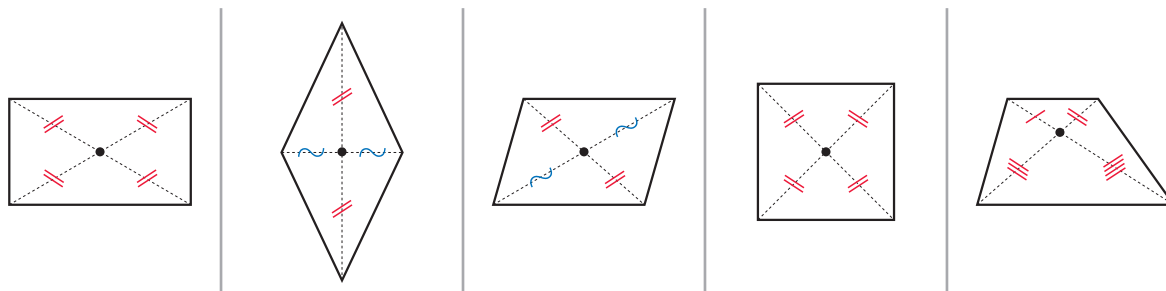


YOU & MATHS

A quadrilateral that is central symmetric with respect to a point is always:

- ☐ **A** a rectangle. ☐ **B** a rhombus. ☐ **C** a parallelogram. ☐ **D** a square. ☐ **E** a trapezium.

Let us draw the five geometrical shapes and their diagonals.



As the diagonals of a trapezium do not bisect each other, it is not possible to find a point in a trapezium that can act as a centre of symmetry.

The same is not true for a parallelogram, whose diagonals bisect each other. It is easy to prove that the point where the diagonals intersect is the centre of symmetry of the parallelogram.

Rectangles, rhombuses and squares are parallelograms, so they are central symmetric as well. However, a parallelogram does not have to be a rhombus, a rectangle or a square in order to be central symmetric, therefore answers A, B and D cannot be correct.

Our final answer is C.