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.
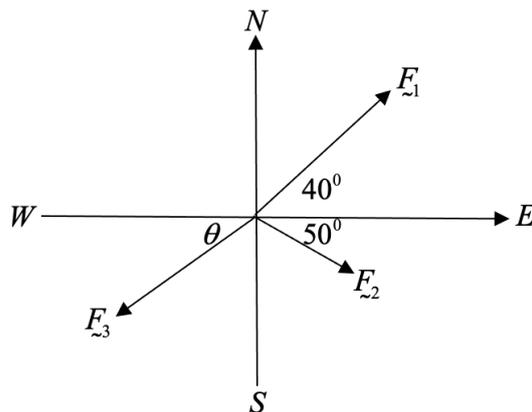
Given that $\left|F_1\right|=10$, $\left|F_2\right|=5$ and let $F_3 = \left|F_3\right|$ and that the body moves in the north direction,

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 $F_3\cos(\theta)<2.598$