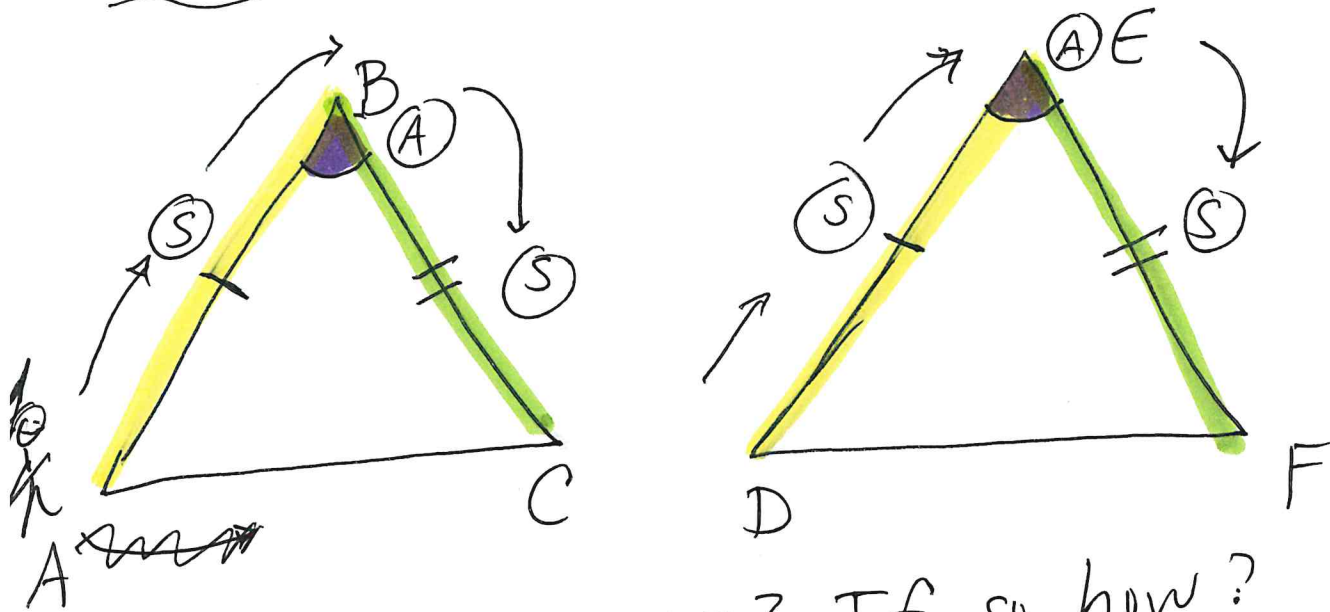


10/12 Lesson 23: Triangles Congruent

Side-Angle-Side (SAS)



Is $\triangle ABC \cong \triangle DEF$? If so, how?

* SAS: the 2 sides meet at the vertex and create the angle.

(S) $\overline{AB} \cong \overline{DE}$

(A) $\angle B \cong \angle E$

(S) $\overline{BC} \cong \overline{EF}$

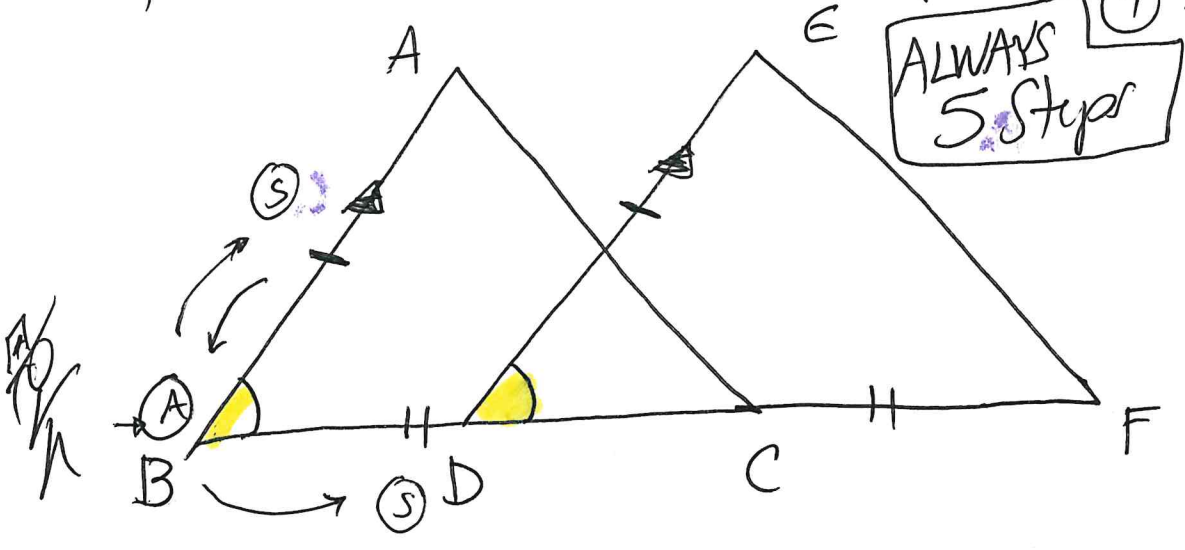
(1)

ie 1 Given $\rightarrow \overline{AB} \cong \overline{DE}; \overline{AB} \parallel \overline{DE};$

$\overline{BC} \cong \overline{DF}$

- ① corr. \angle 's
- ② alt. int. \angle 's
- ③ alt ext. \angle 's

Prove $\rightarrow \Delta ABC \cong \Delta DEF$



Statements

Reasons

- ① See Above
- ② $\overline{AB} \cong \overline{DE}$
- ③ $\angle B \cong \angle D$
- ④ $\overline{BC} \cong \overline{DF}$
- ⑤ $\Delta ABC \cong \Delta DEF$

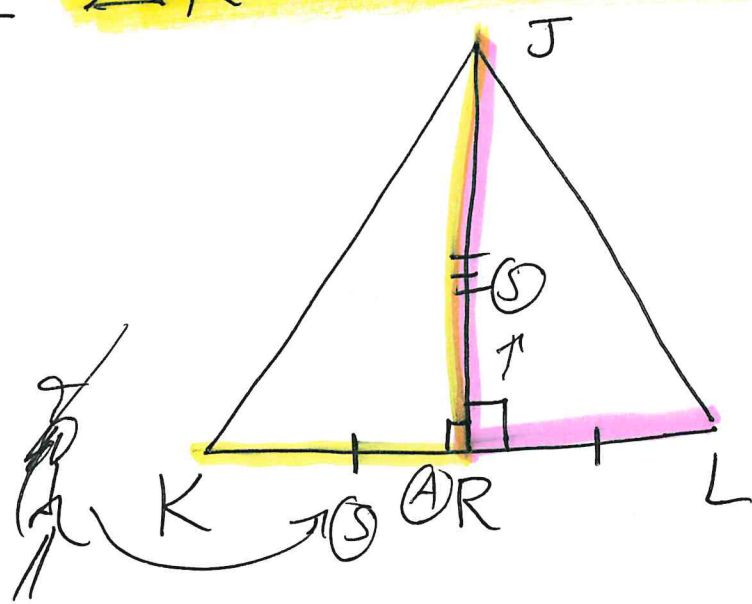
- ① Given
- ② Corr. Sides
- ③ Corr. \angle 's
- ④ Corr. Sides
- ⑤ SAS

ie 2) Given \triangleright \overline{JR} perpendicular to \overline{KL}

bisector
(\perp)

Creates
 90°
 \angle 's

Prove \triangleright $\triangle KJR \cong \triangle LJR$



Cuts
into
half
($\hat{=}$)

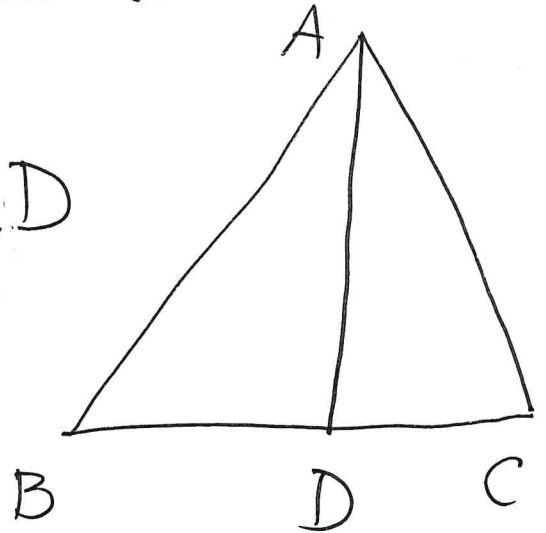
Statements	Reasons
(1) See Above	(1) Given
^s (2) $\overline{KR} \cong \overline{RL}$	(2) Bisector
^A (3) $\angle JRK \cong \angle JRL$	(3) Perp. 90° \angle 's
^s (4) $\overline{JR} \cong \overline{JR}$	(4) Reflexive
(5) $\triangle KJR \cong \triangle LJR$	(5) SAS

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Name _____
HR _____

1.) Given \triangleright \overline{AD} perpendicular bisector of \overline{BC} .

Prove \triangleright $\triangle ADB \cong \triangle CAD$



Statements

Reasons

(1)

(1)

(2)

(2)

(3)

(3)

(4)

(4)

(5)

(5)