



INDIAN SCHOOL NIZWA - WORKSHEET

MATHEMATICS CH:1 Number System

Name: _____

Date: _____

Class: IX Sec: ____

- Express in the form of $\frac{p}{q}$
 - $0.\overline{4}$
 - $2.0\overline{15}$
- Simplify: $3\sqrt{45} + \sqrt{125} - \sqrt{200} - \sqrt{50}$.
- Evaluate: $(0.00032)^{-\frac{2}{5}}$
- Express: $1.3\overline{2} + 0.\overline{35}$ as a fraction in simplest form.
- Determine : p and q if $\frac{7+\sqrt{5}}{7-\sqrt{5}} - \frac{7-\sqrt{5}}{7+\sqrt{5}} = p - 7\sqrt{5}q$
- Simplify: $\frac{6}{2\sqrt{3}-\sqrt{6}} + \frac{6}{\sqrt{3}+\sqrt{6}} - \frac{4\sqrt{3}}{\sqrt{6}-\sqrt{2}}$
- Show that: $\frac{1}{3-\sqrt{8}} - \frac{1}{\sqrt{8}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{6}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2} = 5$
- Find $x + \frac{1}{x}$, if $x = 2 + 3\sqrt{2}$.
- If $x = 9 - 4\sqrt{5}$, find the value of $x^2 + \frac{1}{x^2}$.
- If $x = 2 - \sqrt{3}$, then find the value of $\left(x + \frac{1}{x}\right)^3$.
- Find $x^2 - y^2$ if $x = \frac{2-\sqrt{5}}{2+\sqrt{5}}$, $y = \frac{2+\sqrt{5}}{2-\sqrt{5}}$.