

Algebra 3 Assignment # 5

Simplify the following:

(1) $\frac{\sqrt[3]{-3}}{\sqrt[3]{-24}}$

(2) $\sqrt[3]{(-125)(-1000)}$

(3) $\sqrt[3]{\sqrt[3]{-512}}$

(4) $\sqrt{5} \cdot \sqrt{20}$

(5) $\sqrt[3]{4} \cdot \sqrt[3]{12}$

(6) $2\sqrt{5} + 3\sqrt{125}$

(7) $\sqrt[3]{128} + \sqrt[3]{16}$

(8) $\frac{10}{\sqrt{5}} + 3\sqrt{45} - 2\sqrt{20}$

(9) $3\sqrt{10} + 4\sqrt{90} - 5\sqrt{40}$

(10) $3\sqrt{8x^2} - \sqrt{50x^2}$

(11) $\frac{8}{\sqrt{2}} + 2\sqrt{50}$

(12) $\sqrt{x^2y} + \sqrt{8x^2y} + \sqrt{200x^2y}$

Answers:

1. $\frac{1}{2}$

2. 50

3. -2

4. 10

5. $2\sqrt[3]{6}$

6. $17\sqrt{5}$

7. $6\sqrt[3]{2}$

8. $7\sqrt{5}$

9. $5\sqrt{10}$

10. $x\sqrt{2}$

11. $14\sqrt{2}$

12. $x\sqrt{y} + 12x\sqrt{2y}$