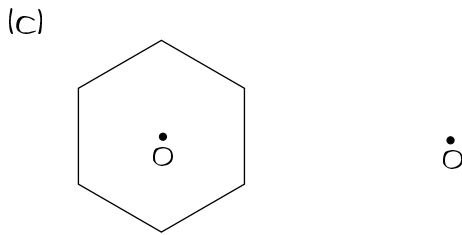
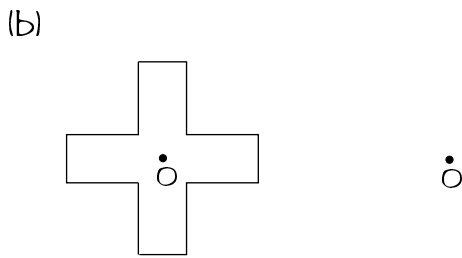
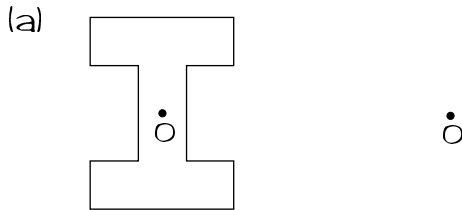
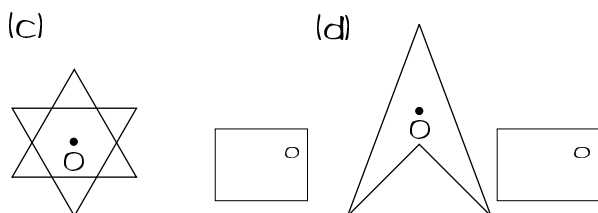
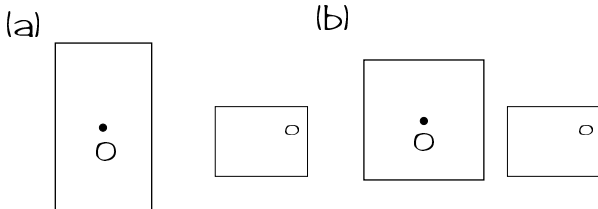




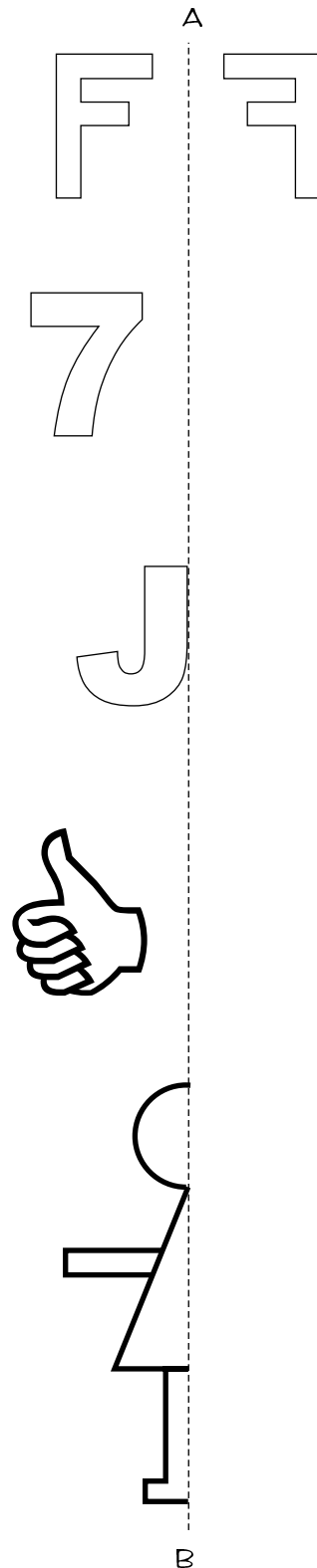
1. Redraw the following shapes after a 90° clockwise rotation about the point O.



2. Notice that the object in 1 (b) above looks the same after the 90° rotation as it did before. What is the minimum angle of clockwise rotation about O for the following shapes to look the same after rotation as before?

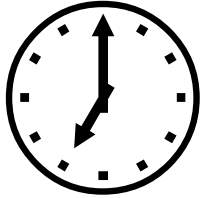


3. Draw the reflection of the shape below about the line AB. The first one is drawn as an example.

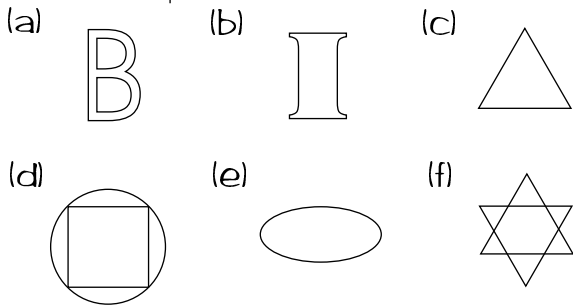
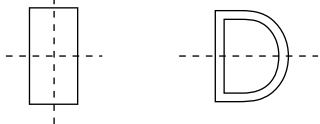




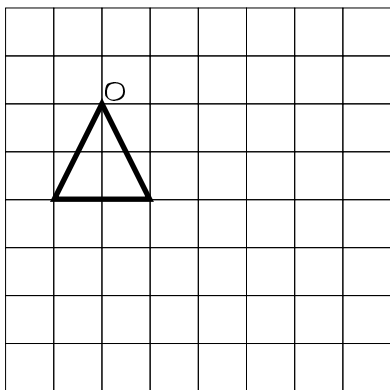
4. Billie saw the reflection of a clockface in a mirror as shown. What was the actual time?



5. Draw all the axes of symmetry (if any) on the following shapes. Two examples are shown.



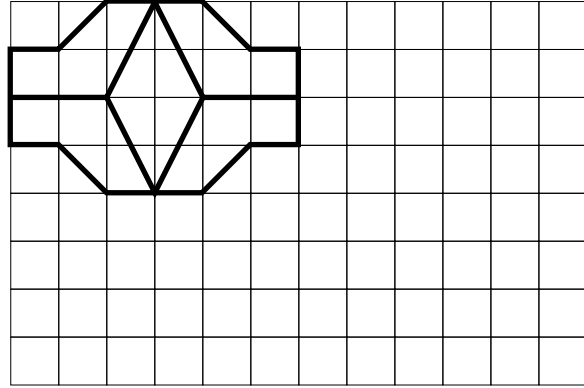
6. (a) Rotate the triangle 90° anticlockwise about point O and draw it in its new position.



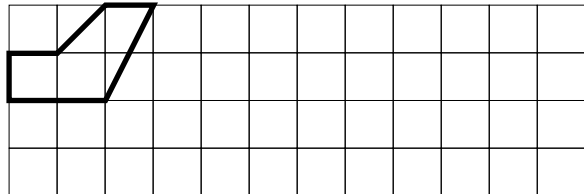
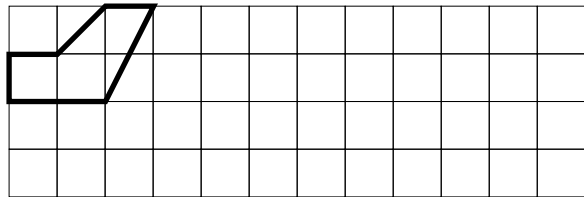
(b) Repeat this procedure until it returns to its original position. Draw the shape after each 90° rotation.

(c) Translate the complete object 3 units to the right and 3 units down and redraw it.

7. Complete this pattern over the entire grid.



8. Design two other patterns that use the same starting shape. You could use rotation or reflection to create your pattern.



9. Use only reflections to complete a pattern using the starting shape below.

