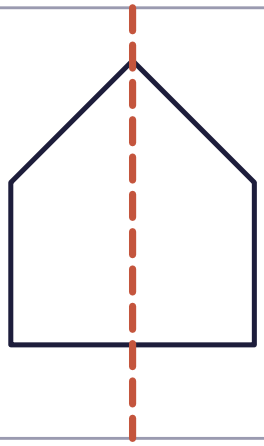
Line symmetry

A line of symmetry cuts a shape into two halves that match exactly.

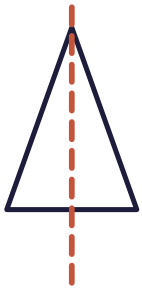
Fold it, or use a mirror

Fold along the line.
If the two halves sit exactly
on top of each other, the line
is a line of symmetry. A mirror on
the line shows the same whole shape.

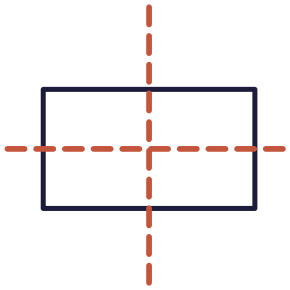




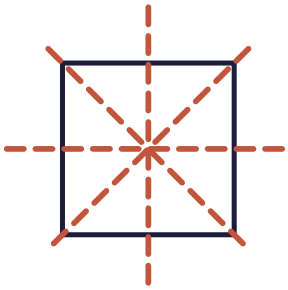
No lines



1 line



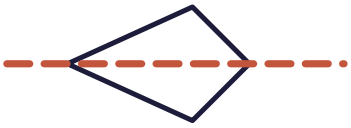
2 lines



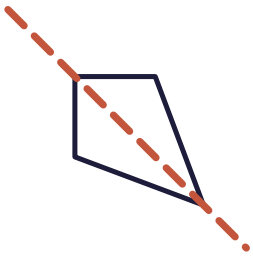
4 lines



Vertical line



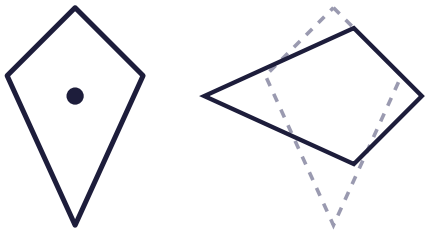
Horizontal line



Diagonal line

Rotational symmetry

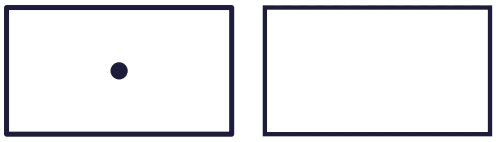
Turn a shape about its centre. How many times does it look the same in one full turn?



turned 1/4

Order 1

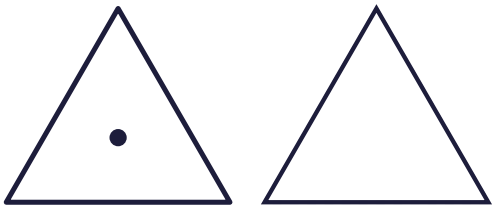
It only looks the same at the end of the full turn: no rotational symmetry.



turned 1/2

Order 2

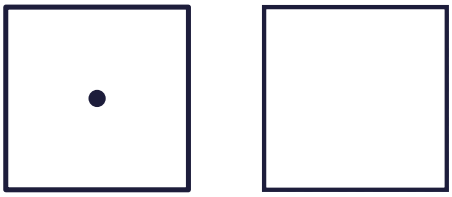
The same after a half turn and a full turn.



turned 1/3

Order 3

The same 3 times: every third of a turn.



turned 1/4

Order 4

The same 4 times: every quarter turn.

Check with tracing paper: trace the shape, put a pencil on the centre and turn.

A regular shape with n sides has n lines of symmetry and rotational symmetry of order n.