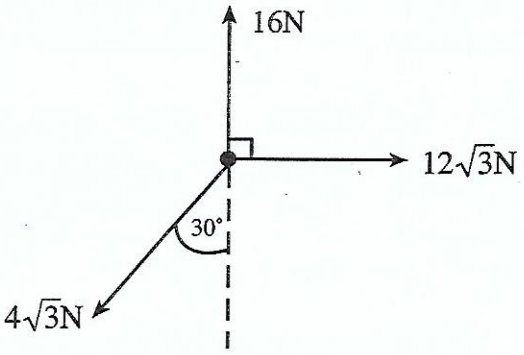
RESULTANT FORCE :

4. A particle A is moving on a smooth horizontal floor under the resultant action of three horizontal forces of magnitudes 16 N, $12\sqrt{3}$ N and $4\sqrt{3}$ N acting in directions shown in the diagram below.

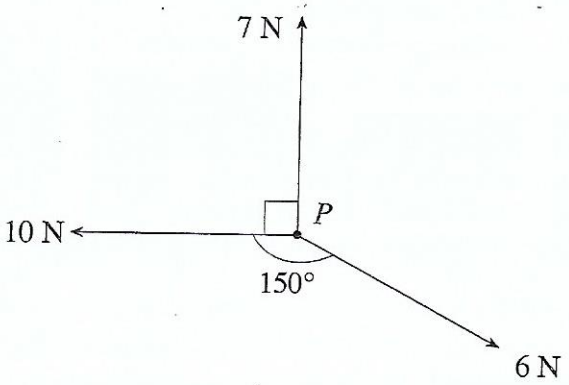
M1 JUNE 2001



(a) Show that the resultant of the three forces has magnitude 20 N and find the angle it makes with the force of magnitude 16 N. [7]

8. A particle P is on a horizontal plane. Three horizontal forces of magnitude 7 N, 10 N and 6 N, acting in directions as shown in the diagram, are applied to P.

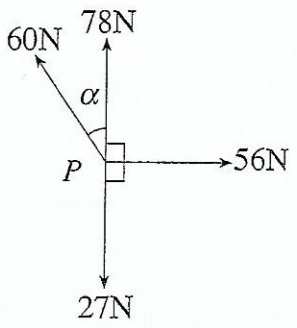
M1 MAY 2002



(a) Show that the resultant of these three forces has magnitude of approximately 6·25 N, and find the angle between its direction and that of the 7 N force. [8]

7. Four horizontal coplanar forces have magnitudes 78 N, 56 N, 27 N, 60 N and act at the point P in the directions shown on the diagram, where $\tan\alpha = \frac{3}{4}$.

M1 JUNE 2005



Find the magnitude and direction of the resultant. [8]