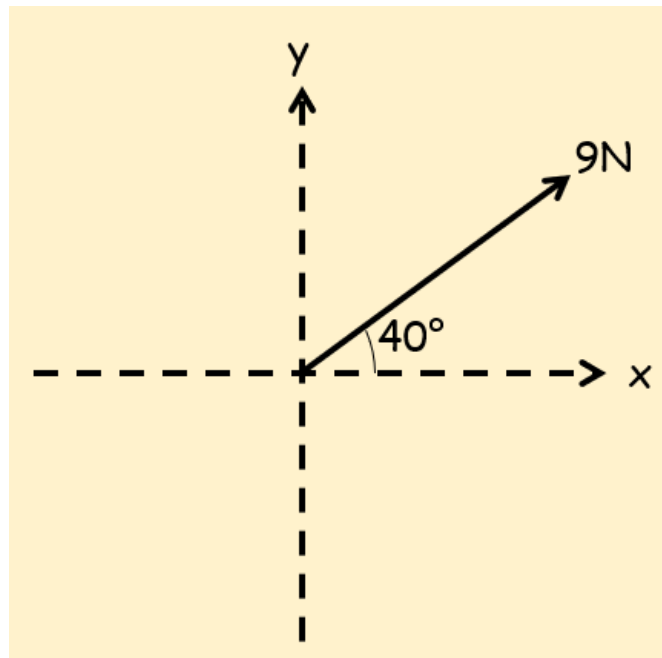


5A Forces at Angles

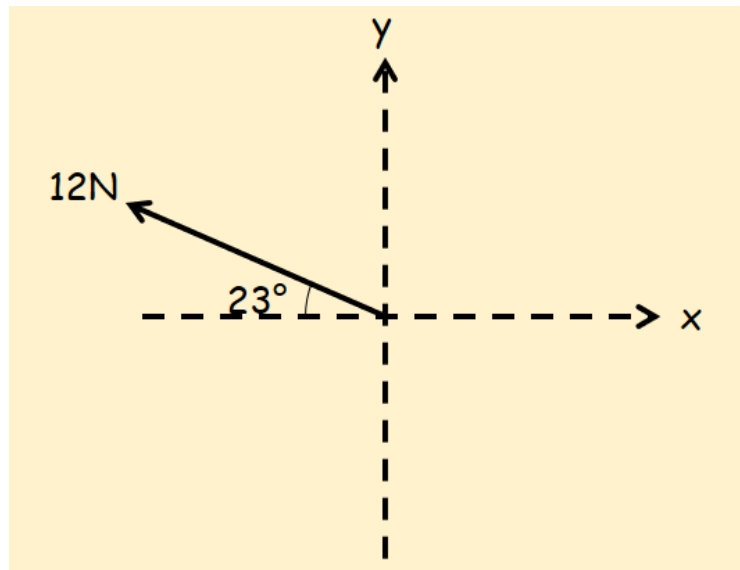
1. Find the component of each force in the x and y-directions.

Hence, write each force in the form $(p\mathbf{i} + q\mathbf{j})N$

a)



b)

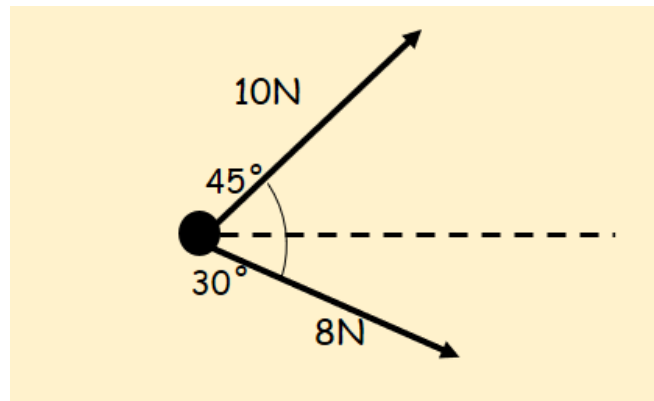


2. A box of mass 8kg lies on a smooth horizontal floor. A force of 10N is applied at an angle of 30° causing the box to accelerate horizontally across the floor.

a) Work out the acceleration of the box

b) Calculate the normal reaction between the box and the floor

3. Two forces, P and Q , act upon a particle as shown in the diagram. Work out the magnitude and direction of the resultant force.



4. Three forces act on a particle as shown. Given that the particle is in equilibrium, calculate the magnitude of P and the value of θ .

