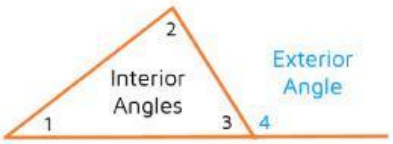
Exterior Angles of a Triangle Worksheet

An **exterior angle** of a triangle is formed when one side of the triangle is extended. The angle that forms outside the triangle is called the **exterior angle**.



Exterior Angle Rule

The exterior angle of a triangle equals the **sum** of the two remote **interior** angles.

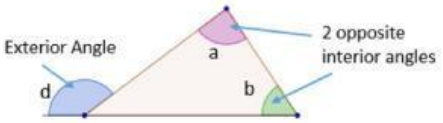
Exterior Angle Theorem

For any triangle, an exterior angle equals the **sum** of the **two non-adjacent interior angles**.

Exterior Angle = Interior Angle 1 + Interior Angle 2

Exterior Angle Theorem

The exterior angle of a triangle is equal to the sum of the two opposite interior angles.

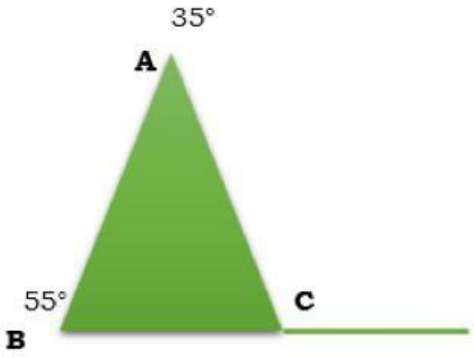


d = a + b

Part A – Find the Missing Exterior Angle

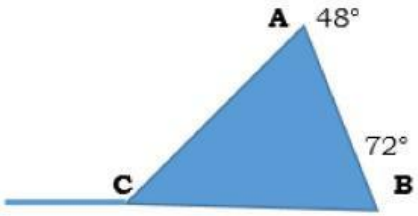
Directions: Use the Exterior Angle Theorem to find the missing exterior angle.

1.



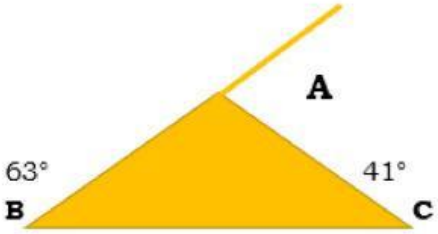
Exterior angle at C = **90°**

2.



Exterior angle at C = ____

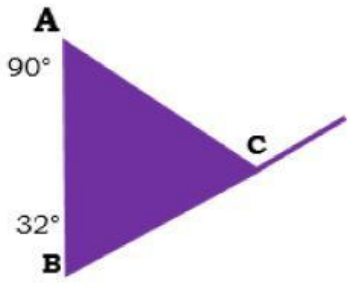
3.



Exterior angle at A = _____°

(Ctrl)

4.



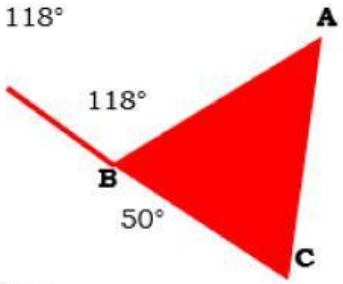
Exterior angle at C = ____°

LIVEWORKSHEETS

Part B – Find the Missing Interior Angle

Directions: The exterior angle is given. Find the missing interior angle.

5. Exterior angle = 118°



Missing interior angle = ____

6. Exterior angle = 135°



Missing interior angle = ____

Part C – Word Problems

9. Two remote interior angles of a triangle measure 45° and 68°. Find the exterior angle.

Answer: _____°

10. An exterior angle measures 124°. One remote interior angle is 57°. Find the other remote interior angle.

Answer: _____°

LIVEWORKSHEETS