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8.3 (By Akuoma)

(1)

a) SI unit → m/s

45 km → 45,000 m

1 hour → 3600 seconds

$\frac{45,000}{3600} = 12.5$

12.5 m/s

b) SI unit → kg/s

1800g → 1.8 kg

1 minute → 60 seconds

$\frac{1.8}{60} = 0.03$ kg/s

c) SI unit → kg/m³

7g → 0.007

$cm^3 \rightarrow m^3$

$\times 10^{-6}$

$\frac{0.007}{10^{-6}} = 7000$

7000 kg/m³

d) SI unit → kg/m³

540g → 0.54 kg

$\times 10^{-3}$

0.54 kg/m³

e) SI unit → kg/m³

$\frac{1.2 \times 10^{-4}}{10^{-6}} = 120$

120 kg/m³

f) SI unit → kg/m³

$cm^3 \rightarrow m^3$

$\times 10^{-6}$

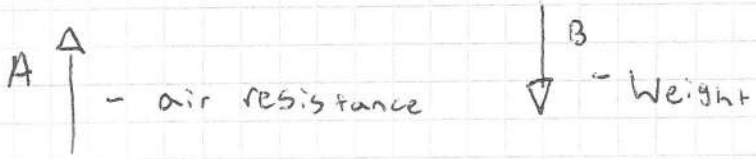
g → kg

$\times 10^{-3}$

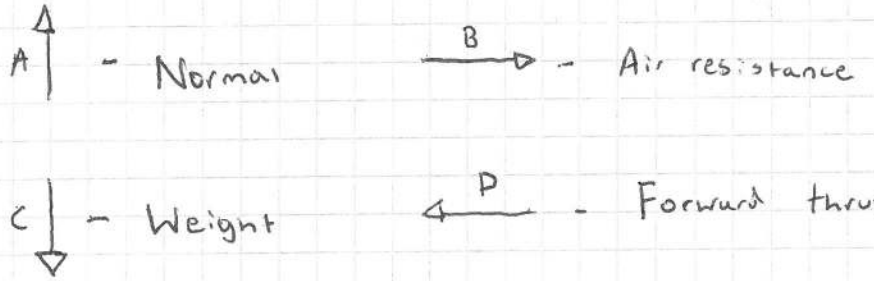
$\frac{4.1 \times 10^5 \times 10^{-3}}{10^{-6}}$

$= 4.1 \times 10^8$ kg/m³

(2) a)



b)



c)