

Mathematics Questions by Topics

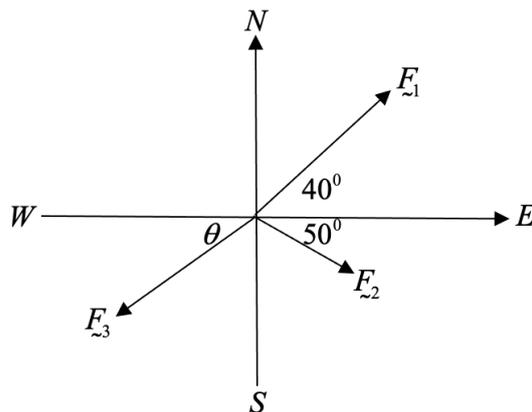
Motion and Force

Question 17

Source: K15SM2Q17

Question 17

A body is on a horizontal smooth plane and acted upon by three forces, F_1 , F_2 and F_3 . A north-south west-east framework is shown.



Given that $|F_1| = 10$, $|F_2| = 5$ and let $F_3 = |F_3|$ and that the body moves in the north direction, then

- A. $F_3 \cos(\theta) = 10.874$ and $F_3 \sin(\theta) > 2.598$
- B. $F_3 \cos(\theta) = 10.874$ and $F_3 \sin(\theta) < 2.598$
- C. $F_3 \sin(\theta) = 2.598$ and $F_3 \sin(\theta) < 10.874$
- D. $F_3 \sin(\theta) = 10.874$ and $F_3 \cos(\theta) > 2.598$
- E. $F_3 \sin(\theta) = 10.874$ and $F_3 \cos(\theta) < 2.598$