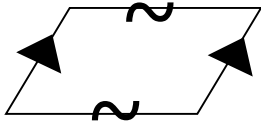


Advanced Geometry Index Cards

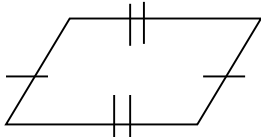
5.6 Proving that a Quadrilateral is a Parallelogram (Methods)

- 1) If both pairs of opposite sides of a quadrilateral are parallel, then the quadrilateral is a parallelogram (*reverse of the definition*).



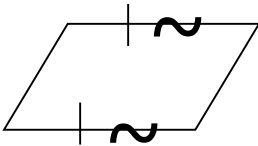
Both pairs of opp sides $\parallel \Rightarrow$ \parallel -gram

- 2) If both pairs of opposite sides of a quadrilateral are congruent, then the quadrilateral is a parallelogram (*converse of a property*).



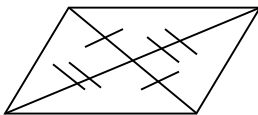
Both pairs of opp sides $\cong \Rightarrow$ \parallel -gram

- 3) If one pair of opposite sides of a quadrilateral are both parallel and congruent, then the quadrilateral is a parallelogram.



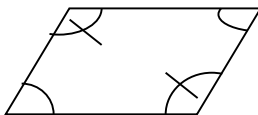
One pair of opp sides \cong and $\parallel \Rightarrow$ \parallel -gram

- 4) If the diagonals of a quadrilateral bisect each other, then the quadrilateral is a parallelogram (*converse of a property*).



Diagonals bisect each other \Rightarrow \parallel -gram

- 5) If both pairs of opposite angles of a quadrilateral are congruent, then the quadrilateral is a parallelogram (*converse of a property*).



Both pairs of opp \angle s $\cong \Rightarrow$ \parallel -gram