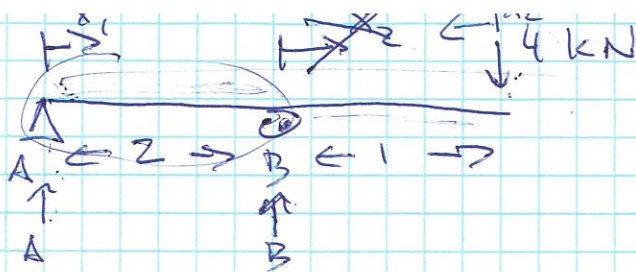
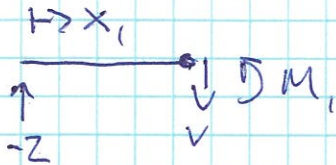


12.4



$$\sum F_z = 0 = A + B - 4 \quad A = -2$$

$$\sum M = 0 = 2B - 3(4) \quad B = 6$$



$$\sum M = M_1 + 2x_1$$

$$M_1 = -2x_1 = \frac{d^2 y}{dx_1^2} EI$$

$$EI \frac{dy}{dx} = -x_1^2 + C_1$$

$$EI V_1 = -\frac{1}{3}x_1^3 + C_1 x + C_2$$

$$V_1(0) = 0 = 0 + 0 + C_2 = 0$$

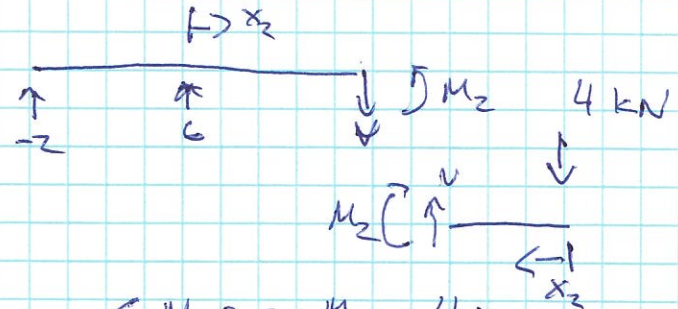
$$V_1(2) = 0 = -\frac{8}{3} + 2(C_1) = 0$$

$$C_1 = \frac{4}{3}$$

$$V_1(x_1=0) = 0$$

$$V_1(x_1=2) = V_2(x_2=0) = 0$$

$$\frac{dv_1}{dx_1}(2) = \frac{dv_2}{dx_2}(0)$$



$$\sum M = 0 = -M_2 - 4x_2$$

$$M_2 = -4x_2 = EI \frac{d^2 v_2}{dx_2^2}$$

$$EI \frac{dv_2}{dx_2} = -2x_2^2 + C_3$$

$$EI v_2 = -\frac{2}{3}x_2^3 + C_3 x_2 + C_4$$

$$0 = -\frac{2}{3} + C_3 + C_4$$

$$-4 + \frac{4}{3} = -(-2 + C_3)$$

$$-4 + \frac{4}{3} = 2 - C_3$$

$$C_3 = 6 - \frac{4}{3} = \frac{14}{3} \approx 4.7$$

$$C_4 = -4$$

$$V_2(0) = -4/EI$$

$$M(x) = -2\langle x-0 \rangle' + 6\langle x-2 \rangle'$$

$$EI \frac{d^3 y}{dx^3}$$

$$EI \frac{dv}{dx} = -\langle x-0 \rangle^2 + 3\langle x-2 \rangle^2 + C_1$$

$$EI V = -\frac{1}{3}\langle x-0 \rangle^3 + \langle x-2 \rangle^3 + C_1 x + C_2$$

$$V(0) \Rightarrow C_2 = 0$$

$$V(2) = 0 = -\frac{8}{3} + C_1(2) \quad C_1 = \frac{4}{3}$$

$$EI V(3) = -\frac{1}{3}(27) + 1 + 4$$

$$= -4$$

