Geometry Review

Line: Extends in both directions

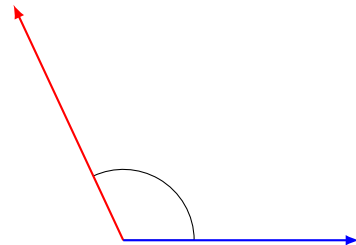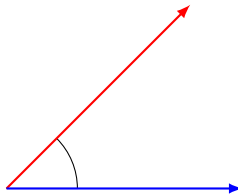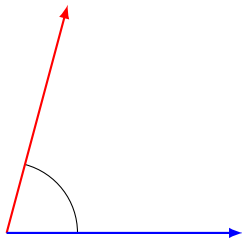**Ray:** Extends in one direction
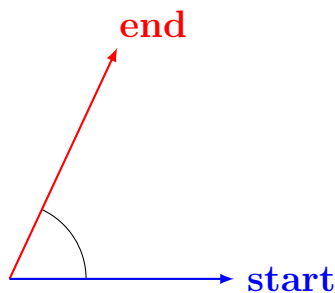
Line Segment: A portion of a line

Angles

An angle is formed between two rays or line segments.

Measuring Angles

The size of the angle is measured in **degrees**. Angles are measured starting from one of the rays. In this case, we begin at the **blue ray** and end at the **red ray**.
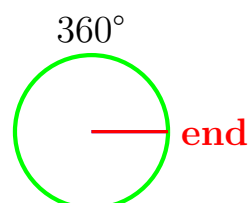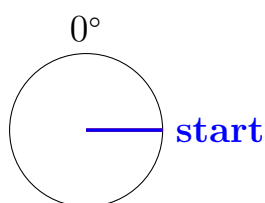
end

start

We will use a circle to discuss angle measurements.

Measuring Angles

Degree: A **degree** is a unit of measurement for angles. We will use a circle to discuss quantities in degrees (symbol is °).

Start at the position in **blue**. The angle that traces the **green** arc and passes around the entire circle is 360°.
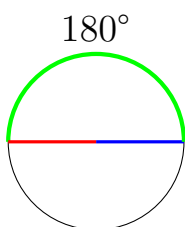
0°   **start**   360°   **end**
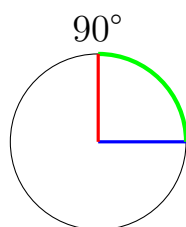
> ✒ **Degrees in a circle**
>
> ▎ The total number of **degrees** contained in a circle is 360°

The measurement is the portion of the total degrees in a circle that an angle has traced. Below are some angle measurements.
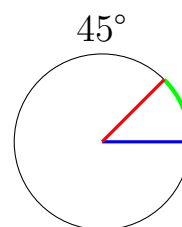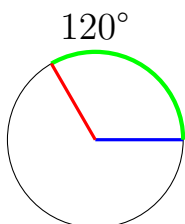
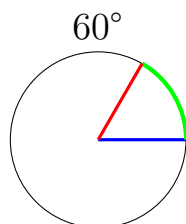$\frac{1}{2}$ of a circle: $\frac{1}{4}$ of a circle: $\frac{1}{8}$ of a circle:
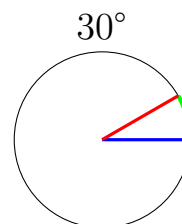
180°   90°   45°

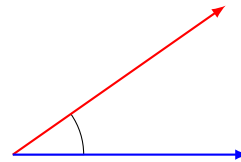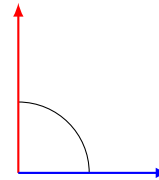$\frac{1}{3}$ of a circle: $\frac{1}{6}$ of a circle: $\frac{1}{12}$ of a circle:
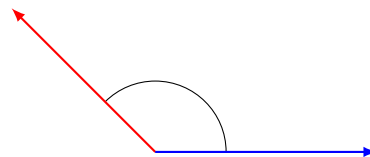
120°   60°   30°

Types of Angles

Acute Angle

$< 90°$

Right Angle †

$= 90°$

Obtuse Angle

$> 90°$

† *Denoted with a square*
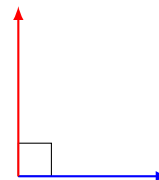
Complementary Angles
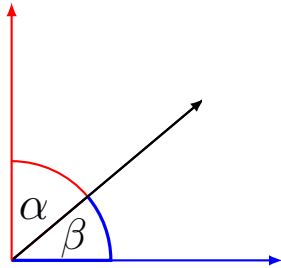
Complementary angles sum up to 90°

$$\angle\,\textcolor{blue}{\beta}\,+\,\angle\,\textcolor{red}{\alpha}\,=\,90°$$

Supplementary Angles

Supplementary angles sum up to 180°

$$\angle\,\textcolor{blue}{\beta}\,+\,\angle\,\textcolor{red}{\alpha}\,=\,180°$$