Draw moment diagram on tensile sides.
\[ w = 2 \text{ kN/m} \quad L_1 = 6 \text{ m} \quad L_2 = 8 \text{ m} \]
\[ L_3 = 10 \text{ m} \quad L_4 = 12 \text{ m} \quad M = 30 \text{ kN\cdot m} \]
\[ P = 10 \text{ kN} \]

**Draw moment diagram**

\[ \Sigma M_a = 0 = -6 \text{ kN\cdot m} + (10 \text{ kN})(6 \text{ m}) \]
\[ Ma = 54 \text{ kN\cdot m} \]

**Floor**

\[ V_{\text{floor}} = 10 \text{ kN} \]
\[ M_{\text{floor}} \]
\[ A_{\text{floor}} = 12 \text{ kN} \]

\[ \Sigma M_{\text{floor}} = -6 + 10(12) - M_{\text{floor}} \]
\[ M_{\text{floor}} = +120 + 6 = +114 \text{ kN\cdot m} \]
Draw moment diagram on tensile sides of members

W = 2 kN/m

L1 = 6 m
L2 = 8 m
L3 = 10 m
Pop Quiz C

Draw M diagram on tension side of members.
Pop Quiz "D"

\[ \Sigma M_e = 0 \text{ get } R_{cv} \]
\[ \Sigma F_v = 0 \text{ get } Rev \]
\[ \Sigma F_h = 0 \text{ get } Re_h \]

\[ 9 \text{ kN} = R_{cv} \]
\[ 9 \text{ kN} = Re_h \]
\[ 2.6 \text{ kN} = REV \]

Draw moment diagrams on tension sides of members.
Problem 2) (20 points) Draw moment diagrams on the tension side of the frames for the dimensions and loadings shown. Show all pertinent values. You are welcome to write equations, but you must then plot those equations on the frames, on the tension sides. Use $L_1 = 6 \text{ m}$, $L_2 = 8 \text{ m}$, $L_3 = 10 \text{ m}$, $L_4 = 12 \text{ m}$, $w = 2 \text{ kN/m}$, $M = 30 \text{ Nm}$, $P = 10 \text{ kN}$ (NOT TO SCALE). You may make calculations on the back of the previous sheet.
Problem 2) (20 points) Draw moment diagrams on the tension side of the frames for the dimensions and loadings shown. Show all pertinent values. You are welcome to write equations, but you must then plot those equations on the frames, on the tension sides. Use $L_1 = 6\,\text{m}$, $L_2 = 8\,\text{m}$, $L_3 = 10\,\text{m}$, $L_4 = 12\,\text{m}$, $w = 2\,\text{kN/m}$, $M = 30\,\text{Nm}$, $P = 10\,\text{kN}$ (NOT TO SCALE). You may make calculations on the back of the previous sheet.