

COS DOUBLE ANGLE FORMULA

Double angle formulas play a significant role in trigonometry as they help determine the values of double angles for all trigonometric functions. These formulas utilize single angle values to calculate the value of the respective double angle. Moreover, you can also derive triple angle formula values using double angle formulas.

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Q1: What is the double angle formula for cosine (cosine of 2θ)?

A: $\cos(2\theta) = \cos^2(\theta) - \sin^2(\theta)$

B: $\cos(2\theta) = 2\cos^2(\theta) - 1$

C: $\cos(2\theta) = 1 - 2\sin^2(\theta)$

D: $\cos(2\theta) = \sin(2\theta)$

Q2: What does the double angle formula for sine ($\sin(2\theta)$) relate to?

A: $\sin(2\theta)$ in terms of $\sin(\theta)$ and $\cos(\theta)$

B: $\sin(2\theta)$ in terms of $\cos(2\theta)$

C: $\sin(\theta)$ and $\cos(\theta)$ in terms of $\sin(2\theta)$

D: $\sin(2\theta)$ in terms of $\tan(\theta)$

Q3: What is the range of values for R-squared (coefficient of determination) in trigonometric functions?

A: -1 to 1

B: 0 to 100%

C: 0 to 1

D: 1 to infinity

Q4: What is $1 - \cos^2 x / 1 + \cos^2 x$ using the double angle formula?

A: $\tan^2 x$

B: $2\tan x$

C: $\tan x^2$

D: None of these

Q5: What is the double angle formula for Sine?

A: $\sin \theta$

B: $\sin \theta + \cos \theta$

C: $\sin \theta - \cos \theta$

D: $\sin \theta \cos \theta$

Q6: What is the double angle formula for Cosine?

- A: $\cos^2\theta + \sin^2\theta$
 - B: $\cos^2\theta - \sin^2\theta$
 - C: $\cos^2\theta \times \sin^2\theta$
 - D: $\cos^2\theta / \sin^2\theta$
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Q7: What is the double angle formula for Tangent?

- A: $(1 - \tan^2\theta)$
 - B: $(2 \tan \theta) + (1 - \tan^2\theta)$
 - C: $(2 \tan \theta) / (1 - \tan^2\theta)$
 - D: $(2 \tan \theta)$
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Q8: What is the Inverse of Cousin called?

- A: Arccos
 - B: Arccot
 - C: Arctan
 - D: None of these
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Q9: What is the value of the Inverse of Cosine?

- A: $\cos^1$
 - B: $\cos^2$
 - C: $\cos^3$
 - D: $\cos^{-1}$
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Q10: Where is the use of the double angle formula perfect?

- A: Calculus
 - B: Trigonometry
 - C: Geometric Progression
 - D: Geometry
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Answers

Q1: A - $\cos(2\theta) = \cos^2(\theta) - \sin^2(\theta)$

Q2: B - $\sin(2\theta)$ in terms of $\cos(2\theta)$

Q3: C - 0 to 1

Q4: A - $\tan^2 x$

Q5: D - $\sin \theta \cos \theta$

Q6: B - $\cos^2 \theta - \sin^2 \theta$

Q7: C - $(2 \tan \theta) / (1 - \tan^2 \theta)$

Q8: A - Arccos

Q9: D - Cos-1

Q10: B - Trigonometry