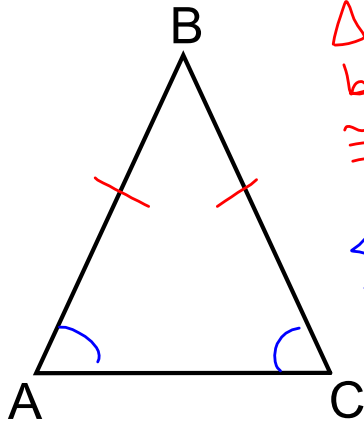


DO NOW

Given: In $\triangle ABC$, $\overline{AB} \cong \overline{BC}$

What conclusions can be drawn?



$\triangle ABC$ is an isosceles \triangle
because isosceles \triangle 's have 2
 \cong sides

$\angle A \cong \angle C$ because an
isosceles \triangle has base \angle 's \cong

Oct 12-7:16 AM

Proofs

Use the "GIVEN" information to mark your diagram!

(conclusions) (definitions)

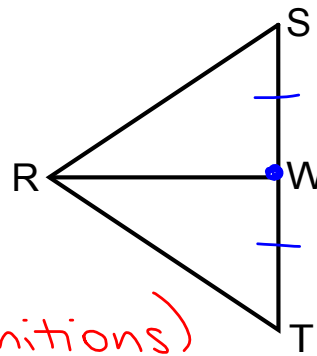
The first STATEMENT and REASON are always the given statements

The FINAL STATEMENT is always what you are asked to prove

Oct 12-7:19 AM

Given: \overline{RW} bisects \overline{ST}

Prove: $\overline{SW} \cong \overline{WT}$



(conclusions)

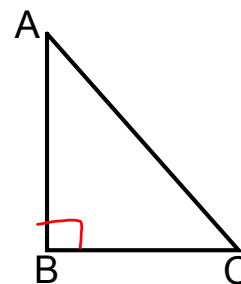
(definitions)

Statements	Reasons
1. \overline{RW} bisects \overline{ST}	1. Given
2. W is the midpoint of \overline{ST}	2. Segment bisector intersects a line segment at its midpoint
3. $\overline{SW} \cong \overline{WT}$	3. Midpoint divides a segment into 2 \cong segments

Oct 12-10:20 AM

Given: In $\triangle ABC$, $\overline{AB} \perp \overline{BC}$

Prove: $\triangle ABC$ is a right triangle



Statements	Reasons
1. $\overline{AB} \perp \overline{BC}$	1. Given.
2. $\angle ABC$ is a right angle.	2. Perpendicular lines form right angles
3. $\triangle ABC$ is a right triangle.	3. If a triangle has a right angle, then it is a right triangle. ■

Oct 12-7:30 AM

Definition of Congruency

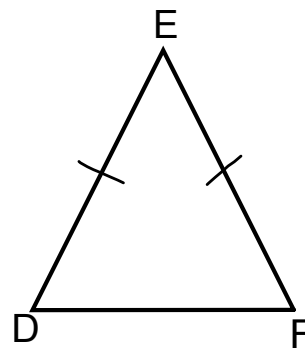
If quantities are EQUAL, then
they are CONGRUENT

Statement	Reason
1) $AB = BC$	Given
2) $\overline{AB} \cong \overline{BC}$	If segments are equal, then they are congruent <i>(definition of congruency)</i>

Oct 12-7:37 AM


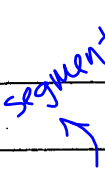
Given: $\triangle DEF$ with $DE = EF$

Prove: $\triangle DEF$ is isosceles



Statements	Reasons
1. DE = EF $DE = EF$	1. Given.
2. $\overline{DE} \cong \overline{EF}$	2. Definition of congruency
3. $\triangle DEF$ is isosceles	3. Isosceles \triangle 's have 2 \cong sides

Oct 12-7:36 AM

Statement	Reason
1) S is the midpoint of \overline{RT} 2) $\overline{RS} \cong \overline{ST}$	1) Given 2) Midpoint divides a segment into 2 \cong segments 
<div style="text-align: center;">  </div>	
Statement	Reason
1) \overline{AB} bisects \overline{WY} at X 2) X is the midpoint of \overline{WY} 3) $\overline{WX} \cong \overline{XY}$	1) Given 2) A segment bisector intersects the segment at its midpoint 3)

Oct 13-11:45 AM