



CENTUM ACADEMY

Grade: X

Subject: Mathematics

Topic: Surds

Worksheet # 4

I. Simplify:

1. $\sqrt{5} \times \sqrt{10}$

2. $\sqrt{27} \times \sqrt{3}$

3. $\sqrt{20} \times \sqrt{45}$

4. $\sqrt[3]{6ax} \times \sqrt[3]{27a^2x^3}$

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

6. $\sqrt[3]{9} \times \sqrt[2]{27}$

7. $\sqrt[4]{4} \times \sqrt[6]{4}$

8. $4\sqrt[3]{72} \times 5\sqrt[3]{576}$

9. $7\sqrt[3]{8a^3x^2} \times 5\sqrt[3]{27b^3x^2}$

10. $\sqrt[2]{8} - \sqrt[4]{6}$

II. Given $\sqrt{2} = 1414$, $\sqrt{3} = 1732$, $\sqrt{5} = 2236$, find to 3 places of decimals the numerical value of

11. $\sqrt{2} - \sqrt{6}$

12. $\sqrt{72} - \sqrt{40}$

13. $\sqrt{275} - \sqrt{22}$

14. $10\sqrt{108} - \sqrt{15}$

ANSWERS

1. $5\sqrt{2}$
2. 9
3. 30
4. $3ax^3\sqrt{6ax}$
5. $\sqrt[6]{288}$
6. $9\sqrt[6]{3}$
7. $\sqrt[12]{1024}$
8. $480\sqrt[3]{3}$
9. $210abx^3\sqrt{x}$
10. $\sqrt[6]{\frac{3}{3}}$
11. 577
12. 1341
13. 3535
14. 26832

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