2+\sqrt{3})} \rightarrow \frac{6+3\sqrt{3}}{4+2\sqrt{3}-2\sqrt{3}-3}$ $\frac{6+3\sqrt{3}}{1} = 6+3\sqrt{3}$ $3(2+\sqrt{3})$