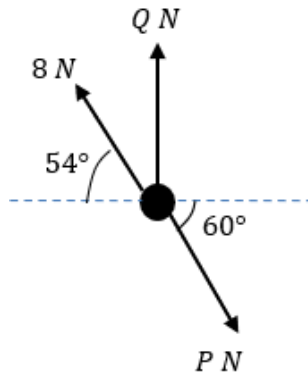


## 7.1) Static particles

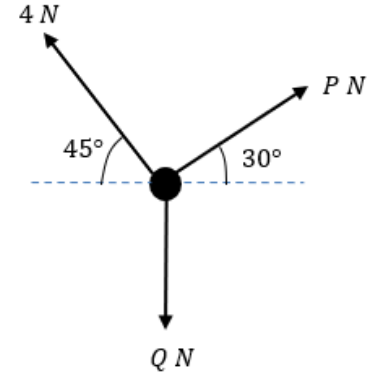
## Worked example

The diagram shows a particle in equilibrium under the forces shown. By resolving horizontally and vertically find the magnitudes of the forces  $P$  and  $Q$ .



## Your turn

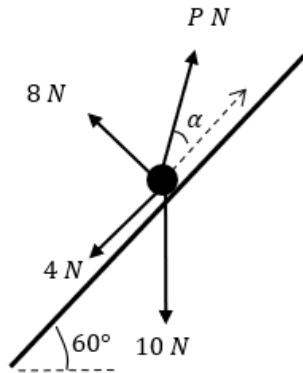
The diagram shows a particle in equilibrium under the forces shown. By resolving horizontally and vertically find the magnitudes of the forces  $P$  and  $Q$ .



$$P = 3.27, Q = 4.46 \text{ (3 sf)}$$

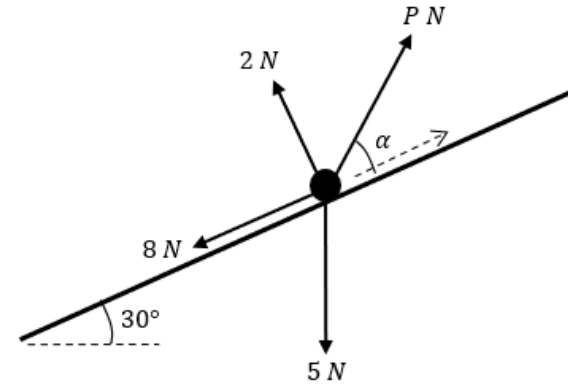
## Worked example

The diagram shows a particle in equilibrium on an inclined plane under the forces shown. Find the magnitude of the force  $P$  and the size of the angle  $\alpha$ .



## Your turn

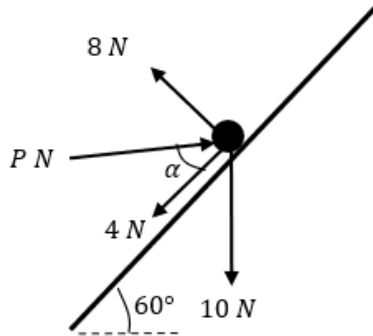
The diagram shows a particle in equilibrium on an inclined plane under the forces shown. Find the magnitude of the force  $P$  and the size of the angle  $\alpha$ .



$$P = 10.8, \alpha = 12.5^\circ \text{ (3 sf)}$$

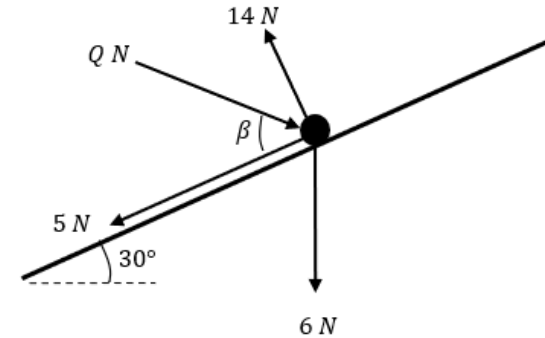
## Worked example

The diagram shows a particle in equilibrium on an inclined plane under the forces shown. Find the magnitude of the force  $P$  and the size of the angle  $\alpha$ .



## Your turn

The diagram shows a particle in equilibrium on an inclined plane under the forces shown. Find the magnitude of the force  $Q$  and the size of the angle  $\beta$ .



$$Q = 11.9, \beta = 47.7^\circ \text{ (3 sf)}$$