## ATOMIC ENERGY CENTRAL SCHOOL, MYSORE

SUBJECT: MATHEMATICS CHAPTER: NUMBER SYSTEM STD: IX
WORK SHEET: 2 MAX. MARKS: 15

## **WORKED OUT EXAMPLES:**

1. Simplify  $(64)^{2/3}$ 

Ans. Cube root of 64 is 4. Square of 4 is 16. Therefore  $(64)^{2/3}$  is 16.

2. Multiply ( $\sqrt{5}$  +3) ( $\sqrt{5}$  -3).

Ans.  $(\sqrt{5} + 3) (\sqrt{5} - 3) = 5 - 9 = -4$ .

3. Convert 1.3333.... into p/q form.

Let 1.333... =x; 
$$10x = 13.333...$$
;  $10x - x = 12$ ;  $9x = 12$ ;  $x = 12/9 = 4/3$ 

4. Rationalise the denominator:  $\frac{7}{\sqrt{3}}$ .

Ans: Multiply both numerator and the denominator by the rationalizing factor  $\sqrt{3}$ . We get  $\frac{7\sqrt{3}}{3}$ .

## 

Answer the following questions.

- 1. Compute (243)<sup>3/5</sup>. (1 mark)
- 2. Simplify  $(\sqrt{2} + \sqrt{8})^2$  (1mark)
- 3. Rationalise the denominator  $\frac{5}{3+\sqrt{5}}$ . (2 marks)
- 4. Factorise:  $(a + \sqrt{b})(a \sqrt{b}) (b \sqrt{a})(b + \sqrt{a})$  (2marks)
- 5. Convert 1.23333.... in the form of p/q (3 marks)
- 6. Visualise 3.272727.... on the number line upto four decimals. (3 marks)
- 7. Represent **V8.7** on the number line. (3 marks)

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