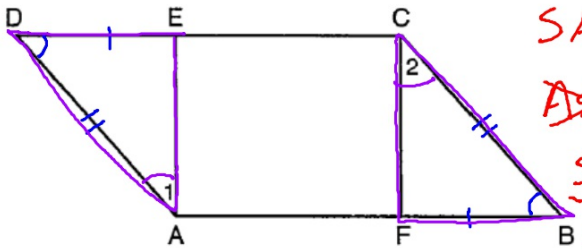
Given: ▱ ABCD (Parallelogram)
$\overline{DE} \cong \overline{FB}$

Prove: a) $\Delta DEA \cong \Delta BFC$
b) $\angle 1 \cong \angle 2$

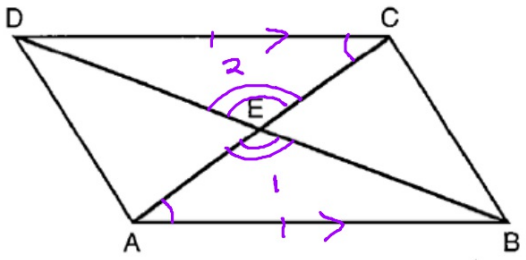


ASA AAS
SAS HL
~~ASSS~~
SSS
CPCTC

STATEMENT	REASONS
1. Parallelogram ABCD	1. Given
2. $\overline{AD} \cong \overline{BC}$	2. opposite sides of ▱ $\cong$
3. $\angle D \cong \angle B$	3. Opposite ∠'s of a ▱ $\cong$
4. $\overline{DE} \cong \overline{FB}$	4. Given
5. $\Delta DEA \cong \Delta BFC$	5. SAS
6. $\angle 1 \cong \angle 2$	6. CPCTC

Given: ▱ ABCD

Prove: $\Delta AEB \cong \Delta CED$

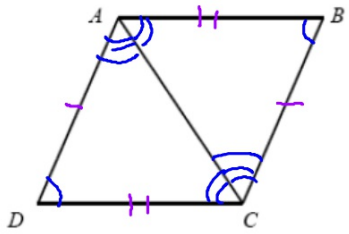


STATEMENT	REASONS
1. Parallelogram ABCD	1. Given
2. $\overline{AB} \cong$ $\overline{CD}$	2. Opposite side ▱ $\cong$.
3. $\overline{AB} \parallel$ $\overline{CD}$	3. opposite sides ▱ $\parallel$.
4. $\angle CAB \cong$ $\angle ACD$	4. Alternate Interior $\angle$'s $\cong$
5. $\angle AEB \cong$ $\angle CED$	5. Vertical $\angle$'s $\cong$
6. $\Delta AEB \cong \Delta CED$	6. AAS

Given: $\square ABCD$

Prove: $\Delta DAC \cong \Delta BCA$

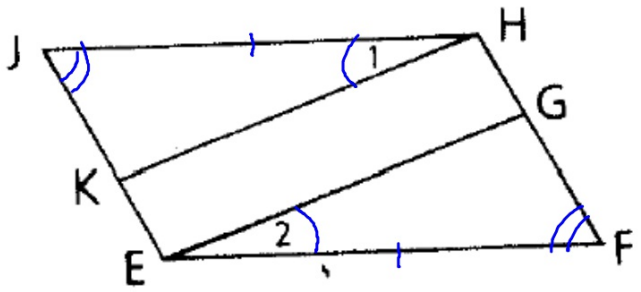
(At most 6 steps! You may not need all 6!!!)



Statements	Reasons
1 ABCD is Parallelogram	1 Given
2	2
3	3
4	4
5	5
6	6

Given: ▱ EFHJ,
$\angle 1 \cong \angle 2$

Conclusion: $\overline{KH} \cong \overline{EG}$



Statements	Reasons
1) EFHJ is Parallelogram	1) Given
2) $\overline{JH} \cong \overline{FE}$	2) Opposite side ▱ $\cong$
3) $\angle J \cong \angle F$	3) Opposite $\angle$'s of ▱ $\cong$
4) $\triangle JHK \cong \triangle FEG$	4) ASA
5) $\overline{KH} \cong \overline{EG}$	5) CPCTC