🔥 **StudyBlaze.io**

Your AI Tutor for interactive quiz, worksheet and flashcard creation.

Exterior Angle Theorem Worksheet Answer Key PDF

Exterior Angle Theorem Worksheet Answer Key PDF

Disclaimer: The exterior angle theorem worksheet answer key pdf was generated with the help of StudyBlaze AI. Please be aware that AI can make mistakes. Please consult your teacher if you're unsure about your solution or think there might have been a mistake. Or reach out directly to the StudyBlaze team at max@studyblaze.io.

Part 1: Building a Foundation

What does the Exterior Angle Theorem state?

undefined. A) The exterior angle is equal to the adjacent interior angle.

undefined. B) The exterior angle is equal to the sum of the two non-adjacent interior angles. ✓

undefined. C) The exterior angle is equal to the difference between the two non-adjacent interior angles.

undefined. D) The exterior angle is equal to the sum of all interior angles.

The Exterior Angle Theorem states that the exterior angle is equal to the sum of the two non-adjacent interior angles.

Which of the following are true about triangles?

undefined. A) The sum of the interior angles is 180 degrees. ✓

undefined. B) A triangle can have more than one exterior angle at each vertex. ✓

undefined. C) The exterior angle is always greater than either of the non-adjacent interior angles. ✓

undefined. D) The sum of an exterior angle and its adjacent interior angle is 180 degrees. ✓

The true statements about triangles include the sum of interior angles being 180 degrees and the relationship between exterior and interior angles.

Explain in your own words why the sum of the interior angles of a triangle is always 180 degrees.

The sum of the interior angles of a triangle is always 180 degrees due to the properties of Euclidean geometry.

List the steps to calculate an exterior angle of a triangle when given two interior angles.

1. Step 1
Identify the two non-adjacent interior angles.

Create hundreds of practice and test experiences based on the latest learning science.

Visit Studyblaze.io

Exterior Angle Theorem Worksheet Answer Key PDF

🔥 **StudyBlaze.io**

Your AI Tutor for interactive quiz, worksheet and flashcard creation.

2. Step 2

Add the two angles together.

3. Step 3

The sum is the measure of the exterior angle.

To calculate an exterior angle, add the two non-adjacent interior angles together.

Part 2: Application and Analysis

If one interior angle of a triangle is 50 degrees and another is 60 degrees, what is the measure of the exterior angle at the third vertex?

undefined. A) 70 degrees

undefined. B) 110 degrees

undefined. C) 130 degrees ✓

undefined. D) 90 degrees

The measure of the exterior angle at the third vertex is 130 degrees.

Given a triangle with angles x, y, and z, where z is the exterior angle, which equations can be used to find z?

undefined. A) z = x + y ✓

undefined. B) z = 180 - (x + y)

undefined. C) z = 180 - x

undefined. D) z = 180 - y

The correct equations to find z include z = x + y.

A triangle has an exterior angle of 120 degrees. If one of the non-adjacent interior angles is 45 degrees, find the other non-adjacent interior angle. Show your work.

The other non-adjacent interior angle is 75 degrees, calculated by subtractively using the exterior angle.

In a triangle, if one exterior angle is twice the measure of one of the non-adjacent interior angles, and the other non-adjacent interior angle is 40 degrees, what is the measure of the exterior angle?

undefined. A) 80 degrees

Create hundreds of practice and test experiences based on the latest learning science.

Visit Studyblaze.io

Exterior Angle Theorem Worksheet Answer Key PDF

🔥 **StudyBlaze.io**

Your AI Tutor for interactive quiz, worksheet and flashcard creation.

undefined. B) 100 degrees

undefined. C) 120 degrees ✓

undefined. D) 140 degrees

The measure of the exterior angle is 120 degrees.

Given a triangle with an exterior angle of 150 degrees and one non-adjacent interior angle of 70 degrees, analyze and find the other non-adjacent interior angle. Explain your reasoning.

The other non-adjacent interior angle is 80 degrees, calculated by subtractively using the exterior angle.

Part 3: Evaluation and Creation

Evaluate the following statement: "The Exterior Angle Theorem can be used to determine the type of triangle (acute, right, obtuse) based solely on its exterior angles."

undefined. A) True

undefined. B) False ✓

undefined. C) Not enough information

undefined. D) Depends on the angles

The statement is false; the Exterior Angle Theorem does not determine triangle types solely based on exterior angles.

Consider a triangle with exterior angles measuring 120 degrees, 110 degrees, and 130 degrees. Evaluate which of the following statements are true.

undefined. A) The triangle is scalene. ✓

undefined. B) The triangle is isosceles.

undefined. C) The triangle is equilateral.

undefined. D) The triangle is obtuse. ✓

The true statement is that the triangle is scalene and obtuse.

Create a real-world problem involving the Exterior Angle Theorem and provide a solution. Explain how the theorem is applied in your scenario.

Create hundreds of practice and test experiences based on the latest learning science.

Visit Studyblaze.io

Exterior Angle Theorem Worksheet Answer Key PDF

A real-world problem could involve architecture or construction where angles need to be calculated.

Propose a method to verify the Exterior Angle Theorem using a geometric construction. List the steps and tools required.

1. Step 1

Draw a triangle using a straightedge.

2. Step 2

Extend one side to create an exterior angle.

3. Step 3

Measure the angles and verify the theorem.

A method to verify the theorem could involve constructing a triangle and measuring angles.

Create hundreds of practice and test experiences based on the latest learning science.

Visit Studyblaze.io

Exterior Angle Theorem Worksheet Answer Key PDF