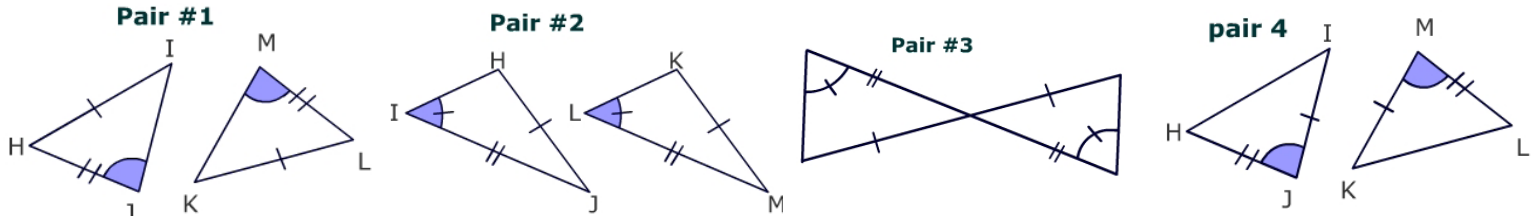


Proof Packet

Identify SAS

1. Which pair of triangles below illustrates the SAS postulate?

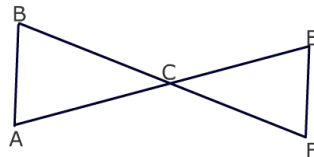


2. On the diagrams above that DO NOT show SAS, **color** the **side** of each triangle that would make it an example of SAS.

Guided Practice Proof

Given: C is the midpoint of BF; $AC \cong CE$

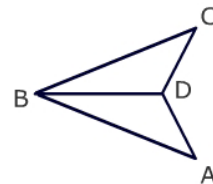
Prove: $\triangle ABC \cong \triangle EFC$



Statements	Reasons
1. C is the midpoint of BF; $AC \cong CE$	1.
2. $\angle ACB \cong \angle ECF$	2.
3. $BC \cong CF$	3.
4. $\triangle ABC \cong \triangle EFC$	4.

Proof #1 **Given:** BD bisects $\angle CDA$; $CD \cong DA$

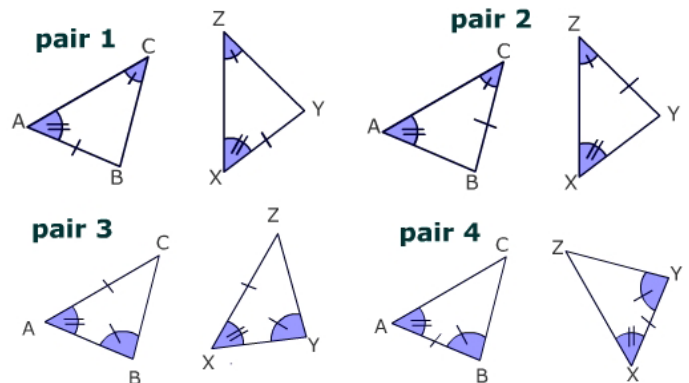
Prove: $\triangle BCD \cong \triangle BAD$



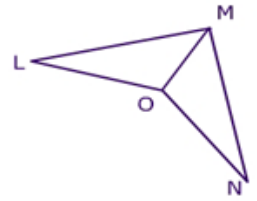
Statements	Reasons

Identify ASA

1) Which pair of triangles on the right illustrates angle-side-angle relationship?

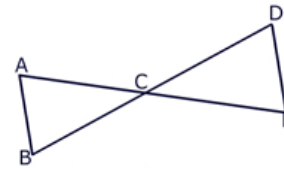


Proof #2 **Given:** OM bisects $\angle LMN$; $\angle LOM \cong \angle NOM$
Prove: $LM \cong NM$



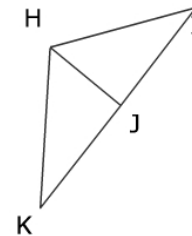
Statements	Reasons

Proof #3 **Given:** $\angle BAC \cong \angle DEC$; BD bisects AE
Prove: $\angle ABC \cong \angle EDC$



Statements	Reasons

Proof #4 **Given:** HJ is a Perpendicular Bisector of KI
Prove: $\triangle HJK \cong \triangle HJI$



Statements	Reasons

Activity: To the right is the proof that two triangles are congruent by Side Angle Side. Draw two triangles, whose diagram is consistent with the proof.

Statement	Reason
1) c is midpoint of \overline{BX}	1) Given
2) c is midpoint of \overline{AY}	2) Given
3) $\overline{BC} = \overline{XC}$	3) definition of midpoint
4) $\overline{CA} = \overline{CY}$	4) definition of midpoint
5) $\angle BCA \cong \angle XCY$	5) Vertical angles are congruent
6) $\triangle BCA \cong \triangle XCY$	6) SAS