

$$\textcircled{1} F = 300 \text{ N} \quad \frac{300 = m \cdot 30}{30 \quad 30}$$

$$A = 30 \text{ m/s}^2$$

$$10 \text{ kg} = m$$

$$\textcircled{2} \frac{45,000 \text{ g}}{1000} = \frac{1 \times 10^{-3} \text{ kg}}{1} = 45 \text{ kg}$$

$$M = 45 \text{ kg}$$

$$A = 9.8 \text{ m/s}^2$$

$$F = 45 \cdot 9.8$$

$$F = 441 \text{ N}$$

$$\textcircled{3} F = 750 \text{ N} \quad \frac{750 = m \cdot 9.8}{9.8 \quad 9.8}$$

$$A = 9.8 \text{ m/s}^2$$

$$76.53 \text{ kg} \approx m$$

$$\begin{array}{r} 7 \\ 9.810 \\ -8.13 \\ \hline 1.67 \end{array}$$

$$\text{Moon } A = 1.67 \text{ m/s}^2$$

$$M = 76.53 \text{ kg}$$

$$1.67 \cdot 76.53 = 127.8 \text{ N}$$

$$④ P = mv$$

$$(5) 4.7 = \frac{v_f - 0}{5} \text{ (s)}$$

$$a = 4.7 \text{ m/s}^2$$

$$23.5 = v_f$$

$$t = 5 \text{ s}$$

$$f = 50,000 \text{ N}$$

$$\frac{50,000}{4.7} = \frac{m \cdot 4.7}{4.7}$$

$$P = 10,638.3 \cdot 23.5$$

$$10,638.3 \text{ kg}$$

$$P = 250,000 \frac{\text{kg} \cdot \text{m}}{\text{s}}$$

⑤ Object A

- mass: 43 kg

- acceleration: 0.95 m/s²

- Force: ? 40.85 N

Object B

- mass: 29 kg

- acceleration: 0.95 m/s²

- Force: 27.55

$$40.85 - 27.55 = 13.3 \text{ N Right (East)}$$

$$\textcircled{b} \quad 30 \text{ Tg} \rightarrow \frac{1 \times 10^{12} \text{ g}}{1 \text{ Tg}} \times \frac{1 \times 10^{-3} \text{ kg}}{1 \text{ g}} = 3.0 \times 10^{10} \text{ kg}$$

$$p = mv$$

$$p = (3.0 \times 10^{10}) (3.9 \text{ m/s})$$

$$\frac{1.17 \times 10^{11} \text{ kg} \cdot \text{m}}{\text{s}}$$