

**SELF ASSESSMENT
WORKSHEET – 1
MATHEMATICS
NUMBER SYSTEM
GRADE – 9**

Attempt all the questions.

Max marks 10

Answer the following questions:

1x10=10

1. For Positive real numbers a and b, which is not true?

(a) $\sqrt{ab} = \sqrt{a}\sqrt{b}$

(b) $(a + \sqrt{b})(a - \sqrt{b}) = a^2 - b$

(c) $\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$

(d) $(\sqrt{a} + \sqrt{b})(\sqrt{a} - \sqrt{b}) = a + b$

2. Out of the following, the irrational number is

(a) $1.\bar{5}$

(b) $2.4\bar{77}$

(c) $1.2\bar{77}$

(d) π

3. On rationalizing the denominator of $\frac{1}{\sqrt{7} - \sqrt{6}}$, we get

(a) $\frac{\sqrt{7} + \sqrt{6}}{\sqrt{7} - \sqrt{6}}$

(b) $\frac{\sqrt{7} - \sqrt{6}}{\sqrt{7} + \sqrt{6}}$

(c) $\sqrt{7} + \sqrt{6}$

(d) $\sqrt{7} - \sqrt{6}$

4. On rationalizing the denominator of $\frac{1}{\sqrt{5} + \sqrt{2}}$, we get

(a) $\sqrt{5} - \sqrt{2}$

(b) $\sqrt{2} - \sqrt{5}$

(c) $\frac{\sqrt{5} - \sqrt{2}}{3}$

(d) $\frac{\sqrt{2} - \sqrt{5}}{3}$

5. On rationalizing the denominator of $\frac{1}{\sqrt{7} - 2}$, we get

(a) $\sqrt{7} - 2$

(b) $\sqrt{7} + 2$

(c) $\frac{\sqrt{7} + 2}{3}$

(d) $\frac{\sqrt{7} - 2}{3}$

6. $\frac{5}{6}$ in the decimal form is:

- (a) $0.8\bar{3}$ (b) $0.8\bar{3}\bar{3}$ (c) $0.6\bar{3}$ (d) $0.6\bar{3}\bar{3}$

7. Decimal representation of rational number $\frac{8}{27}$ is:

- (a) $0.29\bar{6}$ (b) $0.29\bar{6}$ (c) $0.29\bar{6}$ (d) 0.296

8. If $\frac{1}{7} = 0.\overline{142857}$, then $\frac{4}{7}$ equals

- (a) 0.428571 (b) 0.571428 (c) 0.857142 (d) 0.285718

9. The value of n for which $\sqrt{n}$ be a rational number is

- (a) 2 (b) 4 (c) 3 (d) 5

10. $\frac{3\sqrt{12}}{6\sqrt{27}}$ equals

- (a) $\frac{1}{2}$ (b) $\sqrt{2}$ (c) $\sqrt{3}$ (d) $\frac{1}{3}$