

## Bell Work:

$$\begin{aligned} 1) & 7\sqrt{108} + 3\sqrt{12} - 10\sqrt{192} \\ & 7\sqrt{\overset{6}{36}}\sqrt{3} + 3\sqrt{\overset{2}{4}}\sqrt{3} - 10\sqrt{\overset{8}{64}}\sqrt{3} \\ & 42\sqrt{3} + 6\sqrt{3} - 80\sqrt{3} \\ & -32\sqrt{3} \end{aligned}$$

$$\begin{aligned} 2) & (\sqrt{5} - \sqrt{9})^2 \\ & (\sqrt{5})^2 - (\sqrt{5})(\sqrt{9})(2) + (\sqrt{9})^2 \\ & 5 - 6\sqrt{5} + 9 \\ & 14 - 6\sqrt{5} \end{aligned}$$

Examples (Notes)

$$1) (7\sqrt{5} + 4\sqrt{11})(7\sqrt{5} - 4\sqrt{11})$$

$$49(5) - 16(11)$$

$$245 - 176$$

$$= 69$$

$$(2) \frac{\sqrt[3]{32}}{\sqrt[3]{4}} \cdot \frac{\sqrt[3]{2}}{\sqrt[3]{2}}$$

$$= \frac{\sqrt[3]{64}}{\sqrt[3]{8}} = \frac{4}{2}$$

$$= 2$$

$$\frac{\sqrt[3]{32}}{\sqrt[3]{4}} = \sqrt[3]{\frac{32}{4}} = \sqrt[3]{8}$$

$$= 2$$

$$3) \frac{4 + \sqrt[3]{y}}{\sqrt[3]{y}} \cdot \sqrt[3]{y^2}$$

$$\frac{4\sqrt[3]{y^2} + \sqrt[3]{y^3}}{\sqrt[3]{y^3}}$$

$$\frac{4\sqrt[3]{y^2} + y}{y}$$

$$\frac{4\sqrt[3]{y^2}}{y} + \frac{y}{y} = \frac{4\sqrt[3]{y^2}}{y} + 1$$

$$4) \frac{3 - 4\sqrt{7}}{\sqrt{5} + \sqrt{3}} (\sqrt{5} - \sqrt{3})$$

$$\frac{3\sqrt{5} - 3\sqrt{3} - 4\sqrt{35} + 4\sqrt{21}}{5 - 3}$$

$$\frac{3\sqrt{5} - 3\sqrt{3} - 4\sqrt{35} + 4\sqrt{21}}{2}$$