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1. The value of $\cos 0^\circ \cdot \cos 1^\circ \cdot \cos 2^\circ \cdot \cos 3^\circ \dots \cos 89^\circ \cos 90^\circ$ is

- (a) 1
- (b) -1
- (c) 0
- (d) $\frac{1}{\sqrt{2}}$

Answer

Answer: c

2. If $x \tan 45^\circ \sin 30^\circ = \cos 30^\circ \tan 30^\circ$, then x is equal to

- (a) $\sqrt{3}$
- (b) $\frac{1}{2}$
- (c) $\frac{1}{\sqrt{2}}$
- (d) 1

Answer

Answer: d

3. If x and y are complementary angles, then

- (a) $\sin x = \sin y$
- (b) $\tan x = \tan y$
- (c) $\cos x = \cos y$
- (d) $\sec x = \operatorname{cosec} y$

Answer

Answer: d

4. $\sin 2B = 2 \sin B$ is true when B is equal to

- (a) 90°
- (b) 60°
- (c) 30°
- (d) 0°

Answer

Answer: d

5. If A, B and C are interior angles of a ΔABC then $\cos \left(\frac{B+C}{2} \right)$ is equal to

- | | |
|------------------------|-------------------------|
| (a) $\sin \frac{A}{2}$ | (b) $-\sin \frac{A}{2}$ |
| (c) $\cos \frac{A}{2}$ | (d) $-\cos \frac{A}{2}$ |

Answer

Answer: a

6. If A and $(2A - 45^\circ)$ are acute angles such that $\sin A = \cos (2A - 45^\circ)$, then $\tan A$ is equal to

- (a) 0
- (b) $\frac{1}{\sqrt{3}}$
- (c) 1
- (d) $\sqrt{3}$

Answer

Answer: c

7. If $y \sin 45^\circ \cos 45^\circ = \tan^2 45^\circ - \cos^2 30^\circ$, then $y = \dots$

- (a) $-\frac{1}{2}$

- (b) $\frac{1}{2}$

- (c) -2

- (d) 2 **Answer**

Answer: b

8. If $\sin \theta + \sin^2 \theta = 1$, then $\cos^2 \theta + \cos^4 \theta = \dots$

- (a) -1
- (b) 0
- (c) 1
- (d) 2

Answer

Answer: c

9. $5 \tan^2 A - 5 \sec^2 A + 1$ is equal to

- (a) 6
- (b) -5
- (c) 1
- (d) -4

Answer

Answer: d

10. If $\sec A + \tan A = x$, then $\sec A =$

(a) $\frac{x^2 - 1}{x}$

(b) $\frac{x^2 - 1}{2x}$

(c) $\frac{x^2 + 1}{x}$

(d) $\frac{x^2 + 1}{2x}$

Answer

Answer: d