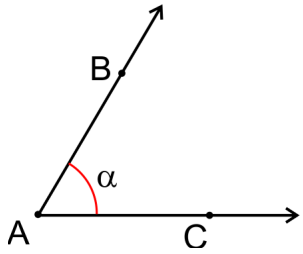
Angle Relationships

A **ray** has a starting point and continues indefinitely in one direction (indicated by one arrowhead).

An **angle** consists of **two rays that start at the same point**, called the **vertex**. Each ray is called a **side** of the angle.

We can denote the angle on the right as angle BAC, or using the symbol "∠" for "angle," as ∠BAC.

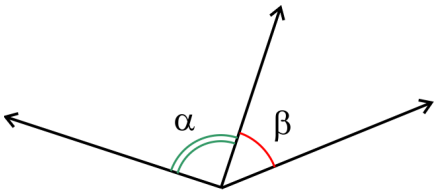
Note that we list the vertex point in the middle: it is ∠B**A**C, not ∠ABC. We could also name it ∠CAB.



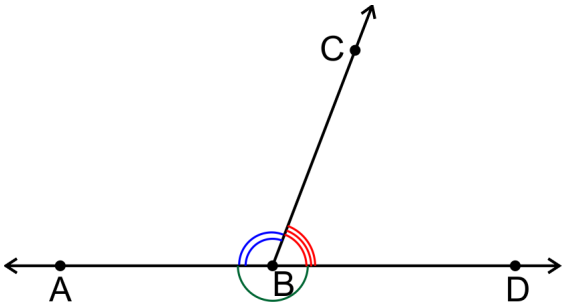
In mathematics, we also often denote angles with the beginning letters of the Greek alphabet: α (alpha), β (beta), γ (gamma), and δ (delta). So ∠BAC can also be called "angle α."

Two angles are **adjacent** if they have a **common vertex and share one side.**

In the image on the right, ∠α and ∠β are adjacent (side-by-side) angles.



1. How many angles do you see in the picture? _____



How many degrees do these angles measure?

∠ABC = _____°

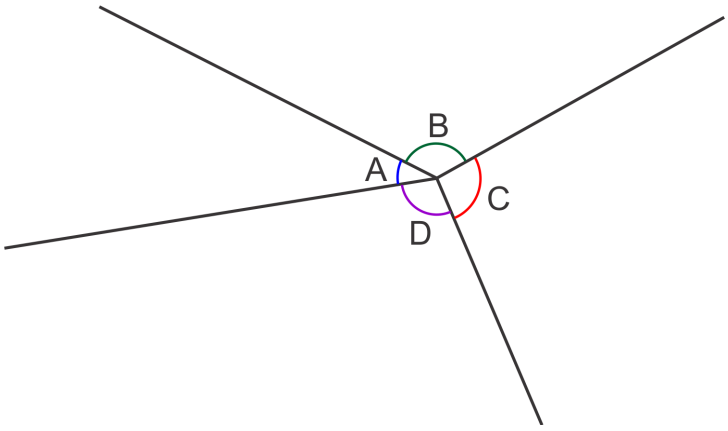
∠CBD = _____°

∠ABD = _____°

What is the sum of ∠ABC and ∠CBD? _____°

What is the sum of all three angles? _____ °

2. Measure the angles. Calculate their sum.



∠A = _____°

∠B = _____°

∠C = _____°

∠D = _____°

Sum of the angles = _____°