

Subiectul A. MECANICĂ

Nr. item	Soluție/Rezolvare
III.a.	$P = F \cdot v$ $F = \frac{P}{v} = 5000 \text{ N}$
b.	$F - fmg = ma$ $a = \frac{F}{m} - fg = \frac{P}{mv} - fg$ <p>Rezultat final: $a = 4 \text{ m/s}^2$</p>
c.	$v = \frac{P}{F} = \frac{P}{m(a + fg)}$ $v_{\max} = \frac{P}{F_{\min}} = \frac{P}{fmg}$ <p>Rezultat final: $v_{\max} = 35 \text{ m/s}$</p>
d.	$\Delta E_c = \frac{m \cdot v_{\max}^2}{2}$ $\Delta E_c = 612500 \text{ J}$