INTERNATIONAL INDIAN SCHOOL
BURAIDAH

Worksheet For The Academic Year 2023-24

CLASS: IX SUBJECT: Mathematics DATE: 14/05/2023

LESSON-1 Number System

1) Find the decimal form and write its type.

a) $\frac{7}{25}$ b) $\frac{11}{24}$ c) $\frac{1}{11}$

2) Express 0.343434…… in the form p/q .

3) Rationalise:

a) $\frac{1}{\sqrt{7}}$ b) $\frac{1}{\sqrt{5}-\sqrt{4}}$ c) $\frac{5\sqrt{3}+3\sqrt{5}}{5\sqrt{3}-3\sqrt{5}}$

4) Write the decimal form of $\frac{56}{1000}$.

5) Find two rational numbers between $\frac{-3}{7}$ and $\frac{1}{3}$.

6) Represent $\sqrt{2}, \sqrt{3}$, $\sqrt{5}$ on three number lines.

7) Simplify:

a) $\sqrt{12} + \sqrt{8} - \sqrt{50}$ b) $(\sqrt{3} - \sqrt{2})^2$ c) $(5 - 2\sqrt{6})(5 + 2\sqrt{6})$

d) $\sqrt[3]{216} - \sqrt[3]{125}$ e) $12\sqrt{18} - 6\sqrt{20} - 3\sqrt{50} + 8\sqrt{45}$ f) $(\frac{1}{27})^{\frac{-2}{3}}$

8) Find the value of 'a' and 'b' if $\frac{5+2\sqrt{3}}{7+4\sqrt{3}} = a - b\sqrt{3}$.

9) If a = 2 , b = 3 find the values of :

a) $a^a + b^b$ b) $(\frac{a}{b})^a$

10) Simplify: $3\sqrt{2} + 3\sqrt{5} - 5\sqrt{2} + 4\sqrt{5}$

11) Solve: $\sqrt[3]{2} \times \sqrt[4]{2} \times \sqrt[12]{32}$

12) Simplify: $\sqrt{10} \times \sqrt{15}$

13) Simplify: $\left(\frac{64}{729}\right)^{\frac{1}{6}}$

14) Simplify: a) $(1^0 + 2^0 + 3^0)^2$

15) Classify as rational and irrational:

a) $\sqrt{37}$ b) $\sqrt{324}$ c) 0.54321

16) Write two irrational numbers between 0.2 and 0.3.

ANSWERS

1) a) 0.28	1) b) 0.4583333…….	1) c) 0.0909…..
2) $^{34}/_{99}$	7) a) $2\sqrt{3} - 3\sqrt{2}$	8) a = 11 b = 6
3) a) $\frac{\sqrt{7}}{7}$ b) $2 + \sqrt{5}$	b) $5 - 2\sqrt{6}$ c) 1	9) a) 13 b) $^{4}/_{9}$
c) $4 + \sqrt{15}$	d) 1 e) $21\sqrt{2} + 12\sqrt{5}$	10) $7\sqrt{5} - 2\sqrt{2}$
4) 0.056	f) 9	11) 2
12) $5\sqrt{6}$	13) $^{2}/_{3}$	14) 9