



$$\sum M_{(B)}^{(1)} = 0 \quad 2M_0 + 6 \frac{M_0}{L} \cdot \frac{L}{4} - V_A \cdot \frac{L}{2} = 0$$

$$2M_0 + \frac{3}{2}M_0 - V_A \cdot \frac{L}{2} = 0$$

$$\frac{7}{2}M_0 - V_A \cdot \frac{L}{2} = 0$$

$$V_A = \frac{7M_0}{L}$$

$$\sum M_{(B)}^{(2)} = 0 \quad -M_0 + \frac{6M_0}{L} \cdot \frac{L}{4} + V_C \cdot \frac{L}{2} = 0$$

$$-\frac{5}{2}M_0 + V_C \cdot \frac{L}{2} = 0$$

$$V_C = \frac{5M_0}{L}$$

$$M(x) = -M_0 + 7 \frac{M_0}{L} \cdot x - \frac{6M_0}{L^2} \cdot \frac{x^2}{2}$$

$$M(x) = -M_0 + 7M_0 \frac{x}{L} - 6M_0 \frac{x^2}{L^2}$$

$$M(x) = M_0 \left(1 - \frac{x}{L}\right) \left(6 \frac{x}{L} - 1\right) = M_0 \left(-1 + 6 \frac{x}{L} - 6 \frac{x^2}{L^2} + \frac{x}{L}\right)$$

$$M(x) = M_0 \left(6 \frac{x^2}{L^2} - \frac{7x}{L} + 1\right)$$

$$\frac{dM}{dx} = 12 \frac{x}{L} - \frac{7}{L}$$

$$\frac{dM}{dx} = 0 \rightarrow x = \frac{7}{12} L$$