

**Mathematics Questions by Topics**

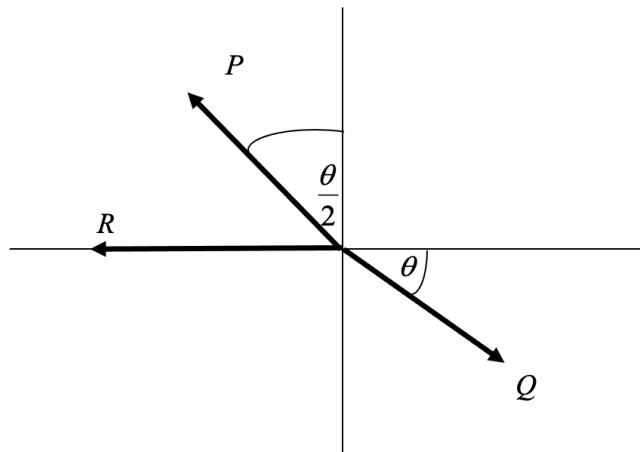
Motion and Force

Question 8

Source: K19SM2Q12

**Question 8**

Three coplanar forces of magnitudes  $P$ ,  $Q$  and  $R$  newtons act on a particle that is in equilibrium as shown in the diagram below.



Then,

- A.**  $P \sin\left(\frac{\theta}{2}\right) = Q \cos(\theta)$
- B.**  $P \cos\left(\frac{\theta}{2}\right) + R = Q \sin(\theta)$
- C.**  $P = Q \sin\left(\frac{\theta}{2}\right)$
- D.**  $P = 2Q \sin\left(\frac{\theta}{2}\right)$
- E.**  $P + Q + R = 0$