

Test-4 MCQs (WhatsApp Test)

1) Which of the following is equal to x ?

(a) $x^{\frac{13}{7}} - x^{\frac{5}{7}}$ (b) $\sqrt[12]{(x^4)^{\frac{1}{3}}}$ (c) $(\sqrt{x^3})^{\frac{2}{3}}$ (d) $x^{\frac{12}{7}} \times x^{\frac{1}{12}}$

2) The value of $\sqrt[4]{(81)^{-2}}$ is (a) $\frac{1}{9}$ (b) $\frac{1}{3}$ (c) 9 (d) $\frac{1}{81}$

3) The product $\sqrt[3]{2} \cdot \sqrt[4]{2} \cdot \sqrt[12]{32} =$ (a) $\sqrt{2}$ (b) 2 (c) $\sqrt[12]{2}$ (d) $\sqrt[12]{32}$

4) If $\sqrt{2} = 1.4142\dots$, then $\sqrt{\frac{\sqrt{2}-1}{\sqrt{2}+1}} =$

(a) $2.4142\dots$ (b) $5.8282\dots$ (c) $0.4142\dots$ (d) $0.1718\dots$

5) The value of $\frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}} =$ (a) $\sqrt{2}$ (b) 2 (c) 4 (d) 8

6) A rational number between $\sqrt{2}$ and $\sqrt{3}$ is

(a) $\frac{\sqrt{2} + \sqrt{3}}{2}$ (b) $\frac{\sqrt{2} \cdot \sqrt{3}}{2}$ (c) 1.5 (d) 1.8

7) The product of any two irrational numbers is

(a) always an irrational no. (b) always a rational no.

(c) always an integer (d) sometimes rational sometimes irrational

8) Which one of the following is a polynomial?

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

9) $\sqrt{2}$ is a polynomial of degree (a) 2 (b) 0 (c) 1 (d) $\frac{1}{2}$

10) Degree of a zero polynomial is

(a) 0 (b) 1 (c) any natural no. (d) not defined

1) $(\sqrt{x^3})^{\frac{2}{3}} = x^{3 \times \frac{1}{2} \times \frac{2}{3}} = x$ (c)

2) $\sqrt[4]{(81)^{-2}} = 3^{4 \times -2 \times \frac{1}{4}} = 3^{-2} = \frac{1}{3^2} = \frac{1}{9}$ (a)

3) $2^{\frac{1}{3}} \cdot 2^{\frac{1}{4}} \cdot 2^{\frac{5}{12}} = 2^{\frac{1 \times 4}{3 \times 4} + \frac{1 \times 3}{4 \times 3} + \frac{5}{12}} = 2^{\frac{12}{12}} = 2$ (b)

4) $\sqrt{\frac{\sqrt{2}-1}{2-1}} = \sqrt{\sqrt{2}-1} = \sqrt{2}-1 = 1.4142\dots - 1 = 0.4142\dots$ (c)

5) $\frac{4\sqrt{2} + 4\sqrt{3}}{2\sqrt{2} + 2\sqrt{3}} = \frac{4(\sqrt{2} + \sqrt{3})}{2(\sqrt{2} + \sqrt{3})} = \frac{4}{2} = 2$ (b)

8) $x^2 + 3x^{\frac{3}{2}} = x^2 + 3x^{\frac{3}{2} - \frac{1}{2}}$

$= x^2 + 3x^1 = x^2 + 3x$ (c)