

ECAT Pre General Science Mathematics Online Test

Sr	Questions	Answers Choice
1	The value of $\cos(\cos^{-1} 1/2)$ is	A. $1/2$ B. $\sqrt{3}/2$ C. $-1/2$ D. $1/\sqrt{2}$
2	What is the value of $\cos^{-1}(1/2)$?	A. $\pi/3$ B. $\pi/4$ C. $3\pi/2$ D. $\pi/6$
3	$\sin^{-1} x =$	A. $\tan^{-1} x$ B. $\operatorname{Cosec}^{-1} x$ C. $\operatorname{Cosec} x$ D. $\operatorname{cosec}^{-1}(1/x)$
4	$\sin^{-1}(-x) =$	A. x B. $-x$ C. $-\sin^{-1} x$ D. $\cos^{-1} x$
5	$\sin^{-1}(\sin 2\pi/3) =$	A. $\pi/2$ B. $2\pi/3$ C. $-3\pi/2$ D. $\pi/3$
6	$\sin(2\sin^{-1} 0.8)$	A. 0.56 B. 0.69 C. -0.16 D. 0.96
7	$\sin^{-1}(\sin \pi/2 - x) =$	A. $\sin(\pi/2 - x)$ B. $\sin^{-1}(\pi/2 - x)$ C. $\pi/2 - \cos^{-1} x$ D. $\pi/2 + \cos^{-1} x$
8	$\sin(\sin^{-1}(1/2)) =$	A. 0 B. 2 C. ∞ D. $1/2$
9	If the cutting plane is slightly tilted and cuts only one nappe of the cone, the resulting section is:	A. an ellipse B. Circle C. a hyperbola D. a parabola
10	If the cone is cut by a plane perpendicular to the axis of the cone, then the section is a:	A. Circle B. ellipse C. hyperbola D. parabola
11	The lines that form the cone are called its:	A. Generation B. Circular cone C. nappes D. conics
12	The surface generated by lines, consists of two parts, called:	A. vertex B. apex C. nappes D. axis
13	A fixed point which lies on the axis of the cone is called its:	A. axis B. apex C. plane D. diameter
14	A cone is generated by all lines through a fixed point and the circumference of	A. a Circle B. an ellipse C. a Hyperbola D. None of these
15	The set of all points in the plane that are equally distant from a fixed point is called a	A. Parabola B. ellipse C. Hyperbola D. Circle

16	The principal value of $\sin^{-1}[-\sqrt{3}/2]$ is	A. $5\pi/3$ B. $-2\pi/3$ C.  D. $\pi/3$
17	The value of $\sin^{-1} 24/25$ is equal to	A. $\csc^{-1} 25/24$ B. $\sec^{-1} 24/25$ C. $2 \tan^{-1} 4/5$ D. $2 \cos^{-1} 24/25$
18	The value of $\sin^{-1} 5/13$ is equal to	A. $\cos 5/13$ B. $\tan^{-1} \sqrt{5/12}$ C. $\cos^{-1} 5/12$ D. $2 \cos^{-1} 4/5$
19	The Principal value of $\sin^{-1} (-1/1/2)$	A. $\pi/2$ B. $-\pi/2$ C. π D. $-\pi$
20	In the interval $0 \leq x \leq \pi$, the sine is	A. Not a function B. Not defined C. Infinity D. Not one-to-one function
21	$x = \sin^{-1} 3$, then the value of $\sin x$ is	A. $\sqrt{3/2}$ B. 3 C. Not possible D. -1
22	The domain of the function $y = \sin x$, is	A. $-\pi/2 \leq x \leq \pi/2$ B. $\pi/2 \leq x \leq \pi$ C. $-2\pi \leq x \leq 2\pi$ D. $-1 \leq x \leq 1$
23	The principal value of $\sin^{-1} (-1/2)$	A. $\pi/3$ B. $\pi/4$ C. $\pi/6$ D. $-\pi/6$
24	The principal value of $\sin^{-1} \sqrt{3/2}$ is	A. $-\pi/3$ B. $\pi/3$ C. $2\pi/3$ D. $\pi/2$
25	The law of sines can be used to solve oblique triangle when following information is given:	A. Two angles and a side B. Two sides and an angle opposite one of the given sides C. Two sides and the angle between two sides D. Option a and b
26	The law of sines can be used to solve	A. Right angle triangle B. Isosceles triangle C. oblique triangle D. hexagon
27	If sides of $\triangle ABC$ are 16, 20, and 33, then the value of the greatest angle is	A. $150^\circ 20'$ B. $132^\circ 35'$ C. $101^\circ 25'$ D. $160^\circ 50'$
28	If $\triangle ABC$ is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula
29	In triangle ABC, in which $b=95$, $c=34$, $a=52$, then the value of $A=$	A. 18 cm B. 18.027 cm C. 20.7 cm D. 19 cm
30	If $\triangle ABC$ is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula