

$2 \text{ gr} / \text{cm}^3 = \dots \text{ kg} / \text{m}^3$
 $= \frac{2 \cdot 10^{-3}}{10^{-6}}$

$$\begin{aligned}
 2 \text{ gr} / \text{cm}^3 &= \dots \text{ kg} / \text{m}^3 \\
 &= \frac{2 \cdot 10^{-3}}{10^{-6}} \text{ kg} / \text{m}^3 \\
 &= 2 \cdot 10^{-3} \cdot 10^6 \text{ kg} / \text{m}^3 \\
 &= 2 \cdot 10^3 \\
 &= 2000 \text{ kg} / \text{m}^3
 \end{aligned}$$



$$9,5 \text{ gr/cm}^3 = \frac{9,5 \cdot 10^{-3}}{10^{-6}} \text{ kg/m}^3$$

$$\begin{aligned} 9,5 \text{ gr/cm}^3 &= \frac{9,5 \cdot 10^{-3}}{10^{-6}} \text{ kg/m}^3 \\ &= 9,5 \cdot 10^{-3} \cdot 10^6 \\ &= 9,5 \cdot 10^3 \\ &= 9500 \text{ kg/m}^3 \end{aligned}$$

3 $0,5 \text{ m} = \dots \text{ cm}$

$$\begin{aligned} 0,5 \text{ m} &= 0,5 \times 10^2 \text{ cm} \\ &= \underline{\underline{50 \text{ cm}}} \end{aligned}$$

4. $36 \text{ km/jam} = \dots \text{ m/s}$

$$36 \text{ km/jam} = \frac{36 \cdot 10^3}{3600} \text{ m/s}$$

$$= \frac{\cancel{36} \cdot 10^3}{\cancel{36} \cdot 10^2}$$

$$= \frac{10^3}{10^2}$$

$$= 10^3 \cdot 10^{-2}$$

$$= 10^1 \text{ m/s}$$

$$18 \text{ km/h} = \dots \text{ m/s}$$

$$18 \text{ km/h} = \frac{18 \cdot 10^3}{3600} \text{ m/s}$$

$$= \frac{18 \cdot 10^3}{3600}$$

$$= \frac{18 \cdot 10^3}{36 \cdot 10^2}$$

$$= \frac{1 \cdot 10^3}{2 \cdot 10^2}$$

$$= \frac{1 \cdot 10^3 \cdot 10^{-2}}{2}$$

$$= \frac{1}{2} \cdot 10$$

$$= 5 \text{ m/s}$$

6.	penurunan dimensi energi kinetik
	$E_k = \frac{1}{2} mv^2$

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m	Besaran massa	satuan kg (m)	dim [M]
v	kel	m/s	[LT ⁻¹]

$$[M] \cdot [LT^{-1}]^2$$

$$[M] \cdot [L^2 T^{-2}]$$

$$F = MA$$

$$F = m a$$

$$m \Rightarrow \text{mass} \Rightarrow \text{kg} \Rightarrow [M]$$

$$a \Rightarrow \text{Percepatan} \Rightarrow m/s^2 \Rightarrow [L T^{-2}]$$

$$[M][L][T^{-2}]$$

$$E = \frac{F L_0}{A \Delta L}$$

$$E = \frac{F L_0}{A \Delta L} \rightarrow L_0 \quad L_1$$

$$\Delta L = L_1 - L_0$$

$$\Rightarrow \text{Gayda} \Rightarrow \text{kg} \frac{\text{m}}{\text{s}^2} \Rightarrow [M][L T^{-2}]$$

$$\Rightarrow \text{Panjang awal} \Rightarrow m \Rightarrow [L]$$

$$\Rightarrow \text{Luas} \Rightarrow m^2 \Rightarrow [L^2]$$

$$\Rightarrow \Delta L \Rightarrow m \Rightarrow [L]$$

$$\frac{[M][\cancel{L}][T^{-2}][\cancel{L}]}{[\cancel{L^2}][L]} = \frac{[M][T^{-2}][\cancel{L^{-1}}]}{[\cancel{L^{-1}}]}$$

$$S = \frac{V_0^2}{g}$$

$S \Rightarrow \text{Jarak} \Rightarrow m \Rightarrow [L]$

$\Rightarrow V_0 = m/s = [L T^{-1}] \Rightarrow \text{kecepatan}$

$g = \text{Percepatan} = m/s^2 \Rightarrow [L T^{-2}]$

$$\frac{[L T^{-1}]^2}{[L T^{-2}]} \Rightarrow$$

$$\frac{[L^2][T^{-2}]}{[L][T^{-2}]}$$

$$= [L]$$

Pembulatan

- $< 5 \rightarrow 0 \downarrow \Rightarrow 2,81 = 2,80$
- $> 5 \rightarrow 0 \uparrow \Rightarrow 3,59 = 3,60$
- $= 5 \rightarrow \text{Genap} \Rightarrow 11,845 = 11,840$
- $= 5 \rightarrow \text{Ganjil} \Rightarrow 11,975 = 11,980$

Penjumlahan & Pengurangan \rightarrow Sesuai jumlah desimal paling sedikit

- $\cdot 2,239 \text{ mm}$ (3 desimal) + $2,0345$ (4 desimal)
- $= 4,2685 \text{ mm} \rightarrow$ jadi 3 desimal $\rightarrow 4,268 \text{ mm}$
- $\cdot 34,369 \text{ mm}$ (3 desimal) + $1,2 \text{ gr}$ (1 desimal)
- $= 35,769 \text{ gr} \rightarrow$ jadi 1 desimal $\rightarrow 35,8 \text{ gr}$

$$\begin{array}{r}
 \begin{array}{c} 3 \\ \uparrow \end{array} \\
 \bullet 2,239 + 2,0345 \\
 \Rightarrow 2,239 \\
 \begin{array}{r} 2,239 \\ 2,0345 \\ \hline 4,2685 \end{array} + \\
 \Rightarrow \underline{\underline{4,268}}
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{c} \uparrow 3 \\ 34,369 \end{array} + \begin{array}{c} \uparrow 1 \\ 1,2 \end{array} \\
 \Rightarrow 34,369 \\
 \begin{array}{r} 34,369 \\ 1,2 \\ \hline 35,769 \end{array} + \\
 \Rightarrow 35,77 \\
 \Rightarrow 35,8
 \end{array}$$

Perkalian & Pembagian \rightarrow Sesuai Jumlah AP Paling Sedikit
 $1,23(3AP) \times 2,5(2AP) = 3,075 \rightarrow$ jadikan 2AP $\rightarrow 3,1$
 $1,23(1AP) \div 2,5(2AP) = 0,492 \rightarrow$ jadikan 2AP $\rightarrow 0,49$

$$\begin{array}{r} 1,23 \\ \times 2,5 \\ \hline 615 \\ 246 \\ \hline 3,075 \end{array}$$

$$\Rightarrow 3,08$$

$$\Rightarrow 3,1$$

$$\begin{array}{r} 0,492 \\ 2,5 \overline{) 1,22} \end{array}$$

$$\Rightarrow 0,49$$

Pemangkatan dan Penarikan skor ~ Sejumlah AP yg di Pangkat

di okorken.

$$\sqrt{49} (1AP) = 7 (1AP) \rightarrow 7,0 (2AP)$$

$$\sqrt{144} (3AP) = 12 (2AP) \rightarrow 12,0 (3AP)$$

$$1,2^2 (2AP) = 1,44 (3AP) \rightarrow 1,4 (2AP)$$

$$1,3^2 (2AP) = 1,69 (3AP) \rightarrow 1,7 (2AP)$$

$$\sqrt{49} \Rightarrow 7 \rightarrow 7,0$$

$$\sqrt{144} \Rightarrow 12 \rightarrow 12,0$$

$$1,2^2 \Rightarrow 1,44 \rightarrow 1,4$$

$$1,3^2 \Rightarrow 1,69 \rightarrow 1,7$$

B. Jawablah pertanyaan-pertanyaan berikut!

1. Besar kalor tiap satuan waktu yang mengalir pada permukaan dengan persamaan:

$$H = hA\Delta T$$

dengan H adalah kalor yang mengalir tiap satuan waktu, A luas permukaan, ΔT perubahan suhu, dan h adalah tetapan konveksi termal. Tentukan satuan h dalam SI!

$$\begin{aligned}
 H &= hA\Delta T \\
 \Rightarrow \frac{H}{A\Delta T} &= h \\
 \frac{\text{kg} \cdot \cancel{\text{m}}}{\text{s}^2} & \\
 \hline
 \cancel{\text{m}^2} \cdot \text{K} & \\
 \Rightarrow \frac{\left(\frac{\text{kg}}{\text{s}^2}\right)}{\left(\text{m} \cdot \text{K}\right)} &= \Rightarrow \frac{\text{kg}}{\text{s}^2} \times \frac{1}{\text{m} \cdot \text{K}} \Rightarrow \frac{\text{kg}}{\text{m} \cdot \text{K} \cdot \text{s}^2}
 \end{aligned}$$

2. Tentukan dimensi.
a. Hambatan jenis (ρ)

$$R = \frac{\rho}{A}$$

hambatan, A = luas permukaan, dan ρ = massa jenis)

$$\rho \Rightarrow \text{massa jenis} \Rightarrow \text{kg/m}^3 \Rightarrow [M L^{-3}]$$

$$A \Rightarrow \text{luas} \Rightarrow \text{m}^2 \Rightarrow [M^2]$$

$$R = \frac{[M] [L^{-3}]}{[M^2]}$$

$$= [M^{-1}] [L^{-3}]$$