

## Rotations

A rotation about a point  $O$  through  $\alpha^\circ$  maps every point  $P$  into  $P'$  such that:

1. If  $P$  is different from  $O$ , then  $OP' = OP$  and  $m\angle P'OP = \alpha^\circ$
2. If  $P$  is the point  $O$ , then  $P'$  is the same as  $P$

The mathematical notation used to describe a rotation is  $R_{(a,b) 30^\circ}(x, y)$ .

That is read *a rotation of  $(x, y)$  about the point  $(a, b)$  through  $30^\circ$ .*

