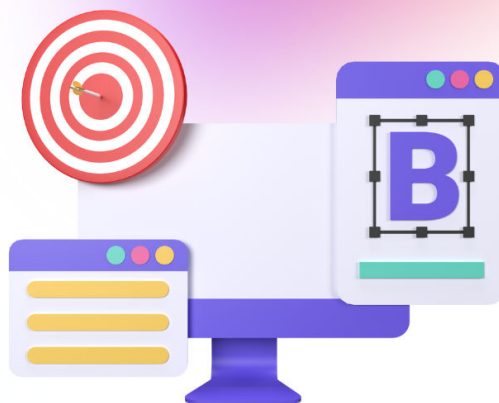


# COSINE FORMULA

The cosine rule is a mathematical formula that connects the lengths of the sides of a triangle to one of the angles in that triangle, specifically the cosine angle. This formula allows for calculating the length of a specific side or determining the measure of an angle when given its corresponding side. Additionally, it's possible to use this rule effectively by using the hypotenuse to calculate the cosine angle.

[Read more](#)



**Q1: Which type of triangle can the cosine rule be applied to?**

- A: Only equilateral triangles
  - B: Only right triangles
  - C: Any type of triangle
  - D: Only isosceles triangles
- 

**Q2: What do 'a', 'b,' and 'c' represent in the cosine rule formula?**

- A: Side lengths of the triangle
  - B: Angles of the triangle
  - C: The perimeter of the triangle
  - D: Area of the triangle
- 

**Q3: What is the cosine rule used when calculating angles in a triangle?**

- A: Finding any angle in any triangle
  - B: Finding only the right angles in a triangle
  - C: Finding the largest angle in a triangle
  - D: Finding angles in an isosceles triangle
- 

**Q4: Identify the General Formula of the Cosine Rule**

- A:  $b^2 = c^2 + a^2 - 2ca \cdot \cos B$
  - B:  $c^2 = a^2 + b^2 - 2ab \cdot \cos C$
  - C:  $b^2 - c^2 = 2c \cos B$
  - D:  $a^2 = b^2 + c^2 - 2bc \cdot \cos A$
- 

**Q5: A farmer has a huge field in the shape of a triangle. The two sides of the field measure 624 ft and 327 ft, and the angle between them measures  $93^\circ$ . Calculate how much fencing is needed to enclose the field.**

- A: 1600 ft
  - B: 1670 ft
  - C: 1750 ft
  - D: 1800 ft
-

**Q6: A boy is standing at point A, and two boats are located at points B and C, so the positions of all three form a triangle. If the measure of angle A is  $36^\circ$  with the lengths AB and AC measuring 2.5 ft and 1.8 ft, respectively, determine the distance between the two boats floating at the lake.**

- A: 1.05
  - B: 1.55
  - C: 1.50
  - D: 1.25
- 

**Q7: The adjacent sides of a parallelogram measure 6 in and 10 in, with the angle between them measuring  $79^\circ$ . Can you determine the length of the diagonal of the parallelogram?**

- A: 12.60
  - B: 11.65
  - C: 10.60
  - D: 3.45
- 

**Q8: Which Theorem is useful for calculating Angles through the Cosine Rule?**

- A: Isosceles Theorem
  - B: Right Triangle Theorem
  - C: Scalene Theorem
  - D: Pythagoras Theorem
- 

**Q9: Where to Apply the Cosine Rule?**

- A: Navigation
  - B: Physics
  - C: Engineering
  - D: All of these
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**Q10: The Special Cosine Rule Applies To—**

- A: Sides
  - B: Angles
  - C: Right Angle
  - D: None of these
-



## Answers

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**Q1:** C - Any type of triangle

**Q2:** A - Side lengths of the triangle

**Q3:** A - Finding any angle in any triangle

**Q4:** D -  $a^2 = b^2 + c^2 - 2bc \cdot \cos A$

**Q5:** B - 1670 ft

**Q6:** C - 1.50

**Q7:** A - 12.60

**Q8:** D - Pythagoras Theorem

**Q9:** D - All of these

**Q10:** B - Angles