PHYSICS CLASS 11 BATCH

Basic Maths & Calculus

Assignment -01

1. Find value of given mathematical expression.

(i) $e^{-\infty}$ (ii) 3°

(iii) $\dfrac{1}{0.001}$ (iv) $\dfrac{6}{0.3}$

(v) $\sqrt{0.49}$ (vi) e^{0}

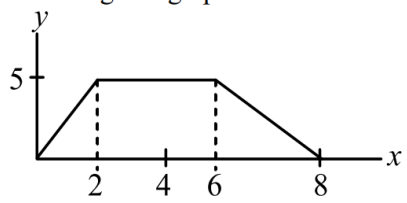
(vii) $\sqrt{1-0.19}$

2. Find the ratio of area of cross section of cylinders to the volume of cylinder of radius R and height H.

3. Find area of equilateral triangle of side 'a'.

4. Find ratio of volume of cube to surface area of cube of side length a.

5. Find area of given graph.



6. Find value of given expression.

(i) $\left(\dfrac{5}{7}\right)^{5} \times \left(\dfrac{5}{7}\right)^{-6}$

(ii) $\left(\dfrac{64}{81}\right)^{3/2}$

(iii) $(4^{\circ} + 4^{-1}) \times 2^{2}$

(iv) $\dfrac{(-4)^{5}}{(-4)^{8}}$

(v) $\left(\sqrt{4}\right)^{-3}$

(vi) $\dfrac{0.4}{0.01}$

7. Find value of m in given expression

$$\frac{2^{m+2} - 2^{m}}{2^{m}}$$

8. Find value of $0.25 \times \sqrt{0.49} \times (0.2)^{2}$

9. Find value of given log.

(i) $\log_{\frac{1}{\sqrt{2}}}\left(\dfrac{1}{\sqrt{8}}\right)$

(ii) $\log_{x}\left(\dfrac{9}{10}\right) = -\dfrac{1}{2}$ find x

(iii) $\log 9^{27} - \log 27^{9}$

10. Which of the following statement is not correct

(1) $\log_{10} 10 = 1$

(2) $\log (2 + 3) = \log (2 \times 3)$

(3) $\log_{10} 1 = 0$

(4) $\log (1 \times 2 \times 3) = \log 1 + \log 2 + \log 3$

ANSWER KEY

1. **(i)** **0** **(ii)** **1**
(iii) **10^3** **(iv)** **20**
(v) **0.7** **(vi)** **1**
(vii) **0.9**

2. $\frac{R}{2H}$

3. $\frac{\sqrt{3}a^2}{4}$

4. $\frac{a}{6}$

5. **(30)**

6. **(i)** $\frac{7}{5}$ **(ii)** $\frac{512}{729}$
(iii) **5** **(iv)** $-\frac{1}{64}$
(v) $\frac{1}{8}$ **(vi)** **40**

7. **(3)**

8. $\frac{7}{1000}$

9. **(i)** **3** **(ii)** $\frac{100}{81}$
(iii) **27 log (3)**

10. **(2)**