

Useful Equations

The following useful equation may be unfamiliar to some students:

$$\rho = m/V \quad \text{density} = \text{mass} \div \text{volume}$$

$$\Delta E = m \times L \quad \text{energy transferred} = \text{mass} \times \text{specific latent heat}$$

$$p = m \times v \quad \text{momentum} = \text{mass} \times \text{velocity}$$

$$P = I^2 \times R \quad \text{Power dissipated in a resistor} = \text{current}^2 \times \text{resistance}$$

$$\text{Work} = \text{force} \times \text{distance}$$

$$\text{Circumference of a circle} = 2\pi r$$

The following constants should be used

$$g = 9.8 \text{ N/kg} \quad \text{gravitational field strength on Earth}$$

Unfamiliar units

$$1 \text{ metric tonne} = 1000 \text{ kg}$$

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$$\theta =$$

$$v =$$

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g)

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Question 14

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c)

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d)

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