INDIAN SCHOOL NIZWA - WORKSHEET

MATHEMATICS
CH:1 Number System

Name: _____ Date:_____ Class: IX Sec: ___

1. Express $0.\overline{4}$ in $\frac{p}{q}$ $form$ Ans: $\frac{4}{9}$

2. Simplify $2.0\overline{15}$ in the $\frac{p}{q}$ form. Ans: $\frac{133}{66}$

3. Evaluate , $(0.00032)^{-\frac{2}{5}}$ Ans: 25

4. Express $1.3\overline{2} + 0.\overline{35}$ $as\ a$ fraction in simplest form. Ans : $\frac{1659}{990}$

5. Determine p and q if $\frac{7+\sqrt{5}}{7-\sqrt{5}} - \frac{7-\sqrt{5}}{7+\sqrt{5}} = p - 7\sqrt{5}q$ $Ans:\ \ p = 0\ ,\ \ q = \frac{-1}{11}$

6. Simplify $\frac{6}{2\sqrt{3}-\sqrt{6}} + \frac{6}{\sqrt{3}+\sqrt{6}} - \frac{4\sqrt{3}}{\sqrt{6}-\sqrt{2}}$ Ans: 0 or $2\sqrt{3} - \sqrt{12}$

7. Show that $\frac{1}{3-\sqrt{8}} - \frac{1}{\sqrt{8}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{6}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2}$ = 5

8. Find $x + \frac{1}{x},\ \ if\ x = 2 + 3\sqrt{2}$ Ans: $\frac{13}{7} + \frac{45\sqrt{2}}{14}$

9. If $x = 2 - \sqrt{3}$, then find the value of $\left(x + \frac{1}{x}\right)^3$. Ans: 64

10. Represent $\sqrt{4.7}$ on the number line