

Problem No: 15-35

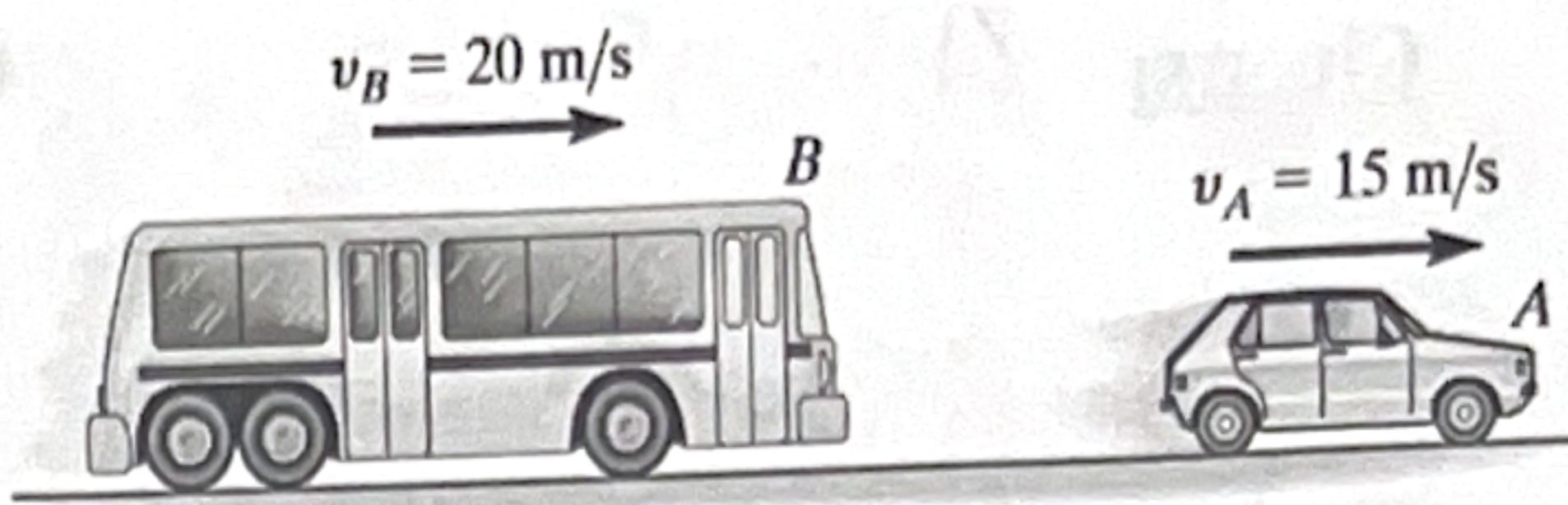
Date:

MECHANICAL AND NUCLEAR
ENGINEERING
DEPARTMENT

Name:

Section:

Givens: $M_B = 5M_A$ $v_{B_i} = 20 \text{ m/s}$
 $M_A = 2M_B$ $v_{A_i} = 15 \text{ m/s}$



Finds:

$$V_f$$

Relationships:

$$M_B v_{B_i} + M_A v_{A_i} = (M_A + M_B) V_f$$

$$V_f = 18.6 \text{ m/s}$$

Problem No: 15-39

Date:

MECHANICAL AND NUCLEAR
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Section:

Givens: $\theta_1 = 0^\circ$ $\theta_2 = 60^\circ$ $m_b = 2\text{kg}$ $m_{bl} = 4\text{kg}$

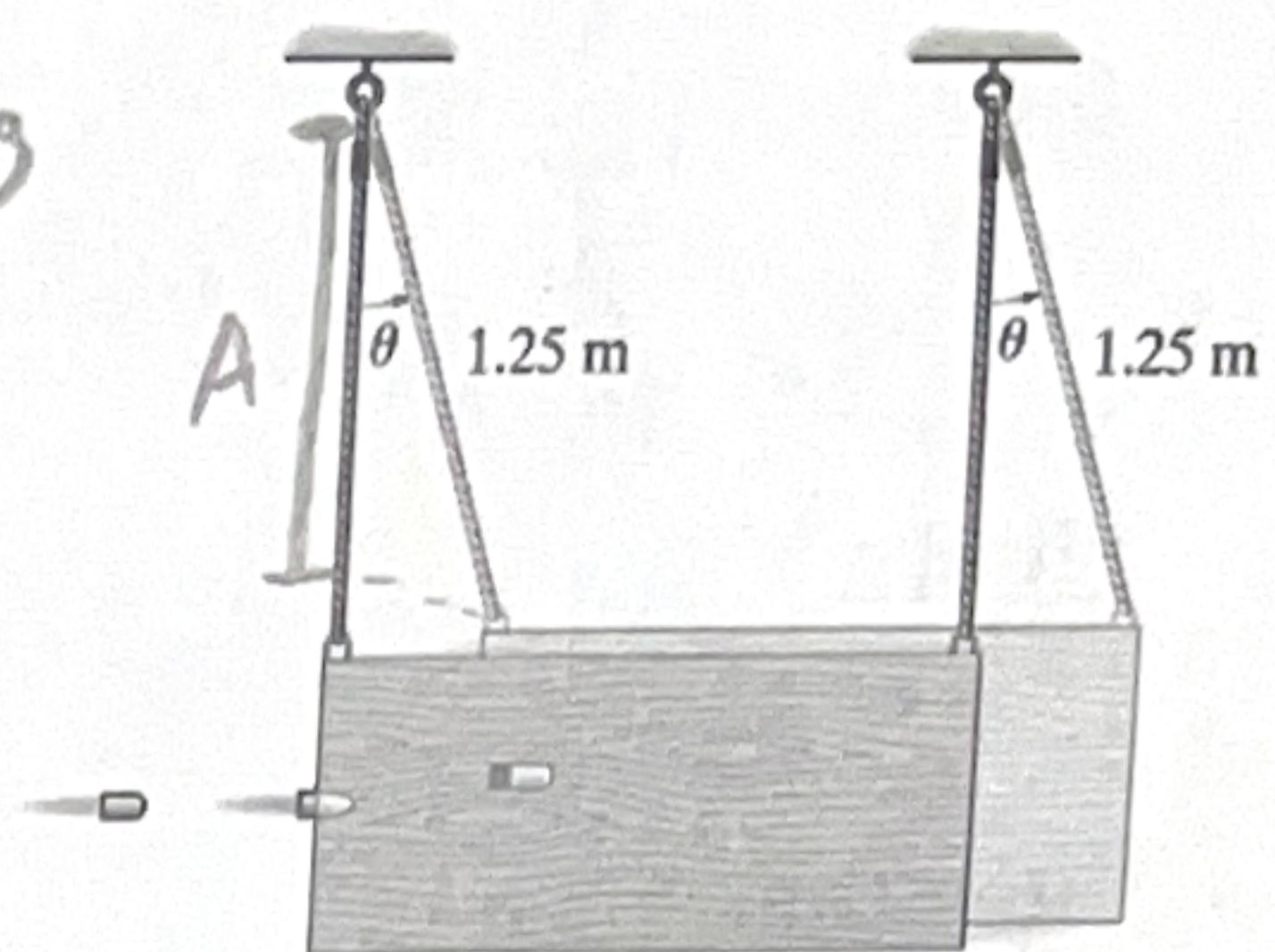
Finds: v_i

Relationships:

$$E_i = E_f$$

$$\frac{1}{2} m_b v_i^2 = (m_b + m_{bl}) g h$$

$$v_i = 16.4 \text{ m/s}$$



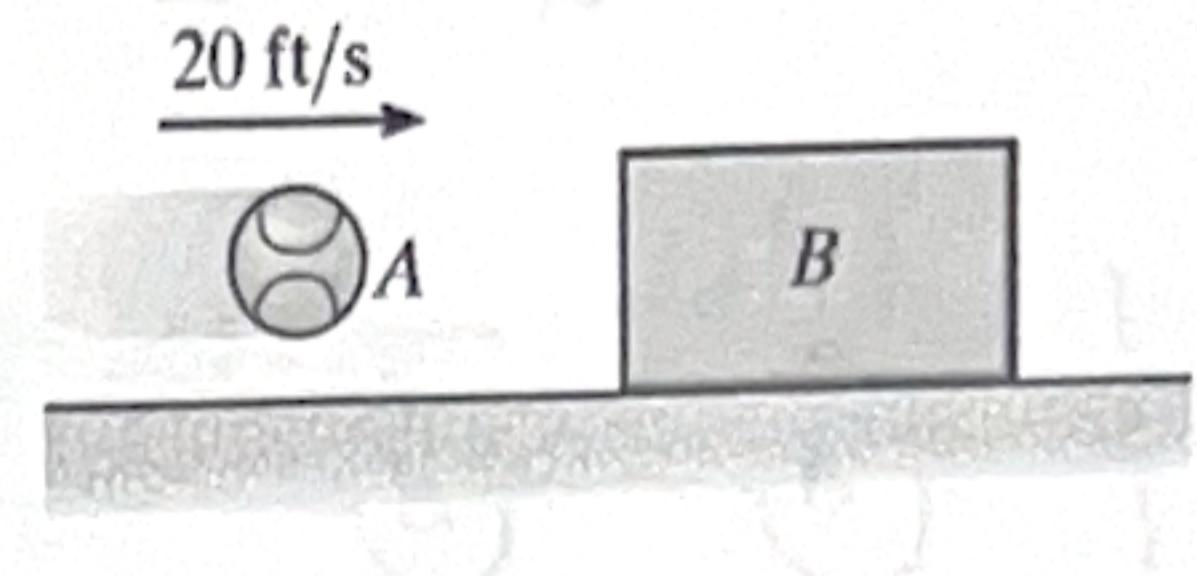
$$\cos \theta = \frac{A}{1.25}$$

$$1.25 \cos \theta = A$$

$$h = 1.25 - A = 0.00$$

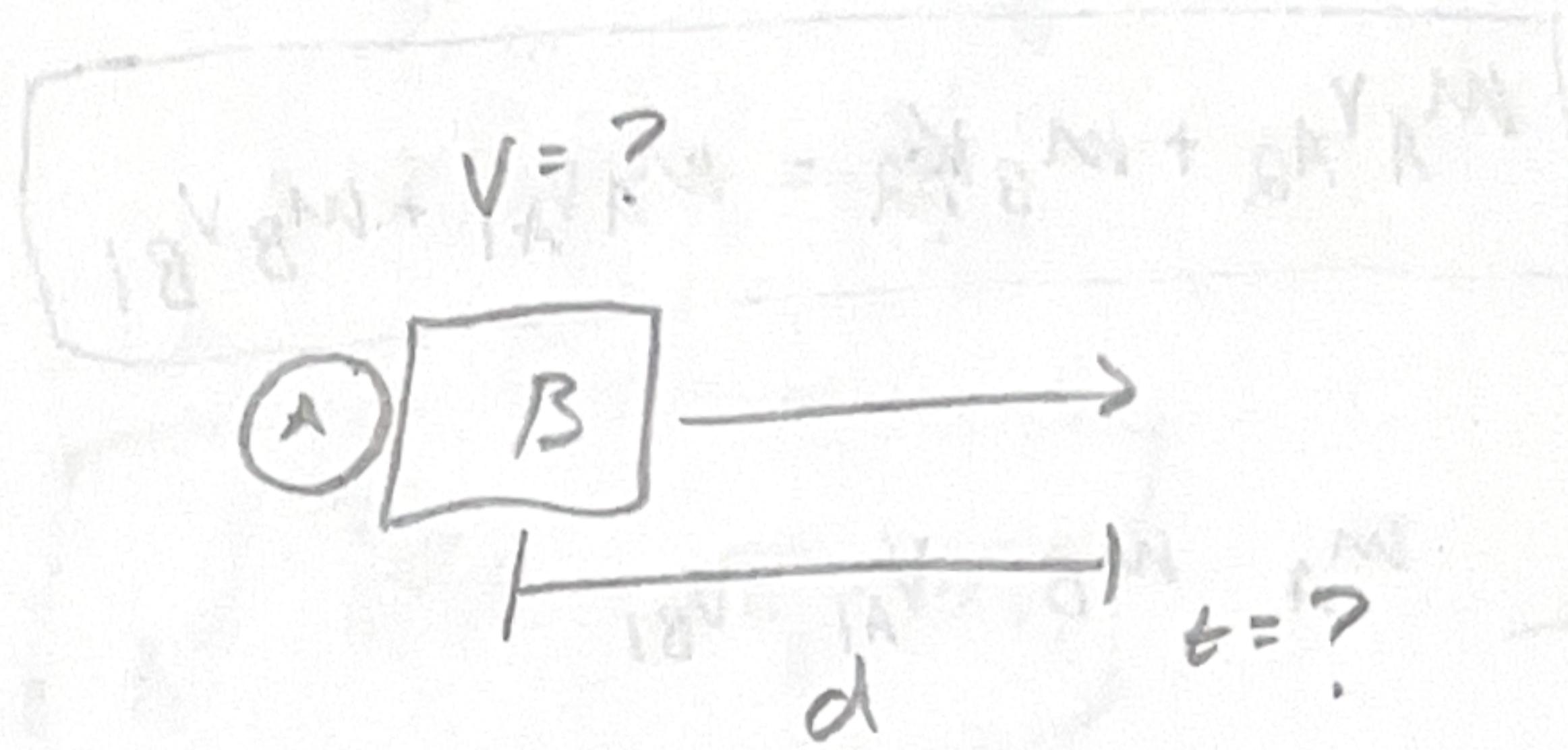
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|-------------------|---|----------|
| Problem No: 15-65 | MECHANICAL AND NUCLEAR ENGINEERING DEPARTMENT | Name: |
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Givens: $w_A = 1 \text{ lb}$ $w_B = 10 \text{ lb}$ $\rho = 0.6$
 $v_A = 20 \text{ ft/s}$ $M_K = 0.4$



Finds: $t @ v_B = 0$

Relationships:



$$v_B = 0$$

$$d = 18 \text{ ft}$$

$$F = 20 \text{ lb}$$

$$F = 18 \text{ lb}$$

$$\bullet (20 - 18) s = 18 \text{ ft} - 0 \text{ ft}$$

$$2 \text{ ft/s} = 0 \text{ ft/s}$$

$$2 \text{ ft/s} = 0 \text{ ft/s}$$

1 > 0 written sideways

1 > 0 written sideways

done yet? - 0 > 0 written sideways