

1.6 Angles and Their Measures

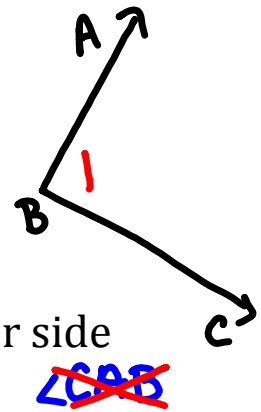
An angle consists of two rays that have the same endpoint.

The rays are the sides of the angle.

The endpoint is the vertex of the angle.

To name an angle, use the angle symbol and:

1. the vertex letter $\angle B$
2. three letters, the side, the vertex, and the other side $\angle ABC, \angle CBA$
3. the number $\angle 1$



The measure of an angle has a unit of degrees ($^\circ$).

87°

$m\angle A$ stands for the measure of $\angle A$.

Example 1: pg. 35 bottom checkpoint

1. $\angle RST$
 $\angle TSR$
 $\angle S$


2. $\angle HMN \leftarrow$ whole
 $\angle HMK \leftarrow$ left
 $\angle KMN \leftarrow$ right

$\angle M$

Two angles are congruent angles if they have the same measure.

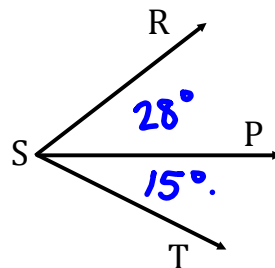
$$\angle A \cong \angle C$$

Angles are classified as:

1. acute greater than 0° but less than 90°
2. right exactly 90° 
3. obtuse greater than 90° but less than 180°
4. straight exactly 180°

Angle Addition Postulate: If P is in the interior of $\angle RST$, then the measure of $\angle RST$ is the sum of the measures of $\angle RSP$ and $\angle PST$.

Segment Addition Post.
part + part = whole



Example 2: pg. 37 bottom checkpoint

$$\begin{aligned} 4. \quad \angle ABD + \angle DBC &= \angle ABC \\ 60 + 20 &= 80^\circ \end{aligned}$$

$$\begin{aligned} 5. \quad \angle ABD + \angle DBC &= \angle ABC \\ 40 + 90 &= 130^\circ \end{aligned}$$

$$\begin{aligned} 6. \quad \angle DBC + \angle ABC &= \angle DBA \\ 60 + ? &= 135 \\ -60 &\quad -60 \\ \angle ABC &= 75^\circ \end{aligned}$$

Name

1.6

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