

ECAT Mathematics Chapter 12 Trigonometric Functions and Identities Online Test

Sr	Questions	Answers Choice
1	$\cos 2a = \underline{\hspace{2cm}}$;	A. $\cos^2 a - \sin^2 a$ B. $2\cos^2 a - 1$ C. $1 - 2\sin^2 a$ D. All of these
2	Distance between A(3, 8), B(5, 6) is	
3	$\cos(\alpha - \beta) = \cos\alpha\cos\beta + \sin\alpha\sin\beta$ is true for all	A. α B. β C. α D. None of these
4	$\sin(2\pi - \theta)$	A. $\cos\theta$ B. $\sin\theta$ C. $\tan\theta$ D. $-\sin\theta$
5	Which one is a pair of allied angles	A. $(180^\circ - \theta)$ B. $(180^\circ + \theta)$ C. $(180^\circ - \theta)$ D. None of these
6	$2\pi + \theta$ will have terminal side in Quad	A. I B. II C. III D. IV
7	$\cos 315^\circ = \underline{\hspace{2cm}}$	
8	$\sec(-360^\circ) = \underline{\hspace{2cm}}$	A. 0 B. 1 C. 2 D. 3
9	$\tan(-135^\circ) = \underline{\hspace{2cm}} \theta$	A. 0 B. 1 C. 2 D. 3
10	$\sin 540^\circ =$	A. 0 B. 1 C. 2 D. 3
		A. $\sin\theta$

11

$$\cos(180^\circ - \theta) =$$

- center;"> θ </i>
 B. $-\cos$ <i style="text-align: center;"> θ </i>
 C. $-\sin$ <i style="text-align: center;"> θ </i>
 D. None of above

12

$$\text{Express as a sum or difference: } 2 \sin 5\theta \cos \theta$$

- A. $\cos 4$ <i> θ </i>
 $-\cos 2$ <i> θ </i>

 B. $\sin 4$ <i> θ </i>
 $+\sin 2$ <i> θ </i>

 C. $\cos 4$ <i> θ </i>
 $+\cos 2$ <i> θ </i>

 D. $\sin 4$ <i> θ </i>
 $-\sin 2$ <i> θ </i>

13

$$\cos(\alpha + \beta) - \cos(\alpha - \beta) =$$

- A. $-2 \sin$ <i> α </i>
 $\sin$ <i style="text-align: center;"> β </i>
 B. $2 \sin$ <i> α </i>
 $\cos$ <i style="text-align: center;"> β </i>
 C. $-2 \sin$ <i> α </i>
 $\cos$ <i> α </i>

 D. $4 \sin$ <i> α </i>
 $\cos$ <i style="text-align: center;"> β </i>

- A. $4 \cos$ <i style="text-align: center;"> α </i> $\cos$ <i> β </i>

 B. $2 \cos$ <i style="text-align: center;"> α </i> $\sin$ <i style="text-align: center;"> β </i>

14	$\cos(\alpha + \beta) + \cos(\alpha - \beta) =$	A. $2 \cos \alpha \cos \beta$ B. $2 \sin \alpha \sin \beta$ C. $2 \sin \alpha \cos \beta$ D. $2 \sin \alpha \sin \beta$
15	$\cos^4 \theta - \sin^4 \theta =$	A. $\cos 4\theta$ B. $\cos 2\theta$ C. $-\sin 2\theta$ D. $\sin 2\theta$
16	$\sin^2 \alpha \cos^2 \alpha =$	A. -1 B. 0 C. 1 D. None of these
17	If $\cos \alpha = 4/5$, then $\cos \alpha/2$	
18	$\tan \theta/2$	
19	$\sin 2\alpha =$	
20	$\cos 2\alpha =$	A. $1 - 2 \sin^2 \alpha$ B. $\sin^2 \alpha + \cos^2 \alpha$ C. $\sin^2 \alpha - \cos^2 \alpha$ D. None of these
21	$\sin(\alpha + \beta) - \sin(\alpha - \beta) =$	A. $4 \cos \alpha \sin \beta$ B. $2 \cos \alpha \sin \beta$ C. $4 \cos \alpha \cos \beta$ D. $4 \sin \alpha \sin \beta$

background-color: rgb(255, 255, 224);"><i>β</i>

22

$$\sin(\alpha + \beta) + \sin(\alpha - \beta)$$

A. $\sin\alpha\cos\beta$
B. $\sin 2\alpha\cos\beta$
C. $\sin\alpha\cos\beta + \sin\alpha\cos\beta$
D. None of these

A. $\sin\alpha\cos\beta$
B. $\sin 2\alpha\cos\beta$
C. $\sin\alpha\cos\beta + \sin\alpha\cos\beta$
D. None of these

23

$$\sin(\alpha - \beta) =$$

A. $\sin\alpha\cos\beta - \cos\alpha\sin\beta$
B. $\sin\alpha\cos\beta + \cos\alpha\sin\beta$
C. $\sin\alpha\cos\beta - \sin\alpha\cos\beta$
D. $\sin\alpha\cos\beta + \sin\alpha\cos\beta$

A. $\sin\alpha\cos\beta - \cos\alpha\sin\beta$
B. $\sin\alpha\cos\beta + \cos\alpha\sin\beta$
C. $\sin\alpha\cos\beta - \sin\alpha\cos\beta$
D. $\sin\alpha\cos\beta + \sin\alpha\cos\beta$

A. $\sin\alpha\cos\beta - \cos\alpha\sin\beta$
B. $\sin\alpha\cos\beta + \cos\alpha\sin\beta$
C. $\sin\alpha\cos\beta - \sin\alpha\cos\beta$
D. $\sin\alpha\cos\beta + \sin\alpha\cos\beta$

A. $\sin\alpha\cos\beta - \cos\alpha\sin\beta$
B. $\sin\alpha\cos\beta + \cos\alpha\sin\beta$
C. $\sin\alpha\cos\beta - \sin\alpha\cos\beta$
D. $\sin\alpha\cos\beta + \sin\alpha\cos\beta$

A. $\sin\alpha\cos\beta - \cos\alpha\sin\beta$
B. $\sin\alpha\cos\beta + \cos\alpha\sin\beta$
C. $\sin\alpha\cos\beta - \sin\alpha\cos\beta$
D. $\sin\alpha\cos\beta + \sin\alpha\cos\beta$

24 $\sin(\alpha + \beta) =$

25 $\tan 2\theta =$

26 $\cos \theta/2 =$

27 $\sin \alpha =$

style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);"><i>α</i>sin<i>β</i>B. sin<i>α</i>cos<i>β</i>cos<i>β</i>cos<i>α</i>sin<i>β</i>C. sin<i>α</i>cos<i style="text-align: center;">β</i>cos<i style="text-align: center;">α</i>cos<i style="text-align: center;">β</i>sin<i>β</i>D. sin<i>α</i>cos<i style="text-align: center;">α</i>cos<i style="text-align: center;">β</i>sin<i>β</i>

A. $2 \sin \langle \text{span style="color: rgb(34, 34, 34); font-family: \"Times New Roman\"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);"} \rangle \alpha \langle /i \rangle \langle /span \rangle \cos \langle \text{span style="color: rgb(34, 34, 34); font-family: \"Times New Roman\"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);"} \rangle \beta \langle /i \rangle \langle /span \rangle$

B. $2 \sin \langle \text{span style="color: rgb(34, 34, 34); font-family: \"Times New Roman\"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);"} \rangle \alpha \langle /i \rangle \langle /span \rangle \cos \langle \text{span style="color: rgb(34, 34, 34); font-family: \"Times New Roman\"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);"} \rangle \beta \langle /i \rangle \langle /span \rangle$

C. $2 \sin \langle i \text{ style="text-align: center;"} \rangle \alpha \langle /i \rangle /2 \cos \langle i \text{ style="text-align: center;"} \rangle \alpha \langle /i \rangle /2$

D. $1 + \tan \langle \sup \rangle 2 \langle /sup \rangle \langle i \text{ style="text-align: center;"} \rangle \alpha \langle /i \rangle /2$

28

$$\sin(180^\circ - \theta) =$$

- A. $\cos\theta$
- B. $-\cos\theta$
- C. $\tan\theta$
- D. $\sin\theta$

29

$$\cos 2\alpha =$$

- A. $\sin^2\alpha - \cos^2\alpha$
- B. $-\cos^2\alpha$
- C. $\tan^2\alpha$
- D. None of these

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Question Image

- A. $-\sin\theta$
- B. $\cos\theta$
- C. $\sin\theta$
- D. $-\cos\theta$