

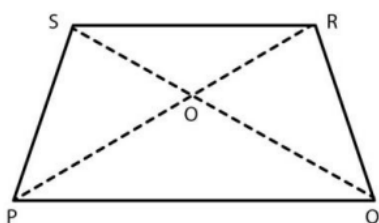


## CLASS NOTES-ANSWERS

### EXERCISE 4.5

1. Draw a rough sketch of a quadrilateral PQRS. Draw its diagonals. Name them. Is the meeting point of the diagonals in the interior or exterior of the quadrilateral?

Answer:

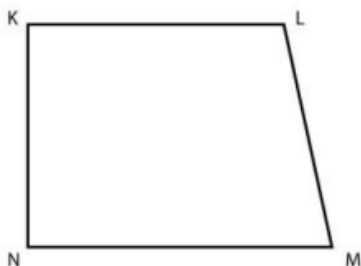


Clearly, the meeting point of the diagonals SQ and PR which is O is in the interior of the quadrilateral PQRS.

2. Draw a rough sketch of a quadrilateral KLMN. State,
- two pairs of opposite sides,
  - two pairs of opposite angles,
  - two pairs of adjacent sides,
  - two pairs of adjacent angles.

Answer:

- Two pairs of opposite sides are MN, KL, and NK, ML.
- Two pairs of opposite angles are  $\angle L$ ,  $\angle N$ , and  $\angle K$ ,  $\angle M$ .
- Two pairs of adjacent sides are KN, NM, and KL, LM.
- Two pairs of adjacent angles are  $\angle K$ ,  $\angle N$  and  $\angle L$ ,  $\angle M$



3. Investigate: Use strips and fasteners to make a triangle and a quadrilateral. Try to push inward at any one vertex of the triangle. Do the same to the quadrilateral. Is the triangle distorted? Is the quadrilateral distorted? Is the triangle rigid? Why is it that structures like electric towers make use of triangular shapes and not quadrilaterals?

Answer:

We use strips and fasteners to make a triangle and a quadrilateral. On pushing inward at any one vertex of the triangle, the triangle is not distorted, However, the quadrilateral is distorted. Hence, a triangle is a rigid figure. This is why structures like electric towers make use of triangular shapes and not quadrilaterals.