

# MATHS

## Logarithms Worksheet for MAH MCA CET 2025

For students preparing for MCA Entrance Exam

1. The value of  $\frac{1}{\log_3 \pi} + \frac{1}{\log_4 \pi}$  is
- A. Greater than 2  
B. Less than 2  
C. Equal to  $\frac{1}{2}$   
D. Equal to 0
2.  $\log_b a \log_c b \log_a c$  is equal to
- A. 1  
B. 2  
C. 0  
D. 3
3.  $\log_y x^3 \cdot \log_z y^3 \cdot \log_x z^3$  is equal to
- A. 9  
B. 4  
C. 27  
D. 16
4. If  $\log_a m = x$ , then  $\log_{1/a} \frac{1}{m}$  is equal to
- A.  $x$   
B.  $-x$   
C.  $\frac{1}{x}$   
D.  $-\frac{1}{x}$
5. If  $f(a) = \log \frac{1+a}{1-a}$ , then  $f\left(\frac{2a}{1+a^2}\right)$  is equal to
- A. 0  
B. 1  
C.  $f(a)$   
D.  $2f(a)$
6.  $\frac{\log(x^3+3x^2+3x+1)}{\log(x^2+2x+1)}$  is equal to
- A.  $\frac{1}{2}$   
B. 1
7.  $(1 + \log_n m) \log_{mn} x$  is equal to
- A.  $\log_n x$   
B.  $\log_m x$   
C.  $\log_n m$   
D.  $\log_x n$
8. If  $\frac{\log a}{b-c} = \frac{\log b}{c-a} = \frac{\log c}{a-b}$ , then  $a^{b+c} \cdot b^{c+a} \cdot c^{a+b}$  is equal to
- A. 0  
B. 1  
C.  $a+b+c$   
D. None of these
9.  $\frac{\log_a x \cdot \log_b x}{\log_a x + \log_b x}$  is equal to
- A.  $\log_b a$   
B.  $\log_a b$   
C.  $\log_{ab} x$   
D.  $\log_x ab$
10. The value of  $(YZ)^{\log_y - \log_z} \times (zx)^{\log_z - \log_x} \times (xy)^{\log_x - \log_y}$  is
- A. 2  
B. 1  
C. 4  
D. 3
11.  $\frac{1}{\log_{xy} xyz} + \frac{1}{\log_{yz} xyz} + \frac{1}{\log_{zx} xyz}$  is equal to
- A. 0

- B. 1
- C. 2
- D.  $\log_x xyz$

12.  $x^{\log_3 x^2 + (\log_3 x)^2 - 10} = \frac{1}{x^2}$ , then x is

equal to

- A. 3
- B. 9
- C. 27
- D. None of these

13.  $\log_{10} \tan 1^\circ + \log_{10} \tan 2^\circ + \dots + \log_{10} \tan 89^\circ$  is equal to

- A. 0
- B. 1
- C. 2
- D. 3

14. if  $a^{3-x} \cdot b^{5x} = a^{x+5} \cdot b^{3x}$ , then  $x \log\left(\frac{b}{a}\right)$  is equal to

- A.  $\log a$
- B.  $a$
- C.  $b$
- D.  $\log b$

15. The number of zeros that are between the decimal point and the first significant figure in  $(0.5)^{100}$ , if  $\log(0.5) = \bar{1}.6990$  is

- A. 30
- B. 20
- C. 10
- D. 40

### Answer Key

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