

1- a rational number between rational numbers $\frac{1}{9}$ and $\frac{2}{9}$.

2-Write $\frac{327}{500}$ in decimal form.

3-Simplify $\sqrt{72} + \sqrt{800} - \sqrt{18}$.

4-State with reasons whether $\sqrt{20} \times \sqrt{45}$ is a surd or not?

5-Simplify $(\sqrt{x^3})^{\frac{2}{3}}$

6-Simplify $16^{-\frac{1}{4}} \times \sqrt[4]{16}$.

7-Find the value of $(81)^{0.16} \times (81)^{0.09}$.

8-Express $18.\overline{48}$ in the form of $\frac{p}{q}$ where p and q are integers and $q \neq 0$.

9-Find the value of $\sqrt{\frac{2+\sqrt{3}}{2-\sqrt{3}}}$, if $\sqrt{3} = 1.73$.

10-Simplify: (i) $\left\{ \left[(625)^{-\frac{1}{2}} \right]^{-\frac{1}{4}} \right\}^2$ (ii) $64^{-\frac{1}{3}} \times \left[64^{\frac{1}{3}} - 64^{\frac{2}{3}} \right]$

11-Write two irrational numbers between $\frac{2}{5}$ and $\frac{3}{4}$.

12-Find three different irrational numbers between the rational numbers 0.13 and 0.14.

13-If $\sqrt{2} = 1.4142$, then simplify $\sqrt{\frac{\sqrt{2}-1}{\sqrt{2}+1}}$.

14-Evaluate: (i) $(3^2 + 4^2)^{\frac{1}{2}}$ (ii) $(1^3 + 2^3 + 3^3)^{\frac{1}{2}}$

15-If $2^x \times 4^x = 8^{\frac{1}{3}} \times (32)^{\frac{1}{5}}$, then find the value of x .

16-If $\sqrt{5} = 2.236$ and $\sqrt{6} = 2.449$, find the value of $\frac{1+\sqrt{2}}{\sqrt{5}+\sqrt{3}} + \frac{1-\sqrt{2}}{\sqrt{5}-\sqrt{3}}$.

$$\left[5\left[8^{\frac{1}{3}} + 27^{\frac{1}{3}}\right]\right]^{\frac{1}{4}}$$

17-Simplify

$$\frac{\sqrt{\sqrt{6+2}} + \sqrt{\sqrt{6-2}}}{\sqrt{\sqrt{6} + \sqrt{2}}}$$

18-Find x^2 , if $x =$

19-If $a = 7 - 4\sqrt{3}$, find the value of $\sqrt{a} + \frac{1}{\sqrt{a}}$.

20-Rationalise the denominator of $\frac{4}{2 + \sqrt{3} + \sqrt{7}}$.

21-Express $0.\overline{38} + 1.\overline{27}$ as a fraction in simplest form.

22-Rationalise the denominator of $\frac{3}{\sqrt{3} + \sqrt{5} - \sqrt{2}}$.

25- Represent following irrational number on number line

$$\sqrt{5}, \sqrt{7}, \sqrt{10}, \sqrt{7.2} \text{ and } \sqrt{8.5}$$