Question 36815

We are given force vectors $\vec{F}_1(16,-11)$ and $\vec{F}_2(8,18)$. The net (resultant) force is $\vec{F}(24,7)$. The magnitude of this force is $F=\sqrt{24^2+7^2}=25\,N$. Hence, according to 2$^{\text{nd}}$ Newtons law, magnitude of acceleration is $a=\dfrac{F}{m}=\dfrac{25\,N}{10\,kg}=2.5\,\dfrac{m}{s^2}$.