

Mathematics Questions by Topics

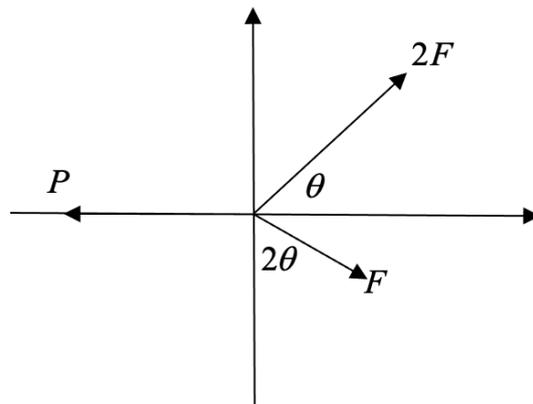
Motion and Force

Question 14

Source: K16SM2Q17

Question 14

A body is on a horizontal smooth plane and acted upon by three forces, with magnitudes and directions as shown in the diagram below.



The correct statement relating the magnitude of the forces and the angle θ is

- A. $P = 3F$
- B. $P = 3F \sin(3\theta)$
- C. $P = 3F \cos(3\theta)$
- D. $P = 2F \sin(\theta) + F \cos(2\theta)$
- E. $\theta = \sin^{-1}\left(\frac{\sqrt{3}-1}{2}\right)$