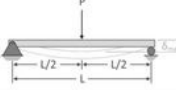
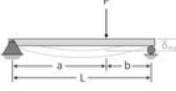
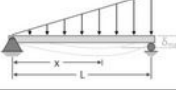
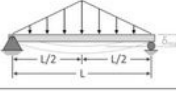



Beam and load cases	Maximum Beam Deflection
	$\delta_{max} = \frac{PL^3}{48EI}$
	$\delta_{max} = \frac{Pb(3L^2 - 4b^2)}{48EI}$
	$\delta_{max} = \frac{5wL^4}{384EI}$
	$\delta_{max} = \frac{0.00652wL^4}{EI}$
	$\delta_{max} = \frac{wL^4}{120EI}$
	$\delta_{max} = \frac{ML^2}{9\sqrt{3}EI}$

$$b := 20 \text{ mm}$$

$$h := 200 \text{ mm}$$

$$L := 1 \text{ m}$$

$$E := 2 \cdot 10^8 \text{ kPa}$$

$$I := \frac{b \cdot h^3}{12} = (1.333 \cdot 10^7) \text{ mm}^4$$

$$w := 1 \frac{\text{kN}}{\text{m}}$$

$$\delta_{max} := \frac{5 \cdot w \cdot L^4}{384 \cdot E \cdot I} = 0.00488 \text{ mm}$$

$$\text{abs} \left( 1 - \frac{0.005316 \text{ mm}}{\delta_{max}} \right) \cdot 100 = 8.872$$