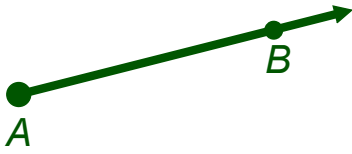


A **ray** consists of a point on a line and all the points on **ONE SIDE** of that point



Ray AB is written as \overrightarrow{AB}

Angle: consists of two different rays with the same endpoint. The rays are sides, and the endpoint is the vertex.

★ The symbol for angle is \angle



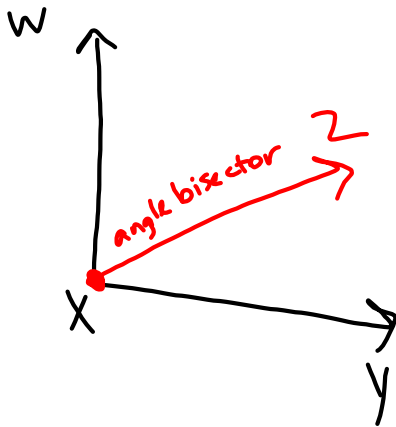
Sep 10-5:34 PM

| | |
|---|--|
| <p>Acute Greater than 0° and less than 90°</p> | <p>Obtuse Greater than 90° and less than 180°</p> |
| <p>Right Exactly 90°</p> | <p>Straight Exactly 180°</p> |

Sep 5-12:34 PM

Congruent: angles that have the same measure.
 symbol for congruent is \cong

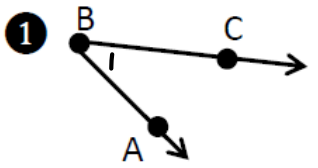
Angle Bisector: a ray that divides an angle into two congruent angles



If \overrightarrow{XZ} bisects $\angle WXY$,
 then $\angle WXZ \cong \angle ZXY$

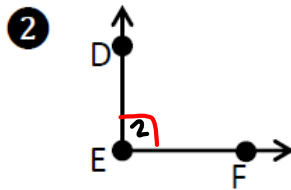
Sep 5-12:36 PM

Write three names for each of the angles below. Name the vertex and the sides. Then, tell whether it appears to be acute, obtuse, right or straight



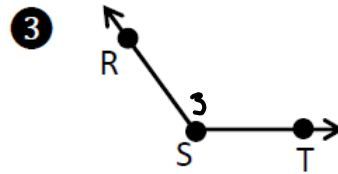
$\angle B$ (vertex)
 $\angle CBA$
 $\angle ABC$

acute



$\angle DEF$
 $\angle FED$
 $\angle E$

right



$\angle S$
 $\angle TSR$
 $\angle RST$

obtuse

Sep 5-12:35 PM

Angle Addition Postulate:
 If P is the interior of $\angle RST$, then $m\angle RST = m\angle RSP + m\angle PST$.

point "measure of"

$m\angle RST = 80 + 20$

$m\angle RST = 100^\circ$

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4 Given $m\angle ABC = 94^\circ$, find $m\angle CBD$.

$m\angle ABD + m\angle CBD = m\angle ABC$

$3x + 15 + x + 7 = 94$

$4x + 22 = 94$

$4x = 72$

$x = 18$

$m\angle CBD = 18 + 7$

$m\angle CBD = 25^\circ$

5 Given $m\angle QRS = 135^\circ$, find $m\angle QRT$.

$m\angle QRT + m\angle TRS = m\angle QRS$

$3x + 1 + 2x - 6 = 135$

$5x - 5 = 135$

$5x = 140$

$x = 28$

$m\angle QRT = 3(28) + 1$

$m\angle QRT = 85^\circ$

Sep 5-12:37 PM

In the diagram \overrightarrow{BD} bisects $\angle ABC$. Find $m\angle ABC$.

6

$\angle ABD \cong \angle DBC$

55°

$(5x+10)^\circ$

$(7x-8)^\circ$

$$\begin{array}{r} 5x+10 = 7x-8 \\ -5x \quad -5x \\ \hline 10 = 2x-8 \\ +8 \quad +8 \\ \hline 18 = 2x \\ \frac{18}{2} = \frac{2x}{2} \\ 9 = x \end{array}$$

$m\angle ABC = 110^\circ$

7

$m\angle ABC = 162^\circ$

$(8x-23)^\circ$

$(5x+16)^\circ$

$8(13)-23$

$5(13)+16$

81°

81°

$$\begin{array}{r} 8x-23 = 5x+16 \\ -5x \quad -5x \\ \hline 3x-23 = 16 \\ +23 \quad +23 \\ \hline 3x = 39 \\ \frac{3x}{3} = \frac{39}{3} \\ x = 13 \end{array}$$

Sep 5-12:36 PM

\overrightarrow{BD} bisects $\angle ABC$. If $m\angle ABD = 32$, what is the $m\angle ABC$?

$m\angle ABC = 64^\circ$

Sep 8-6:59 AM