INDICES

Math's Algebraic Indices Worksheet for MAH MCA CET 2025

For students preparing for MCA Entrance Exam

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1. What should come in place of the questions mark (?) in the following equation?

$31^{7.5} \div 31^{\frac{3}{2}} \times 31^{-3} = \left(\sqrt{31}\right)^{?}$

A. 9/2
B. 6
C. 7/2
D. 4

2. In the equation $\left(\frac{x}{21}\right) \times \left(\frac{x}{189}\right) = 1$, which of the following number will replace both the x?

A. 21
B. 63
C. 3969
D. None of these

3. The number of boys raised ₹400 for a relief fund, each boy giving as many 25 paise coin as there were boys. The number of boys was

A. 40
B. 16
C. 20
D. 100

4. If 6440 soldiers were asked to stand in rows to from a perfect square, it was found that 40 soldiers were left out. What was the number of soldiers in each row?

A. 40
B. 80
C. 64
D. 60

5. The value of

$\sqrt{5 + \sqrt{11 + \sqrt{19 + \sqrt{29 + \sqrt{49}}}}}$ is

A. 3
B. 9
C. 7
D. 5

6. Each member of picnic party contributed twice as many rupees as the total number of member and the total collection was ₹ 3042. The number of member present in the party was

A. 2
B. 32
C. 40
D. 39

7. If cube root of 175616 is 56, then the value of $\sqrt[3]{175.616} + \sqrt[3]{0.175616} + \sqrt[3]{0.000175616}$ is equal to

A. 0.168
B. 62.16
C. 6.216
D. 6.116

8. The value of $\frac{3.9^{n+1} + 9.3^{2n-1}}{9.3^{2n} - 6.9^{n-1}}$ is

A. $3\frac{3}{5}$
B. $3\frac{2}{5}$
C. 3n+ 1
D. 3n - 16

9. The least number which is a perfect square and has 7936 as one of its factors is equal to

A. 12.008
B. 246016
C. 61504
D. 240616

10. $17^{3.5} \times 17^{7.3} \div 17^{4.2} = 17^{?}$, then find the value of (?).
    A. 6.5
    B. 7.2
    C. 6.6
    D. 15.8

11. if $\left(\sqrt{2}^{\sqrt{2}}\right)^{\sqrt{2}} = 2^{x}$, then x is equal to
    A. 2
    B. 0
    C. 3
    D. 1

12. $\left(-\frac{1}{343}\right)^{-\frac{2}{3}}$ is equal to
    A. $-\frac{1}{49}$
    B. $\frac{1}{49}$
    C. - 49
    D. 49

13. if $5\sqrt{5} \times 5^{3} \div 5^{-\frac{3}{2}} = 5^{x+2}$, then the value of x is
    A. 4
    B. 5
    C. -3
    D. -6

14. Which is greater $\sqrt[3]{4}$, $\sqrt[3]{6}$, $\sqrt[6]{15}$, $\sqrt[12]{245}$?
    A. $\sqrt[3]{4}$
    B. $\sqrt[3]{6}$
    C. $\sqrt[6]{15}$
    D. $\sqrt[12]{245}$

15. $(16)^{0.16} \times (16)^{0.04} \times (2)^{0.2}$ is equal to
    A. 1
    B. 2
    C. 4
    D. 16

16. Simplify $\frac{(6.25)^{\frac{1}{2}} \times (0.0144)^{\frac{1}{2}+1}}{(0.027)^{\frac{1}{3}} \times (81)^{\frac{1}{4}}}$
    A. 0.14
    B. 1.4
    C. 1
    D. $1.\overline{4}$

17. If $\frac{(x^3)^2 \times x^4}{x^{10}} = x^{p}$, then the value of p is
    A. 26
    B. 2
    C. 1
    D. 0

18. The value of x is $25^{7.5} \times 5^{2.5} \div 125^{1.5} = 5^{x}$
    A. 16
    B. 17.5
    C. 8.5
    D. 1.3

Answer Key

1. B	2. B	3. A	4. B	5. A	6. D	7. C	8. A	9. B	10. C
11. D	12. D	13. A	14. B	15. B	16. D	17. D	18. D		