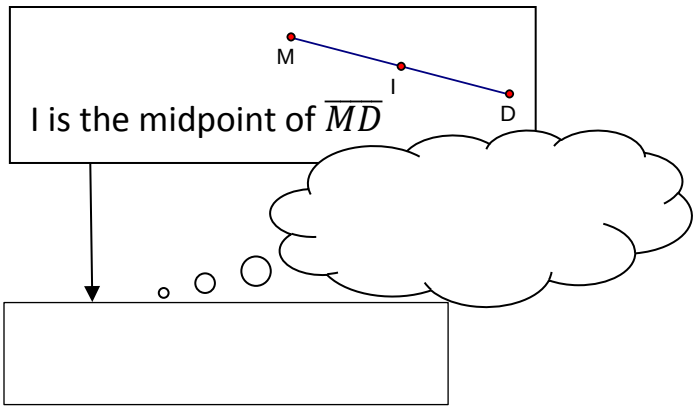
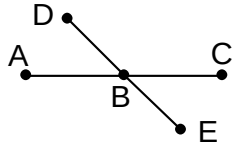
$\overline{TO} \cong \overline{AD}$

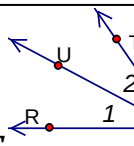
$\angle 4 \cong \angle 5$



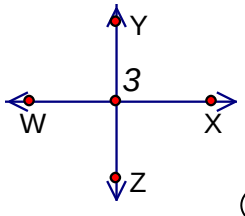
I is the midpoint of $\overline{MD}$



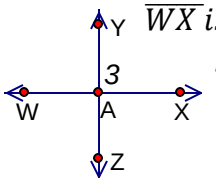
$\overline{DE}$ *bisects* $\overline{AC}$



$\overrightarrow{SU}$ *bisects* $\angle RST$

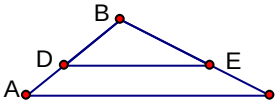


$\overleftrightarrow{WX} \perp \overleftrightarrow{YZ}$



$\overline{WX}$ *is the perpendicular bisector of* $\overline{YZ}$

OR



$\angle 4 \cong \angle 5$

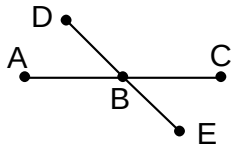
Definition of congruent angles

$m\angle 4 = m\angle 5$

$\overline{TO} \cong \overline{AD}$

Definition of congruent segments

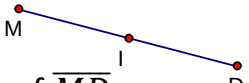
$TO = AD$



$\overline{DE}$ *bisects* $\overline{AC}$

Definition of segment bisector

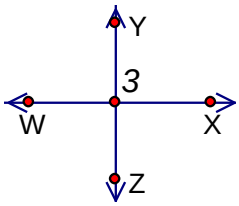
B is the midpoint of $\overline{AC}$



I is the midpoint of $\overline{MD}$

Definition of midpoint

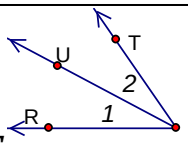
$\overline{MI} \cong \overline{ID}$



$\overleftrightarrow{WX} \perp \overleftrightarrow{YZ}$

Definition of perpendicular lines

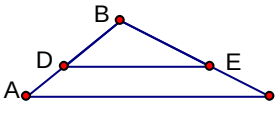
$\angle 3$ *is right*



$\overrightarrow{SU}$ *bisects* $\angle RST$

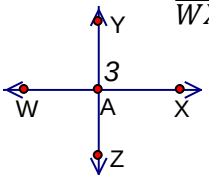
Definition of angle bisector

$\angle 1 \cong \angle 2$



Reflexive property of congruence

$\angle B \cong \angle B$



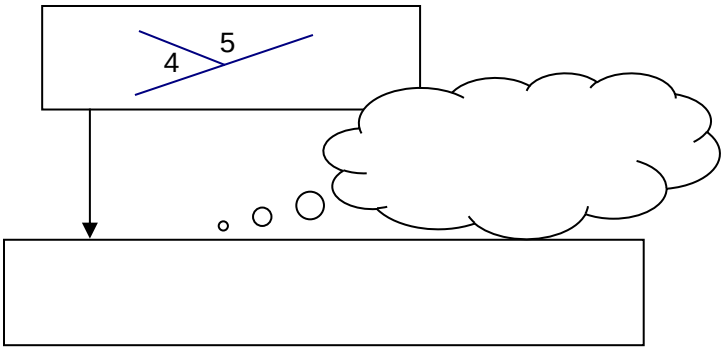
$\overline{WX}$ *is the perpendicular bisector of* $\overline{YZ}$

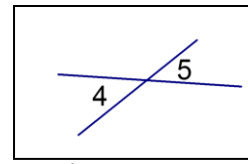
Definition of perpendicular bisector

$\overline{WX} \perp \overline{YZ}$ OR
A *is the midpoint of* $\overline{YZ}$

$\angle L$ and $\angle E$ are supplementary

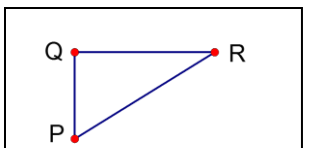
$\angle L$ and $\angle E$ are complementary





$\angle H$ is right

$\angle C$ and $\angle D$ are right angles.



$\angle Q$ *is right*

$\angle 5 \cong \angle 8$ *and* $\angle 8 \cong \angle 4$

$\angle L$ and $\angle E$ are complementary

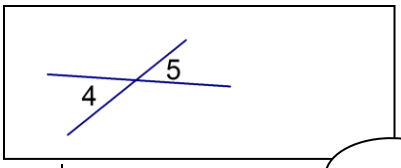
Definition of complementary angles

$m\angle L + m\angle E = 90°$

$\angle L$ and $\angle E$ are supplementary

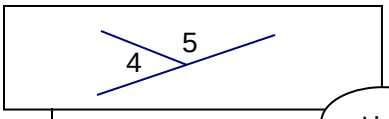
Definition of supplementary angles

$m\angle L + m\angle E = 180°$



Vertical angles are congruent.

$\angle 4 \cong \angle 5$



Linear pairs are supplementary.

$\angle 4$ and $\angle 5$ are supplementary

$\angle C$ and $\angle D$ are right angles.

All right angles are congruent.

$\angle C \cong \angle D$

$\angle H$ is right

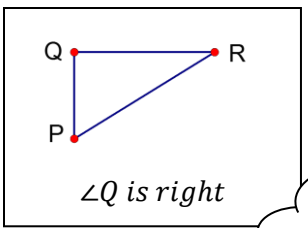
Definition of right angle

$m\angle H = 90°$

$\angle 5 \cong \angle 8$ and $\angle 8 \cong \angle 4$

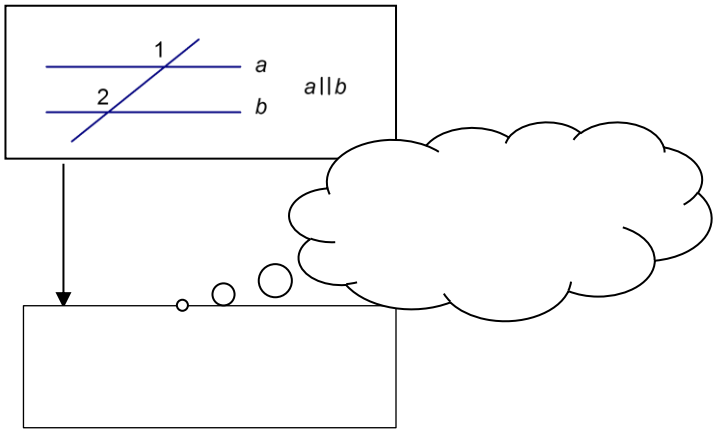
Transitive property of congruence

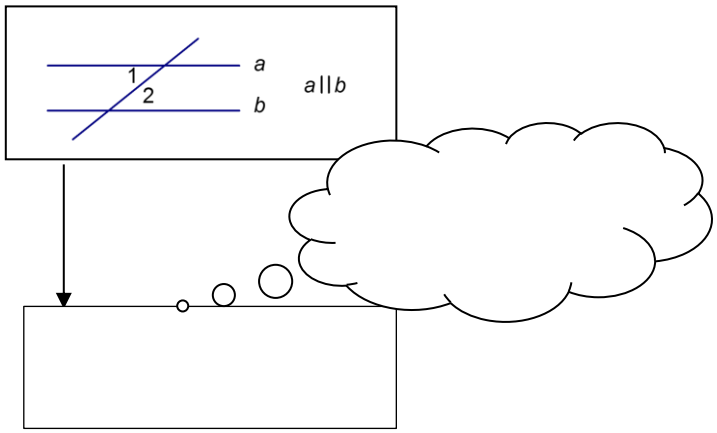
$\angle 5 \cong \angle 4$

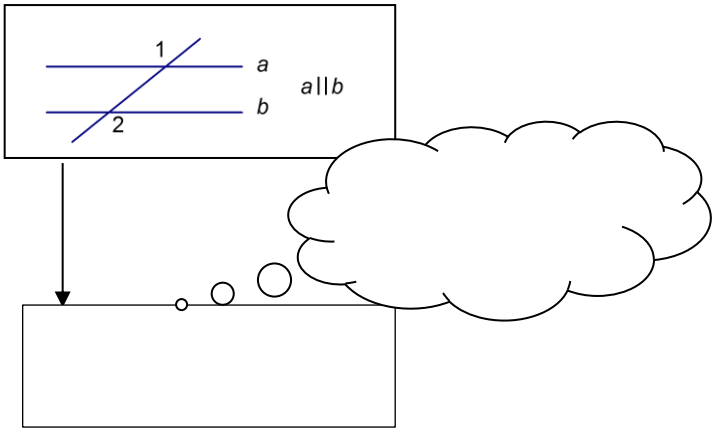


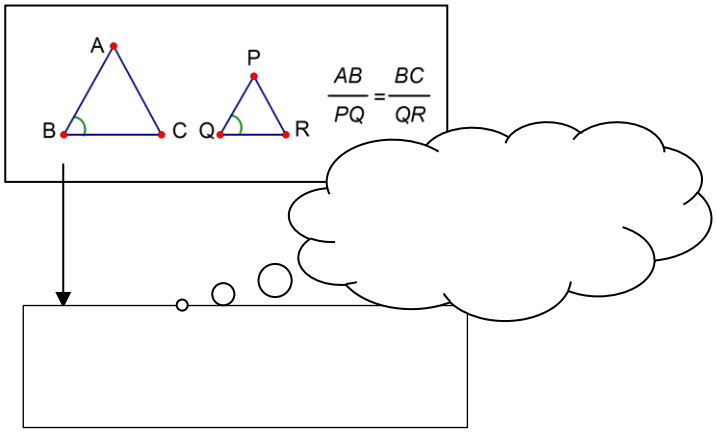
$\angle Q$ is right

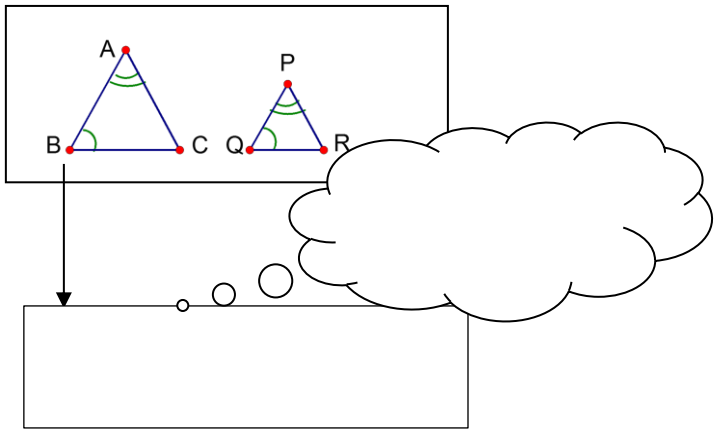
ΔPQR is a right Δ

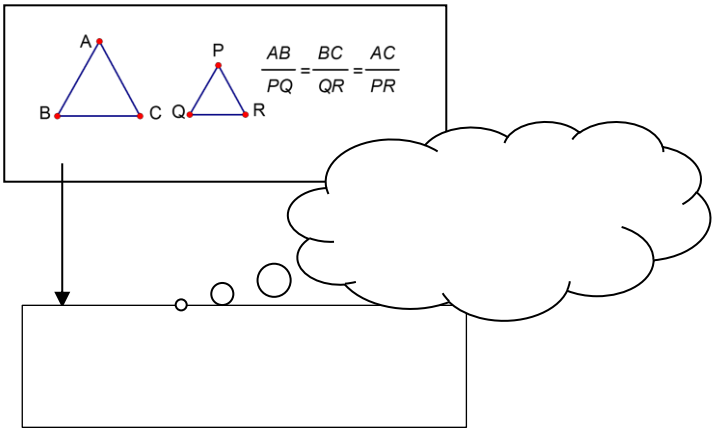

1
2
a
b
a||b

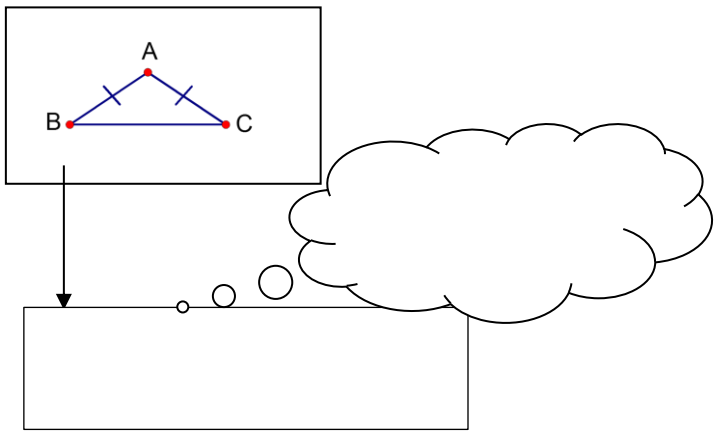

1
2
a
b
a||b

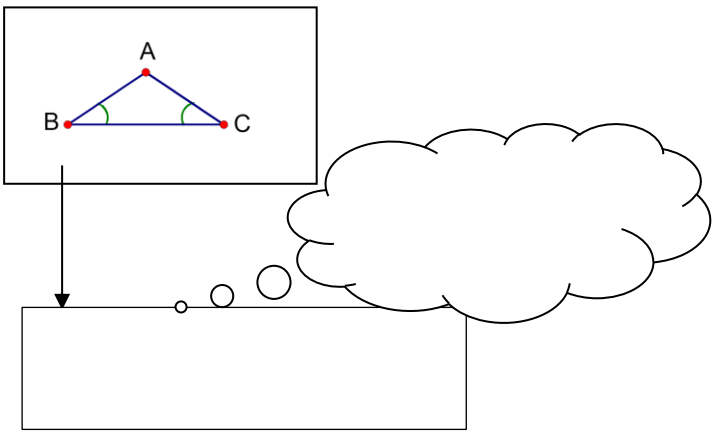

1
2
a
b
a||b

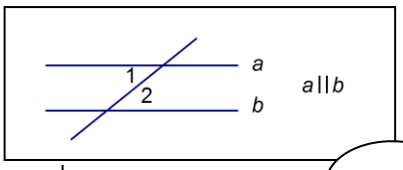

A
B
C
P
Q
R
AB/PQ = BC/QR


A
B
C
P
Q
R


A
B
C
P
Q
R
AB/PQ = BC/QR = AC/PR

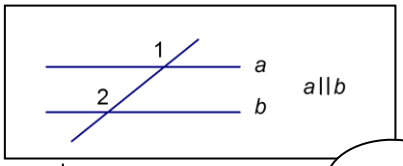

A
B
C


A
B
C



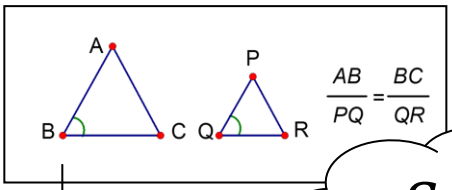
If ∥ lines are cut by a trans., alt. int. $\angle s$ are ≅.

$\angle 1 \cong \angle 2$



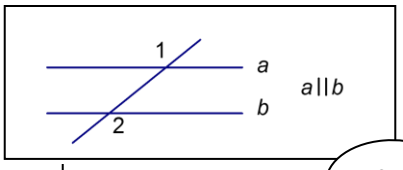
If ∥ lines are cut by a trans., corr. $\angle s$ are ≅.

$\angle 1 \cong \angle 2$



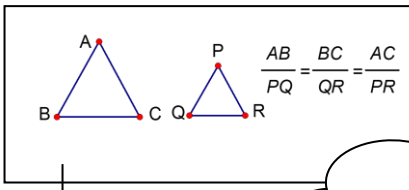
$SAS\sim$

$\Delta ABC \sim \Delta PQR$



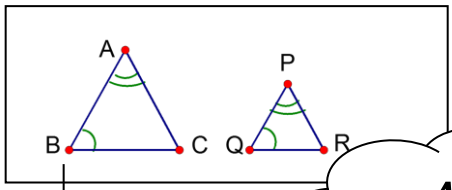
If ∥ lines are cut by a trans., alt. ext. $\angle s$ are ≅.

$\angle 1 \cong \angle 2$



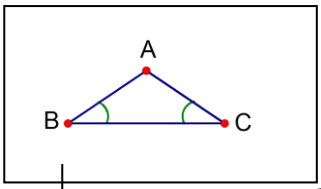
$SSS\sim$

$\Delta ABC \sim \Delta PQR$



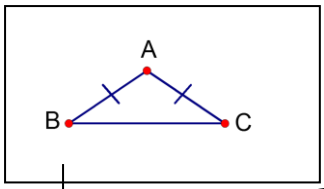
$AA\sim$

$\Delta ABC \sim \Delta PQR$



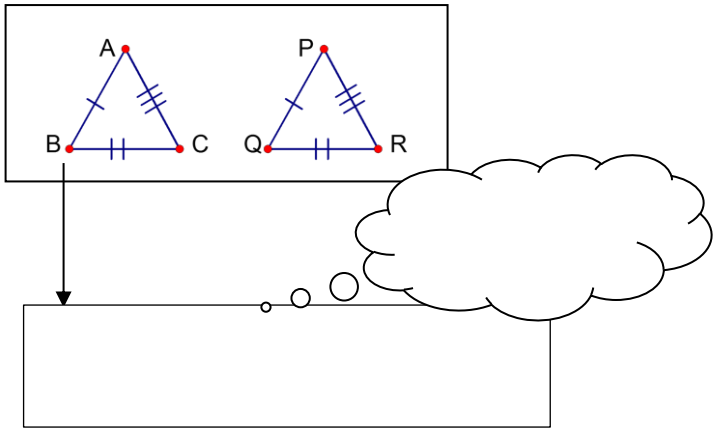
ITT Converse

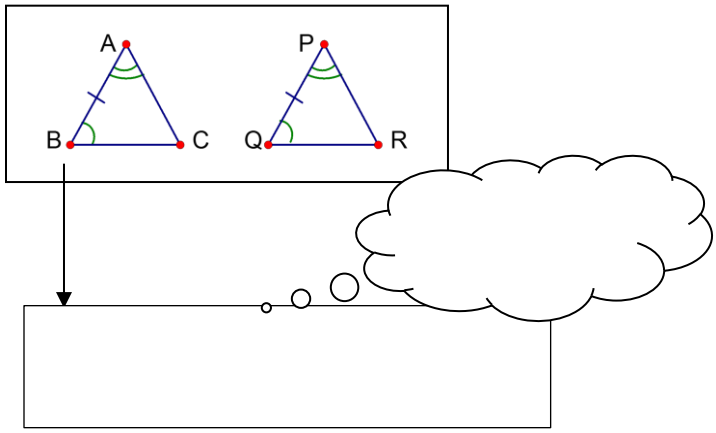
$\overline{AB} \cong \overline{AC}$

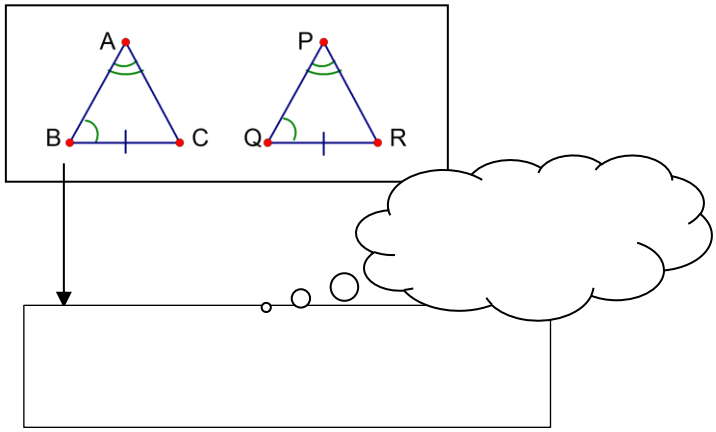


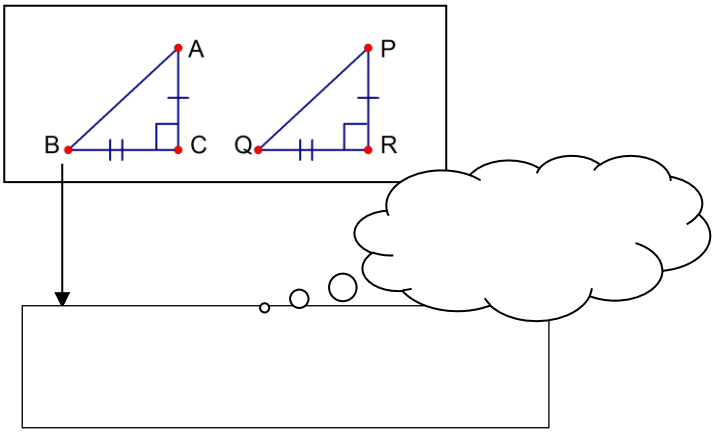
ITT

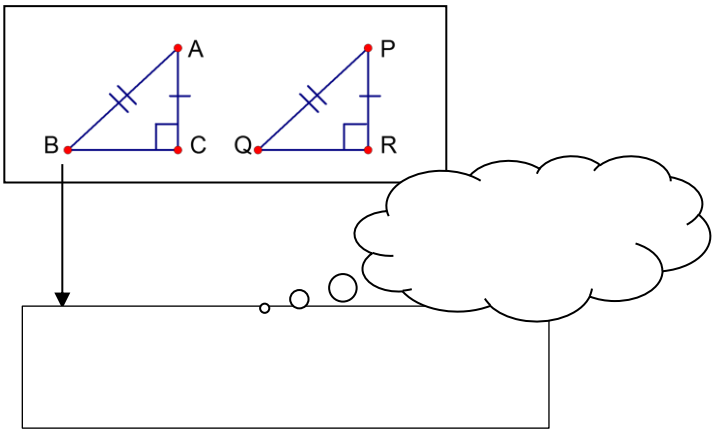
$\angle B \cong \angle C$

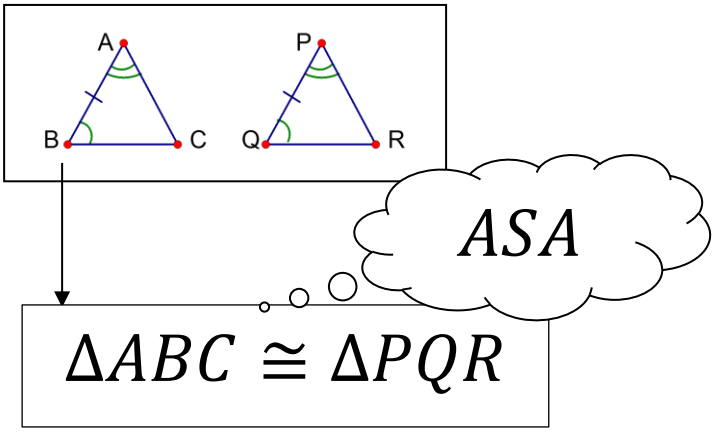

A
B
C
P
Q
R


A
B
C
P
Q
R


A
B
C
P
Q
R

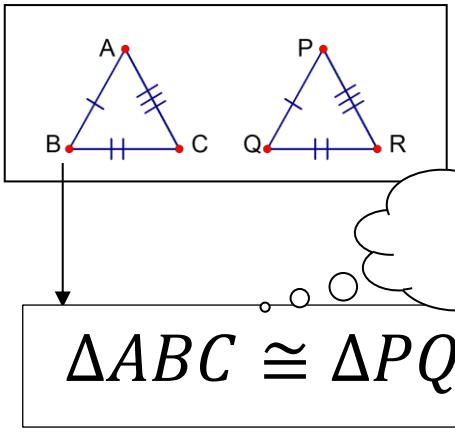

A
B
C
P
Q
R


A
B
C
P
Q
R



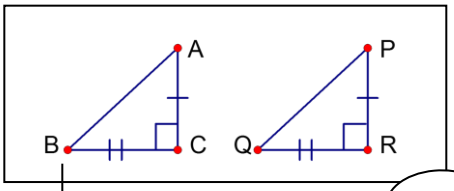
ASA

$\Delta ABC \cong \Delta PQR$



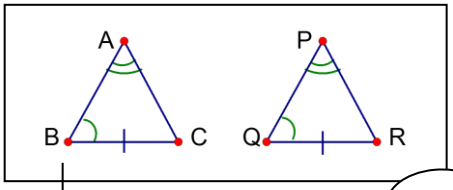
SSS

$\Delta ABC \cong \Delta PQR$



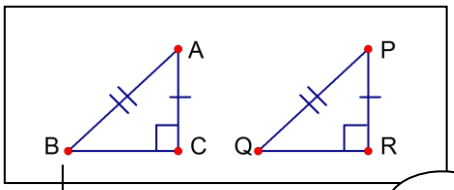
SAS

$\Delta ABC \cong \Delta PQR$



AAS

$\Delta ABC \cong \Delta PQR$



HL

$\Delta ABC \cong \Delta PQR$