

# Rotations Worksheets - Teachers' Notes

These sheets are designed to be photocopied and given to pupils when you are using the free download *rotations.xls*

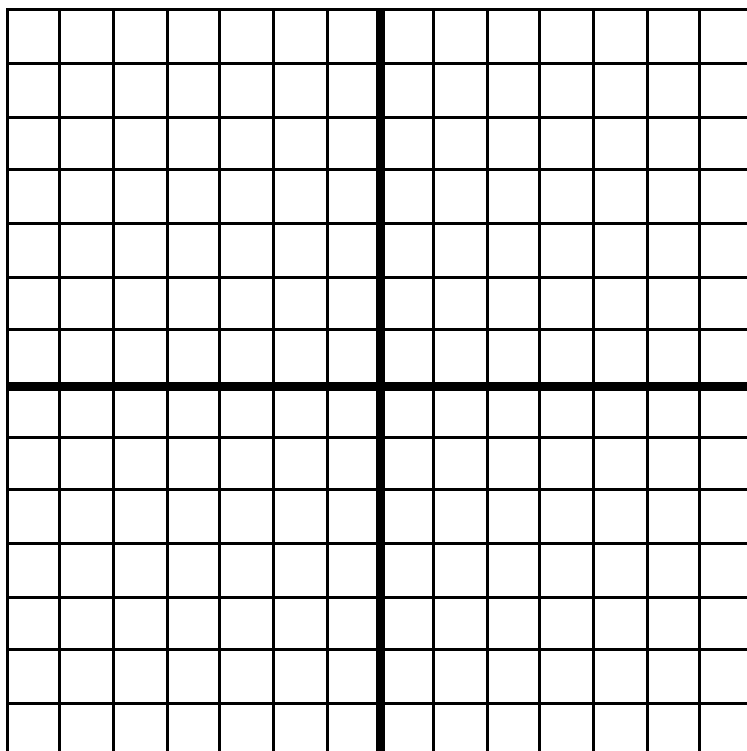
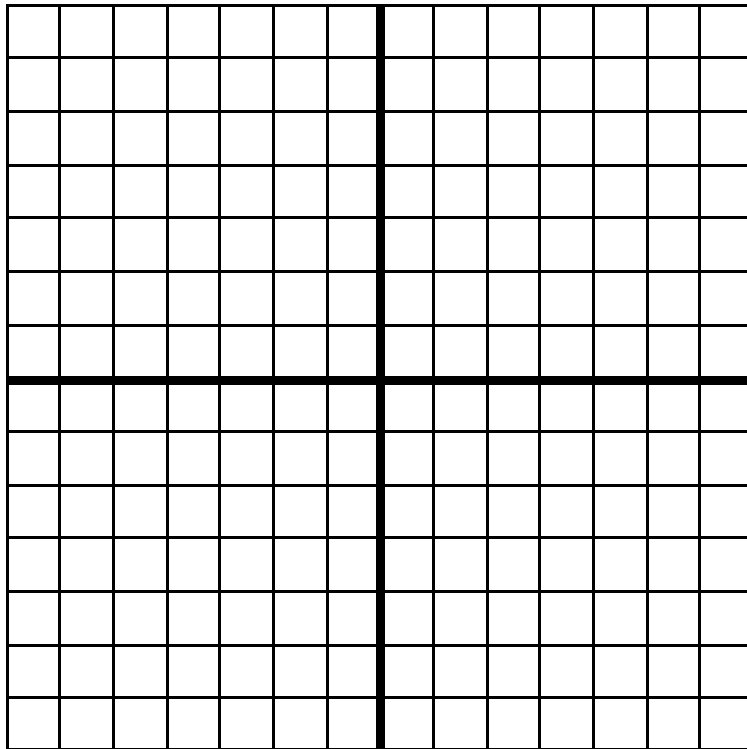
The *rotations.xls* spreadsheet can be used to demonstrate and discuss rotations with a whole class of pupils, particularly if you have got a digital projector and an interactive whiteboard.

First, create a shape in the first quadrant (upper-right quarter) of the grid by highlighting a cell or cells and clicking on the SHADE CELLS button. You could allow pupils to come out to the front and shade cells of their choice.

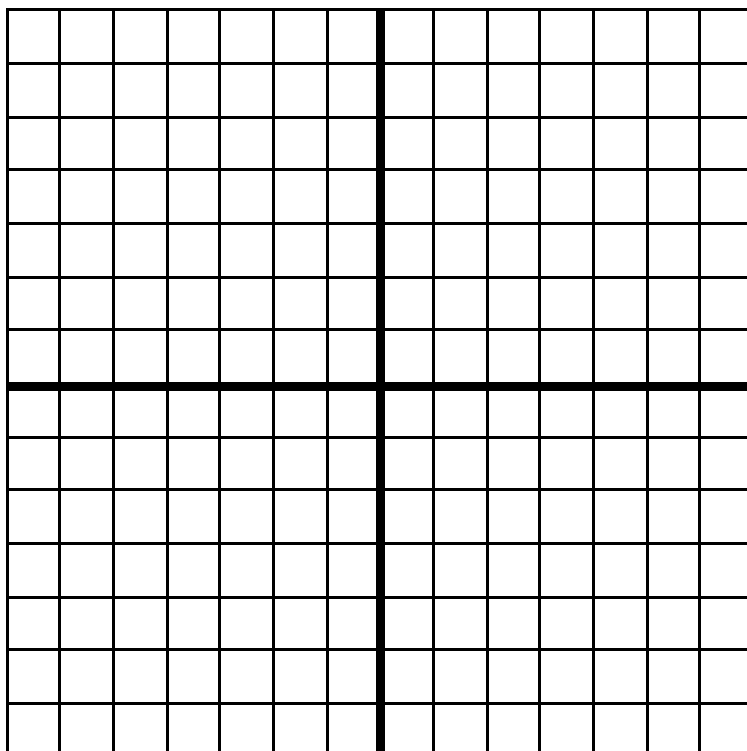
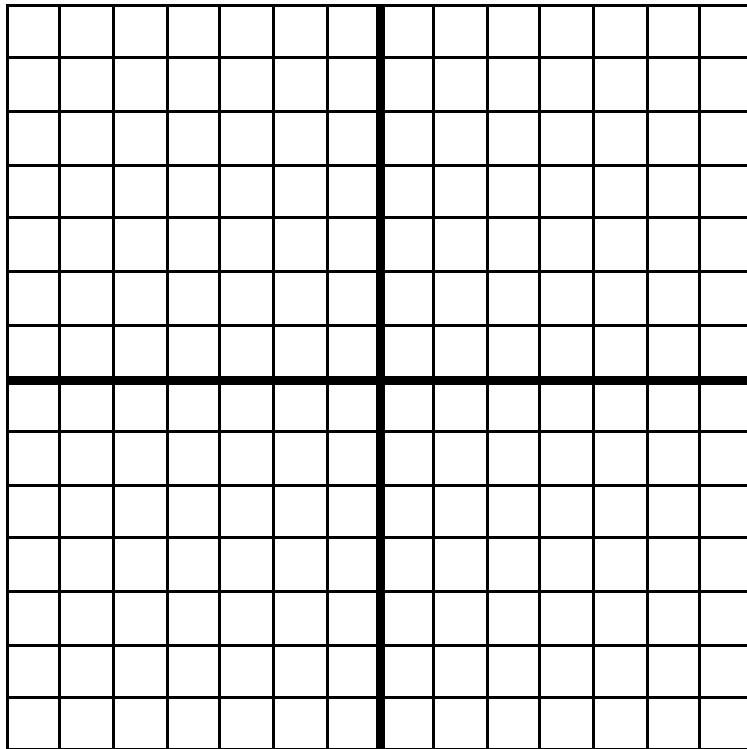
Next, ask pupils to draw the shape onto their copies of the handouts enclosed here. Also ask them to draw the image of the shape after it has been rotated clockwise a quarter-turn, or half-turn or three-quarter turn or all three.

Finally, allow pupils to check their images by clicking on the SHOW IMAGE button.

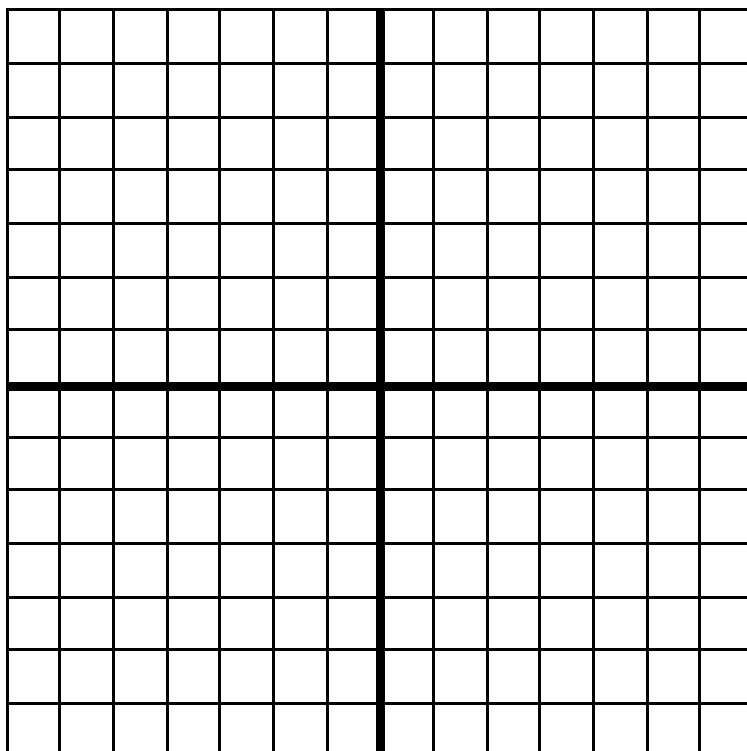
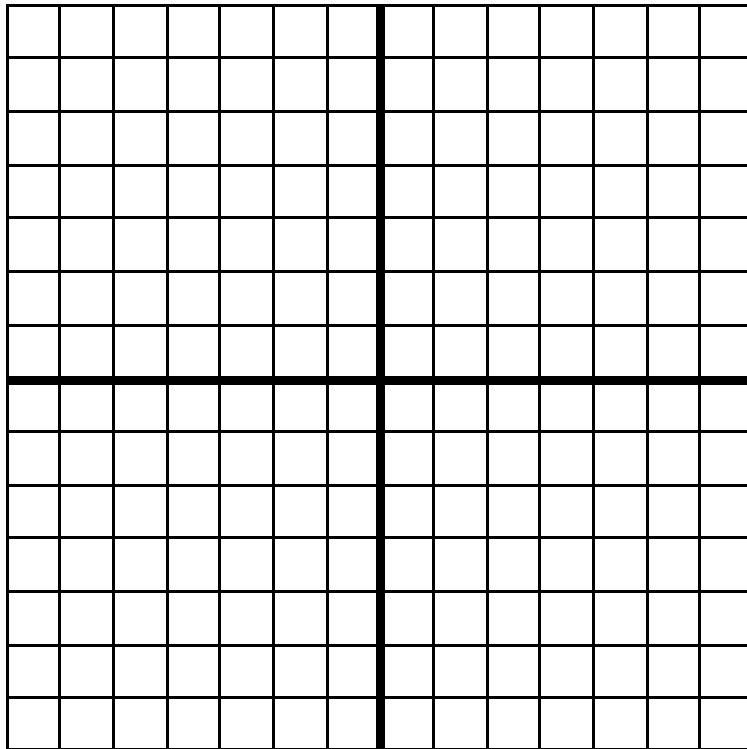
# Quarter Turn Clockwise Rotations



# Half Turn Rotations



# Three-Quarter Turn Clockwise Rotations



# $\frac{1}{4}$ , $\frac{1}{2}$ , and $\frac{3}{4}$ Turn Rotations

