

## Numerical answers for 3D4

$$1a) \text{ ii) } M = \frac{5}{7} WL$$

$$1b) \quad M_A = 0.5714 W$$

$$M_B = 0.9286 W$$

$$2a) \text{ i) } J = b t^3$$

$$\text{ii) } I_{\xi\xi} = 1.427 b^3 t$$

$$I_{\eta\eta} = 0.156 b^3 t$$

$$2b) \quad x_s = \frac{9}{44} b$$

$$3a) \quad P_{cr, \min} = 2 \sqrt{EI k}$$

$$4a) \quad T_{\min} = \frac{G}{L}$$

$$4c) \quad \begin{bmatrix} 8+s & 2 \\ 2 & 7+s(1-c^2) \end{bmatrix} \frac{EI}{L}$$