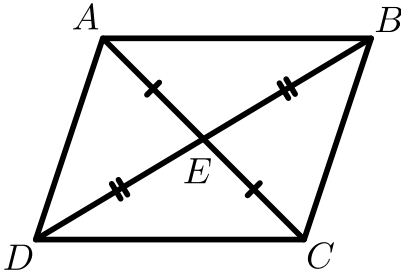
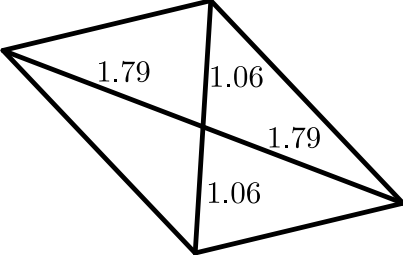
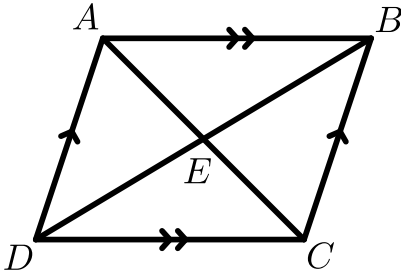


# Parallelogram Diagonals Converse

## Examples & Non-Examples

Example	Example	Non-Example
 <p data-bbox="110 621 524 730"><i>Since the diagonals bisect each other, quadrilateral ABCD must be a parallelogram.</i></p>	 <p data-bbox="586 621 1029 730"><i>Since the diagonals bisect each other, the quadrilateral must be a parallelogram.</i></p>	 <p data-bbox="1065 621 1511 730"><i>Since quadrilateral ABCD is a parallelogram, then the diagonals must bisect each other.</i></p>

## Statement

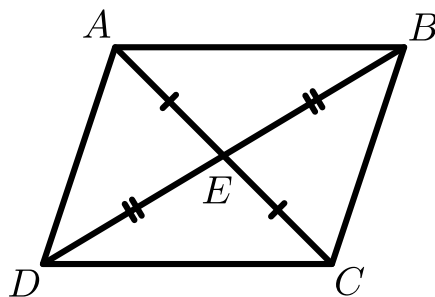
If the diagonals of a quadrilateral bisect each other, then the quadrilateral is a parallelogram.

### In simple terms:

If the diagonals cut each other exactly in half, the shape must be a parallelogram.

### Example:

In quadrilateral  $ABCD$ , if diagonals  $AC$  and  $BD$  intersect at point  $E$  such that  $AE = CE$  and  $BE = DE$ , then  $ABCD$  is a parallelogram.



### Why It Matters:

This is a useful test for proving a quadrilateral is a parallelogram when you know something about its diagonals.

