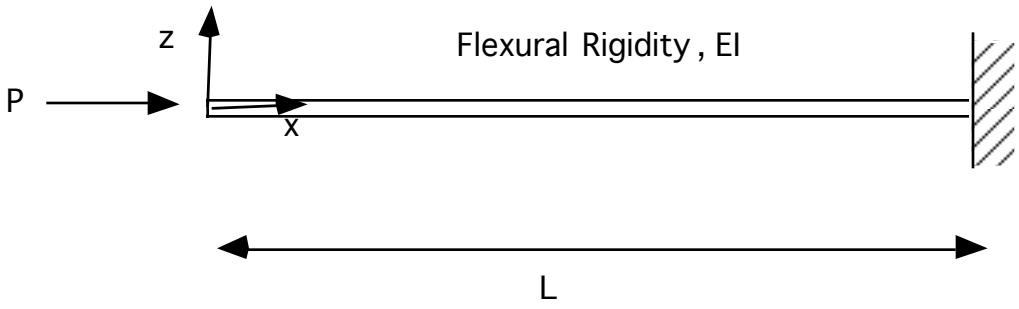
M13 Concept Question 1

For the clamped-free, end-loaded, rod shown below the buckling load can be given by:

$$P_{cr} = \frac{c\pi^2 EI}{L^2}$$

what is the value of c?

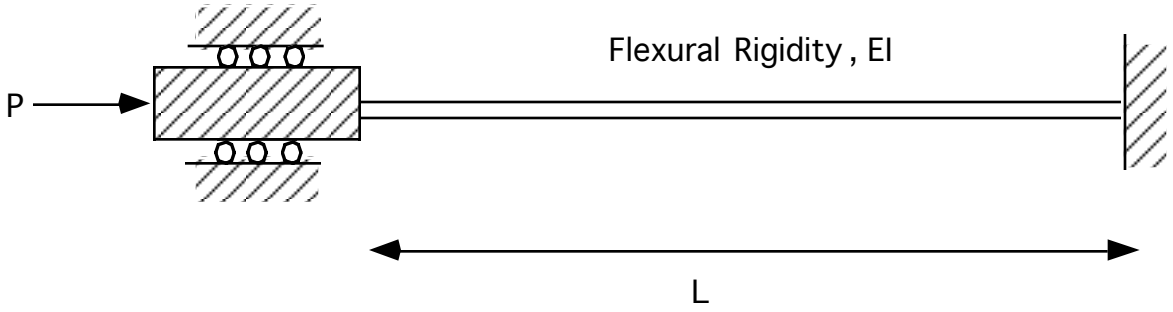


1. c = 1
2. c = 2
3. c = 4
4. c = 0.5
5. c = 0.25
6. Some other answer
7. Do not know/do not understand

M13 Concept Question 2

For the clamped-clamped, end-loaded, rod shown below the buckling load can be given by:

$$P_{cr} = \frac{c\pi^2 EI}{L^2}$$



what is the value of c?

1. c = 1
2. c = 2
3. c = 4
4. c = 0.5
5. c = 0.25
6. Some other answer
7. Do not know/do not understand

M13 Concept Question 3

For the pin-ended, eccentrically end-loaded, rod shown on the board, what are the appropriate boundary conditions?

1. $x = 0: \quad w = 0, \quad x = \frac{L}{2}: \quad \frac{dw}{dx} = 0$

$x = 0: \quad w = e, \quad \frac{d^2w}{dx^2} = 0$

2. $x = L: \quad w = e, \quad \frac{d^2w}{dx^2} = 0$

3. $x_1 = 0: \quad w = 0, \quad M = Pe$
$x_1 = L: \quad w = 0, \quad M = Pe$

4. $x = 0: \quad w = e, \quad x = L: \quad w = e$

5. $x_1 = 0: \quad w = e, \quad M = Pe$
$x_1 = L: \quad w = e, \quad M = Pe$

6. Some other answer

7. I do not know/I do not understand