

Class: IX

M.C.Q. Worksheet
Number System

Date: 17/04/25

<1> The simplest form of the expression

$$\left(\frac{256}{625}\right)^{\frac{1}{4}} \text{ is } \text{---}$$

(a) $\frac{5}{2}$

(b) $\frac{2}{5}$

(c) $\frac{4}{5}$

(d) $\frac{5}{4}$

<2> The fifth root of 243 is given by ---

(a) 9

(b) -9

(c) -3

(d) 3

<3> Which one of the following rational number lies between $-\frac{2}{3}$ and $\frac{3}{2}$?

(a) $\frac{12}{5}$

(b) $\frac{5}{12}$

(c) $-\frac{12}{5}$

(d) $\frac{15}{7}$

<4> If $x^{\frac{1}{12}} = (49)^{\frac{1}{24}}$, then x^3 is ---

(a) $(49)^{\frac{1}{8}}$

(b) 343

(c) $(49)^8$

(d) $7^{\frac{3}{4}}$

<5> Which of the following is a terminating decimal number?

(a) $\frac{23}{42}$

(b) $\frac{18}{40}$

(c) $\frac{16}{90}$

(d) $\frac{3}{11}$

<6> Which of the following values of x is irrational?

(a) $x^2 = 25$

(b) $x^2 = 18$

(c) $x^3 = 27$

(d) $x^4 = 16$

<7> The value of $1.999\dots$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$, is —

- (a) $\frac{19}{10}$ (b) $\frac{1999}{1000}$ (c) 2 (d) $\frac{1}{9}$

<8> If $\sqrt{2} = 1.4142$, then $\sqrt{\frac{\sqrt{2}-1}{\sqrt{2}+1}}$ is equal to —

- (a) 2.4142 (b) 5.8282 (c) 0.4142 (d) 0.1718

<9> After rationalising the denominator of $\frac{7}{3\sqrt{3}-2\sqrt{2}}$, we get the denominator as —

- (a) 13 (b) 19 (c) 5 (d) 35

<10> The number obtained on rationalising the denominator of $\frac{1}{\sqrt{7}-2}$ is —

- (a) $\frac{\sqrt{7}+2}{3}$ (b) $\frac{\sqrt{7}-2}{3}$ (c) $\frac{\sqrt{7}+2}{5}$ (d) $\frac{\sqrt{7}+2}{45}$

<11> The value of $\frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}}$ is equal to —

- (a) $\sqrt{2}$ (b) 2 (c) 4 (d) 8

<12> Value of $(256)^{0.16} \times (256)^{0.09}$ is —

- (a) 4 (b) 16 (c) 64 (d) 256.25

<13> $\sqrt[4]{3\sqrt{2^2}}$ equals to —

- (a) $2^{-1/2}$ (b) $2^{1/6}$ (c) $\sqrt[12]{2}$ (d) $\sqrt[12]{32}$

<14> Assertion (A): $2 + \sqrt{6}$ is an irrational number.

Reason (R): Sum of a rational number and an irrational number is always an irrational number.

(a) $A \checkmark R \checkmark E \checkmark$

(c) $A \checkmark R \times$

(b) $A \checkmark R \checkmark E \times$

(d) $A \times R \checkmark$

<15> Assertion (A): $\frac{1}{\sqrt{7} + \sqrt{3}} = \sqrt{7} - \sqrt{3}$

Reason (R): To rationalise the denominator of an irrational no., we have to multiply both the numerator and denominator by the conjugate irrational no.

(a) $A \checkmark R \checkmark E \checkmark$

(c) $A \checkmark R \times$

(b) $A \checkmark R \checkmark E \times$

(d) $A \times R \checkmark$

<16> If $x = 9 + 4\sqrt{5}$, then the value of

$\left(\sqrt{x} + \frac{1}{\sqrt{x}}\right)$ is —

(a) $2\sqrt{5}$

(b) 2

(c) 6

(d) -4