



CENTUM ACADEMY

Grade: IX

Subject: Mathematics

Topic: Surds

WS No # 2

I. Simplify:

1. $\sqrt{12} + \sqrt{75}$

2. $\sqrt{18} + \sqrt{32}$

3. $\sqrt{20} + \sqrt{180}$

4. $\sqrt{98} - \sqrt{50}$

5. $\sqrt[3]{128} - \sqrt[3]{54}$

6. $\sqrt[4]{80} + \sqrt[4]{405}$

7. $\sqrt[4]{768} - \sqrt[4]{243}$

8. $2\sqrt{27} - \sqrt{75} + \sqrt{12}$

9. $2\sqrt{405} - 3\sqrt{125} + \sqrt{45}$

10. $4\sqrt[3]{192} - 4\sqrt[3]{375} + 2\sqrt[3]{24}$

11. $3\sqrt[3]{40} + 2\sqrt[3]{625} - 4\sqrt[3]{320}$

12. $5\sqrt[3]{-54} - 2\sqrt[3]{-16} + 4\sqrt[3]{686}$

13. $\sqrt{45x^3} + \sqrt{80x^3} + \sqrt{5xy^2}$

14. $x\sqrt[3]{x^3a} + y\sqrt[3]{-8y^3a} - z\sqrt[3]{-27z^3a}$

15. $2\sqrt[4]{32a^4x} + 3\sqrt[4]{512a^4x} - 4a\sqrt[4]{162x}$

ANSWERS

1. $7\sqrt{3}$

2. $7\sqrt{2}$

3. $8\sqrt{5}$

4. $2\sqrt{2}$

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

6. $5\sqrt[4]{5}$

7. $\sqrt[4]{3}$

8. $3\sqrt{3}$

9. $6\sqrt{5}$

10. 0

11. 0

12. $17\sqrt[3]{2}$

13. $(7x+y)\sqrt{5x}$

14. $(x^2 - 2y^2 + 3z^2)\sqrt[3]{a}$

15. $4a\sqrt[4]{2x}$