Subiectul A. MECANICĂ

Nr. item	Soluţie/Rezolvare
II.a.	$\vec{G}+\vec{N}+F_f=m\vec{a}$ $mg\sin\alpha-\mu mg\cos\alpha=ma$ $a=g(\sin\alpha-\mu g\cos\alpha)$ Rezultat final: $a=5\left(1-\frac{\sqrt{3}}{10}\right)m/s^2\cong 4{,}13\,m/s^2$
b.	$v_m=\frac{d_{AB}}{\Delta t}$ $v_m=\frac{0+v}{2}$ $a=\frac{\Delta v}{\Delta t}$ $v=\sqrt{\frac{2ah}{\sin\alpha}}$ Rezultat final: $v\cong 2{,}88\,m/s^2$
c.	$F_{\min}=mg\sin\alpha-\mu mg\cos\alpha$ Rezultat final: $F_{\min}=0{,}5\left(1-\frac{\sqrt{3}}{10}\right)N\cong 0{,}4\,N$
d.	La ridicare uniformă: $F_{\min}=mg\sin\alpha+\mu mg\cos\alpha$ Rezultat final: $F_{\min}=0{,}5\left(1+\frac{\sqrt{3}}{10}\right)N\cong 0{,}59\,N$