

Exterior Angle Theorem Worksheet

Exterior Angle Theorem Worksheet

Disclaimer: The exterior angle theorem worksheet 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?
Hint: Think about the relationship between exterior and interior angles.
A) The exterior angle is equal to the adjacent interior angle.
○ B) The exterior angle is equal to the sum of the two non-adjacent interior angles.
C) The exterior angle is equal to the difference between the two non-adjacent interior angles.
O) The exterior angle is equal to the sum of all interior angles.
Which of the following are true about triangles?
Hint: Consider the properties of triangles and their angles.
A) The sum of the interior angles is 180 degrees.
B) A triangle can have more than one exterior angle at each vertex.
C) The exterior angle is always greater than either of the non-adjacent interior angles.
D) The sum of an exterior angle and its adjacent interior angle is 180 degrees.
Explain in your own words why the sum of the interior angles of a triangle is always 180 degrees.
Hint: Consider the properties of parallel lines and transversals.

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



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

Hint: Think about how the angles relate to each other.
1. Step 1
2. Step 2
Z. Step 2
3. Step 3
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?
exterior angle at the third vertex? Hint: Use the Exterior Angle Theorem to find the answer.
Hint: Use the Exterior Angle Theorem to find the answer. A) 70 degrees B) 110 degrees
Hint: Use the Exterior Angle Theorem to find the answer. A) 70 degrees B) 110 degrees C) 130 degrees
Hint: Use the Exterior Angle Theorem to find the answer. A) 70 degrees B) 110 degrees
Hint: Use the Exterior Angle Theorem to find the answer. A) 70 degrees B) 110 degrees C) 130 degrees D) 90 degrees
Hint: Use the Exterior Angle Theorem to find the answer. A) 70 degrees B) 110 degrees C) 130 degrees
Hint: Use the Exterior Angle Theorem to find the answer. A) 70 degrees B) 110 degrees C) 130 degrees D) 90 degrees Given a triangle with angles x, y, and z, where z is the exterior angle, which equations can be used to
Hint: Use the Exterior Angle Theorem to find the answer. A) 70 degrees B) 110 degrees C) 130 degrees D) 90 degrees Given a triangle with angles x, y, and z, where z is the exterior angle, which equations can be used to find z?
Hint: Use the Exterior Angle Theorem to find the answer. A) 70 degrees B) 110 degrees C) 130 degrees D) 90 degrees Given a triangle with angles x, y, and z, where z is the exterior angle, which equations can be used to find z? Hint: Consider the relationships between the angles.
Hint: Use the Exterior Angle Theorem to find the answer. A) 70 degrees B) 110 degrees C) 130 degrees D) 90 degrees Given a triangle with angles x, y, and z, where z is the exterior angle, which equations can be used to find z? Hint: Consider the relationships between the angles. A) z = x + y B) z = 180 - (x + y) C) z = 180 - x
Hint: Use the Exterior Angle Theorem to find the answer. A) 70 degrees B) 110 degrees C) 130 degrees D) 90 degrees Given a triangle with angles x, y, and z, where z is the exterior angle, which equations can be used to find z? Hint: Consider the relationships between the angles. A) z = x + y B) z = 180 - (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.

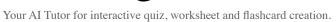
Hint: Use the Exterior Angle Theorem to find the answer.



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

	//
In a triangle, if one exterior angle is twice the measure of one of the non-adjacent interior angle and the other non-adjacent interior angle is 40 degrees, what is the measure of the exterior ang	
Hint: Set up an equation based on the relationships between the angles.	
A) 80 degrees	
○ B) 100 degrees	
○ C) 120 degrees	
○ D) 140 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.	
Hint: Use the Exterior Angle Theorem to find the answer.	
	_//
De d.O. E. al. alter and Outstan	
Part 3: Evaluation and Creation	
Evaluate the following statement: "The Exterior Angle Theorem can be used to determine the ty triangle (acute, right, obtuse) based solely on its exterior angles."	pe of
Hint: Consider the properties of triangle types and their angles.	
○ A) True	
B) False	
C) Not enough information	
O) Depends on the angles	

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





Consider a triangle with exterior angles measuring 120 degrees, 110 degrees, and 130 degrees. Evaluate which of the following statements are true.
Hint: Think about the properties of triangles and their angles.
A) The triangle is scalene.
B) The triangle is isosceles.
C) The triangle is equilateral.
D) The triangle is obtuse.
Create a real-world problem involving the Exterior Angle Theorem and provide a solution. Explain how the theorem is applied in your scenario.
Hint: Think about practical applications of geometry.
Propose a method to verify the Exterior Angle Theorem using a geometric construction. List the steps and tools required.
Hint: Consider using a compass and straightedge.
1. Step 1
2. Step 2
3. Step 3