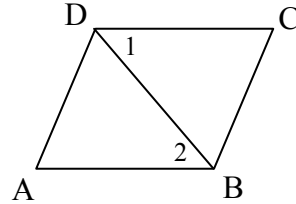


Name : _____
Period: _____ Date: _____

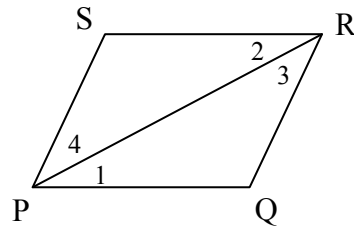
HC3 – U4L3
Parallelogram Proofs

Directions: Prove each of the following on a separate sheet of paper.

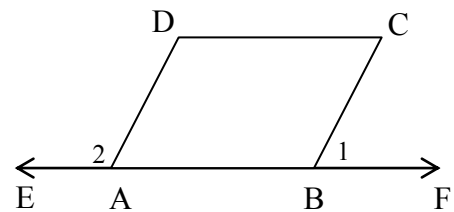
1. *Given:* $ABCD$ is a quadrilateral, $\overline{AB} \cong \overline{CD}$, $\angle 1 \cong \angle 2$.
Prove: $ABCD$ is a parallelogram.



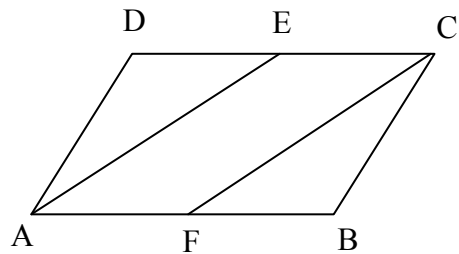
2. *Given:* $PQRS$ is a quadrilateral, $\angle 1 \cong \angle 2$, $\angle 3 \cong \angle 4$.
Prove: $PQRS$ is a parallelogram.



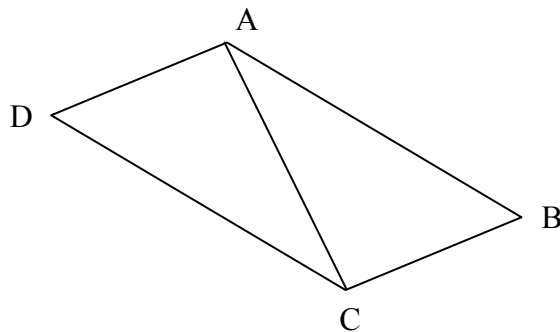
3. *Given:* \overline{EABF} , $\angle 2$ is supplementary to $\angle 1$, $\angle C \cong \angle 1$.
Prove: $ABCD$ is a parallelogram.



4. Given: \overline{ABCD} is a parallelogram, E is the midpoint of \overline{DC} , F is the midpoint of \overline{AB} .
 Prove: $\overline{AE} \cong \overline{CF}$



5. Given: $\overline{AB} \cong \overline{CD}$ and $\overline{BC} \cong \overline{DA}$
 Prove: $\angle B \cong \angle D$



6. Given: \overline{TQ} bisects $\angle RTS$ and $\overline{TQ} \perp \overline{RS}$
 Prove: $\overline{RQ} \cong \overline{QS}$

