

小テスト解答

$$\text{Q1} \quad 2 \cdot \begin{vmatrix} i & j & k \\ 3 & 4 & 1 \\ 0 & 2 & 4 \end{vmatrix} = 2 \cdot \begin{pmatrix} 4 \times 4 - 1 \times 2 \\ 1 \times 0 - 3 \times 4 \\ 3 \times 2 - 4 \times 0 \end{pmatrix} = \begin{pmatrix} 28 \\ -24 \\ 12 \end{pmatrix} \text{kgm}^2/\text{s}$$

$$\sqrt{28^2 + 24^2 + 12^2} = 38.8 \text{kgm}^2/\text{s}$$

$$\text{Q2} \quad (1) \quad I = \frac{1}{2}mr^2 = 1.8 \text{kgm}^2 \quad L = 36 \text{kgm}^2/\text{s}$$

$$(2) \quad I = \frac{1}{12}ml^2 = 8.5 \text{kgm}^2$$

$$(3) \quad 36 / 8.5 = 4.2 \text{rad/s}$$