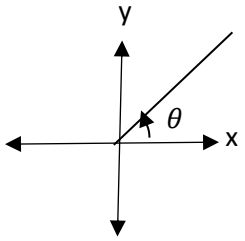
MONTESSORI ELITE SENIOR SECONDARY SCHOOL
(Affiliated to CBSE, New Delhi – Affiliation No – 130604)
ELITE IIT ACADEMY
IIT (Online) Refresher Course

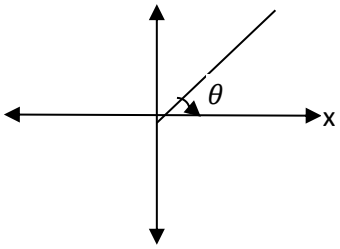
Subject : Physics **Date : 01 – 05 - 23**

Worksheet 1

1. If the volume of the sphere V = f(r) = $\frac{4}{3}\pi r^3$ find the volume V = f(10 m). ( )
   a) $\frac{4\pi}{3}$ m^3 b) $\frac{32\pi}{3}$ m^3 c) $\frac{4000\pi}{3}$ m^3 d) $\frac{8000\pi}{3}$ m^3
2. If surface of sphere S = f(r) = $4\pi r^2$ find the surface of sphere at S = f(2m) ( )
   a) 400πm^2 b) $4\ \pi$m^2 c) $16\ \pi$m^2 d) $1600\ \pi$m^2
3. If Y = f(x) = $x^2 + x$ find the value of f(1) is ( )
   a) 0 b) 2 c) 6 d) 12
4. If Y = f(x) = $x^2 + x$ find the value of f {f(1)} is ( )
   a) 0 b) 2 c) 6 d) 12
5. If Y = f(x) = $\frac{x+1}{x+2}$ find f {f(x)} of composite functions ( )
   a) $\frac{3x+2}{5x+3}$ b) $\frac{2x+3}{3x+5}$ c) $\frac{4x+1}{3x+4}$ d) $\frac{2x+6}{3x+7}$
6. To convert 15^0 degrees into equivalent radians ( )
   a) $\frac{\pi}{3}$ b) $\frac{\pi}{6}$ c) $\frac{\pi}{12}$ d) π
7. To convert $\frac{\pi}{6}$ radians into equivalent degrees ( )
   a) 30^0 b) 60^0 c) 45^0 d) 90^0
8. The following fig shown in below angle θ is ( )

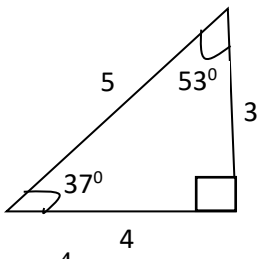


   a) positive b) negative c) neither +ve or –ve d) zero
9. The following fig shown in below angle θ is ( )



   a) positive b) negative c) both a and b d) zero

10. From a given right angled triangle find the sin 37^0 equal to ( )



a) $\frac{3}{5}$ b) $\frac{4}{5}$ c) $\frac{4}{3}$ d) $\frac{3}{4}$