

MAT 104 Quiz 26

Friday, December 3, 2004

1. Simplify

$$2\sqrt[3]{b} + 2 + 3\sqrt[3]{b} - 1$$

$$5\sqrt[3]{b} + 1$$

2. Simplify

$$2\sqrt[3]{3} - 4\sqrt[3]{81}$$

$$\begin{aligned} 2\sqrt[3]{3} - 4\sqrt[3]{81} &= 2\sqrt[3]{3} - 12\sqrt[3]{3} \\ &= -10\sqrt[3]{3} \end{aligned}$$

3. Simplify

$$(\sqrt{a} - 3\sqrt{b})(\sqrt{a} + 3\sqrt{b})$$

$$\begin{aligned} (\sqrt{a} - 3\sqrt{b})(\sqrt{a} + 3\sqrt{b}) &= \sqrt{a}\sqrt{a} + 3\sqrt{a}\sqrt{b} - 3\sqrt{a}\sqrt{b} - 9\sqrt{b}\sqrt{b} \\ &= a - 9b \end{aligned}$$