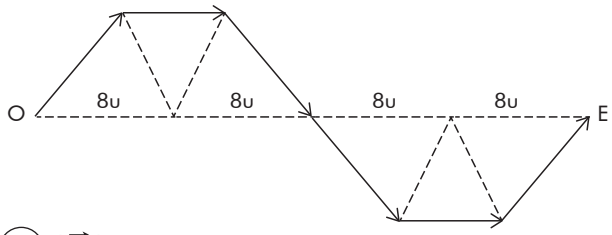
Resolução dos exercícios de casa do Caderno Extensivo – FI – Torres

Cad. 1 – F1

Pag. 55 T. 4



(b) $|\vec{S}| = 32\ U$

Cad. 1 – F1

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$$F = m_A \cdot a \Rightarrow m_A = \frac{F}{a}$$

$$F = m_B \cdot b \Rightarrow m_B = \frac{F}{b}$$

$$F = (m_A + m_B) \cdot a_{AB} \Rightarrow F = \left(\frac{F}{a} + \frac{F}{b}\right) \cdot a_{AB}$$

$$F = F \cdot \left(\frac{1}{a} + \frac{1}{\frac{a}{2}}\right) \cdot a_{AB} \Rightarrow 1 = \frac{3}{a} \cdot a_{AB} \Rightarrow a_{AB} = \frac{a}{3}$$

(d)

Cad. 1 – F1

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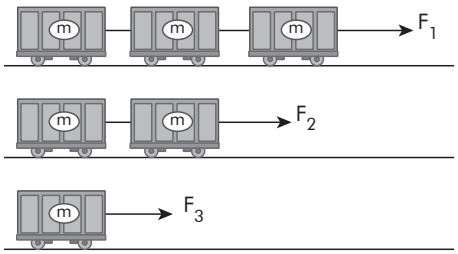

$$F_1 = 3m \cdot a \Rightarrow a = \frac{F_1}{3 \cdot m}\ (1)$$

$$F_2 = 2m \cdot a \Rightarrow a = \frac{F_2}{2 \cdot m}\ (2)$$

$$F_3 = m \cdot a \Rightarrow a = \frac{F_3}{m}\ (3)$$

(1) = (2) = (3) = a

$$\frac{F_1}{3m} = \frac{F_2}{2m} = \frac{F_3}{m} \Rightarrow \frac{F_1}{3} = \frac{F_2}{2} = F_3$$

(a)