Concept_Grade-9_Real Numbers

Operations on Rational Numbers

1. Simplify: $(5 + \sqrt{5})(5 - \sqrt{5})$

2. Write the equivalent of $\sqrt{12} \times \sqrt{8}$

3. Calculate the value of $4\sqrt{28} \div 3\sqrt{17}$.

4. If b > 0 and b^2 = a, then find the value of $\sqrt{a}$

5. Write the equivalent value of $(a + \sqrt{b})(a - \sqrt{b})$.

6. Simplify : $- \sqrt{72} + \sqrt{800} - \sqrt{18}$

7. Simplify :- $8\sqrt{3} - 2\sqrt{3} + 4\sqrt{3}$

8. Simplify:- $\sqrt{50} - \sqrt{98} + \sqrt{162}$

9. Simplify:- $3\sqrt[3]{40} - 4\sqrt[3]{320} - \sqrt[3]{5}$

10. Simplify:- $\sqrt[4]{16} - 6\sqrt[3]{343} + 18\sqrt[5]{243} - \sqrt{196}$

11. Find the product of:- $5\sqrt{2}\ (3 + \sqrt{2})(5 + \sqrt{2})$

12. Simplify:- $3\sqrt{45} - \sqrt{125} + \sqrt{200} - \sqrt{50}$

13. Find the value of $729^{\frac{-1}{6}}$

14. Evaluate : $\sqrt{5 + 2\sqrt{6}} + \sqrt{8 - 2\sqrt{15}}$

15.