



**Grade: IX CH-1-NUMBER SYSTEM**

1. Which one of the following is a rational number:

- (a)  $\sqrt{3}$  (b)  $\sqrt{2}$  (c) 0 (d)  $\sqrt{5}$

2. 0.6666 in  $\frac{p}{q}$  form is:

- (a)  $\frac{6}{99}$  (b)  $\frac{2}{3}$  (c)  $\frac{3}{5}$  (d)  $\frac{1}{66}$

3. Express in fraction( p/q form) and find the sum :  $2.\bar{3} + 0.1\bar{3}$

4. Write ONE irrational number and ONE rational number between :  $\frac{2}{5}$  and  $\frac{5}{6}$

5. Represent  $\sqrt{5}$  on a number line.

6 Simplify :  $\left(\frac{49}{64}\right)^{-\frac{1}{2}}$

7. Simplify :  $2\sqrt{48} - \sqrt{75} + \sqrt{108} - 4\sqrt{3}$

8. Simplify :  $2^3\sqrt{125} + 4^3\sqrt{27} - 4\sqrt{64}$

9. Simplify :  $\frac{2\sqrt{6}}{\sqrt{2}+\sqrt{3}} + \frac{6\sqrt{2}}{\sqrt{6}+\sqrt{3}} - \frac{8\sqrt{3}}{\sqrt{6}+\sqrt{2}}$

10. If  $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{7}-\sqrt{5}} = a + b\sqrt{35}$  find a and b

11. Show that :  $\frac{1}{2+\sqrt{3}} + \frac{2}{\sqrt{5}-\sqrt{3}} + \frac{1}{2-\sqrt{5}} = 0$

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