

1.1

Ans:

- (a) $4.65735 \text{ m} = \underline{4.66 \text{ m}}$
- (b) $55.578 \text{ s} = \underline{55.6 \text{ s}}$
- (c) $4555 \text{ N} = \underline{4.56 \times 10^3 \text{ N}}$
- (d) $2768 \text{ kg} = \underline{2.76 \times 10^3 \text{ kg}}$

1.9

Ans:

$$1 \text{ Pa} = 1 \text{ N/m}^2 = \frac{1 \text{ N}}{\text{m}^2} \times \frac{1 \text{ m}^2}{10.76 \text{ ft}^2} \times \frac{\text{lb}}{4.448 \text{ N}}$$

$$= 0.0209 \text{ lb/ft}^2$$

$$= \underline{20.9 \times 10^{-3} \text{ lb/ft}^2}$$

$$14.7 \text{ lb/in}^2 = 14.7 \times \frac{\text{lb}}{\text{in}^2} \times \frac{144 \text{ in}^2}{\text{ft}^2} \times \frac{10.76 \text{ ft}^2}{1 \text{ m}^2} \times \frac{4.448 \text{ N}}{\text{lb}}$$

$$= 101.3 \text{ N/m}^2$$

$$= \underline{101.3 \text{ Pa}}$$

1.7

Ans:

$$m = \frac{W}{g}$$

(a) $20 \text{ mN} = 20 \times \text{mN} \times \frac{1 \text{ N}}{1000 \text{ mN}} = 0.02 \text{ N}$

$$\therefore m = \frac{0.02 \text{ N}}{9.8 \text{ m/s}^2} = 0.002 \text{ kg}$$