

Answers to MEEG 2003 Test IIIc

1.

(a) $I_x = 34.7 \text{ ft}^4$

(b) $k_x = 1.962 \text{ ft}$

(c) $\bar{y} = 1.633 \text{ ft}$

(d) $\bar{I}_{x'} = 10.65 \text{ ft}^4$

(e) $I_y = 34.2 \text{ ft}^4$

2.

$\mathbf{A} = 24\mathbf{i} - 12\mathbf{j} \text{ kN}$

$\mathbf{B} = -42\mathbf{i} + 16\mathbf{j} \text{ kN}$

$\mathbf{C} = 18\mathbf{i} - 4\mathbf{j} \text{ kN}$

3.

A. (a)

B. (f)

C. (b)

D. (g)

4. See text.