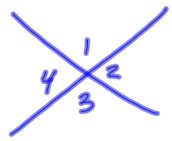


when would
$\angle 1 \cong \angle 2$

Conditional If $\underline{P}$ then $\underline{Q}$
Inverse If $\underline{\sim P}$ then $\underline{\sim Q}$
converse If $\underline{Q}$ then $\underline{P}$
Contrapositive If $\underline{\sim Q}$ then $\underline{\sim P}$

Biconditional → If and only if
"IFF"

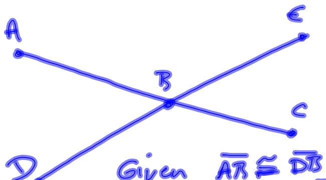
True only if
conditional and converse
are true
If $m\angle B$ is 47° then $\angle B$ is acute
converse is false Not true

P : If is sunny Q : I go outside

$P \rightarrow Q$

$\sim Q \rightarrow \sim P$

$\sim P$ It is not sunny

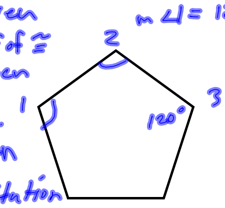


Given $\overline{AB} \cong \overline{DB}$, $\overline{BE} \cong \overline{BC}$
Prove $\overline{AC} \cong \overline{DE}$

$\overline{AB} \cong \overline{DB}$, $\overline{BE} \cong \overline{BC}$ given
$AB = DB$ $BE = BC$ def of $\cong$
$AB + BC = DB + BE$ Addition
$AB + BC = AC$, $DB + BE = DE$ segment addition
$AC = DE$ Transitive property
$AC \cong DE$ Def of $\cong$

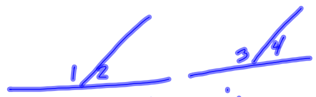
$\angle 1 \cong \angle 2$, $m\angle 2 = m\angle 3$
$m\angle 1 = 120^\circ$

$\angle 1 \cong \angle 2$ given
$m\angle 1 = m\angle 2$ def of $\cong$
$m\angle 2 = m\angle 3$ given
$m\angle 1 = m\angle 3$ trans.
$m\angle 3 = 120^\circ$ given
$m\angle 1 = 120^\circ$ substitution



congruent compliments

congruent supplements



Given 1,2 linear pair
3,4 linear pair
$\angle 2 \cong \angle 4$

Proof $\angle 1 \cong \angle 3$