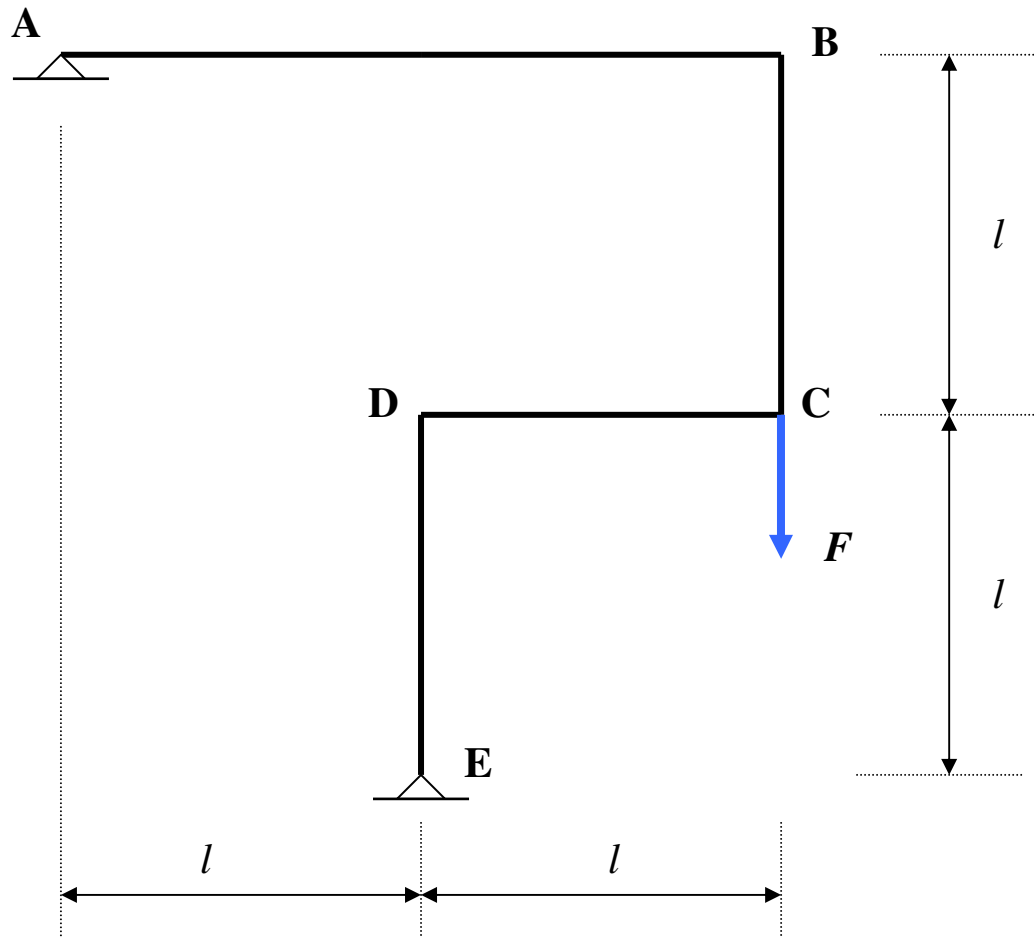
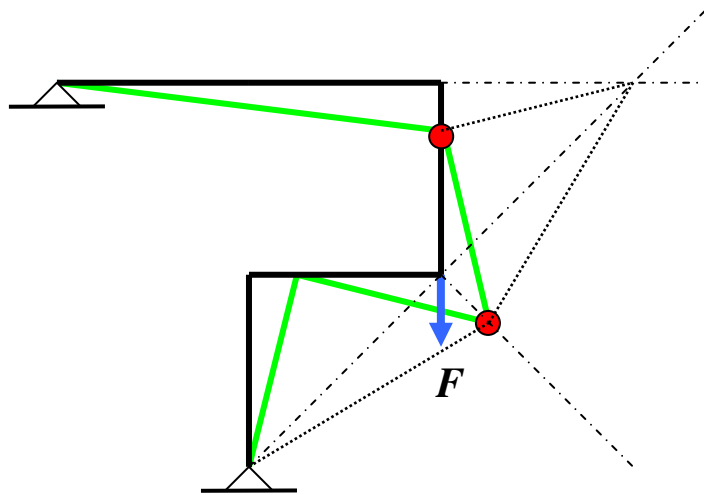


BEPAAAL DE BEZWIJKBELASTING F_p

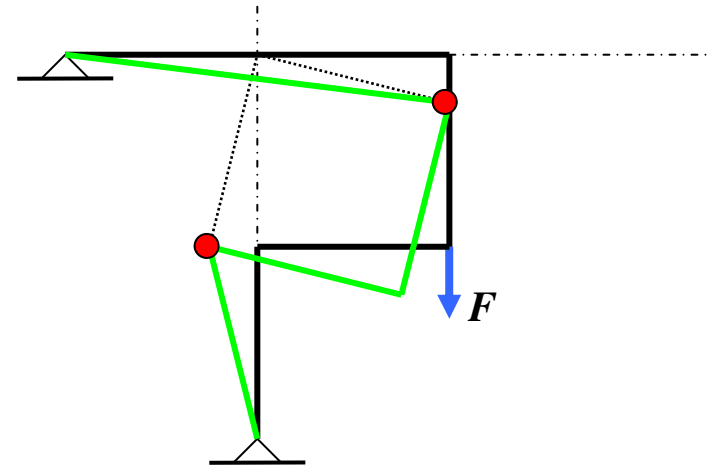


Analyse :

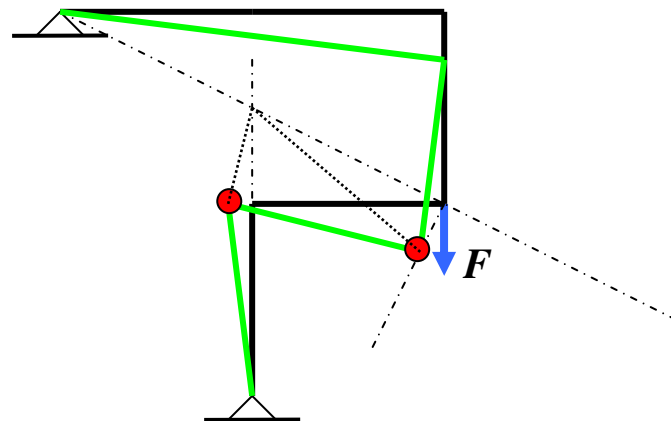
- Enkelvoudig statisch onbepaald $n=1$
- Ten hoogste 2 scharnieren nodig om een mechanisme te vormen
- 3 mogelijke plaatsen waar scharnieren kunnen ontstaan (B,C,D)
- 3 mogelijke bezwijkmechanismen



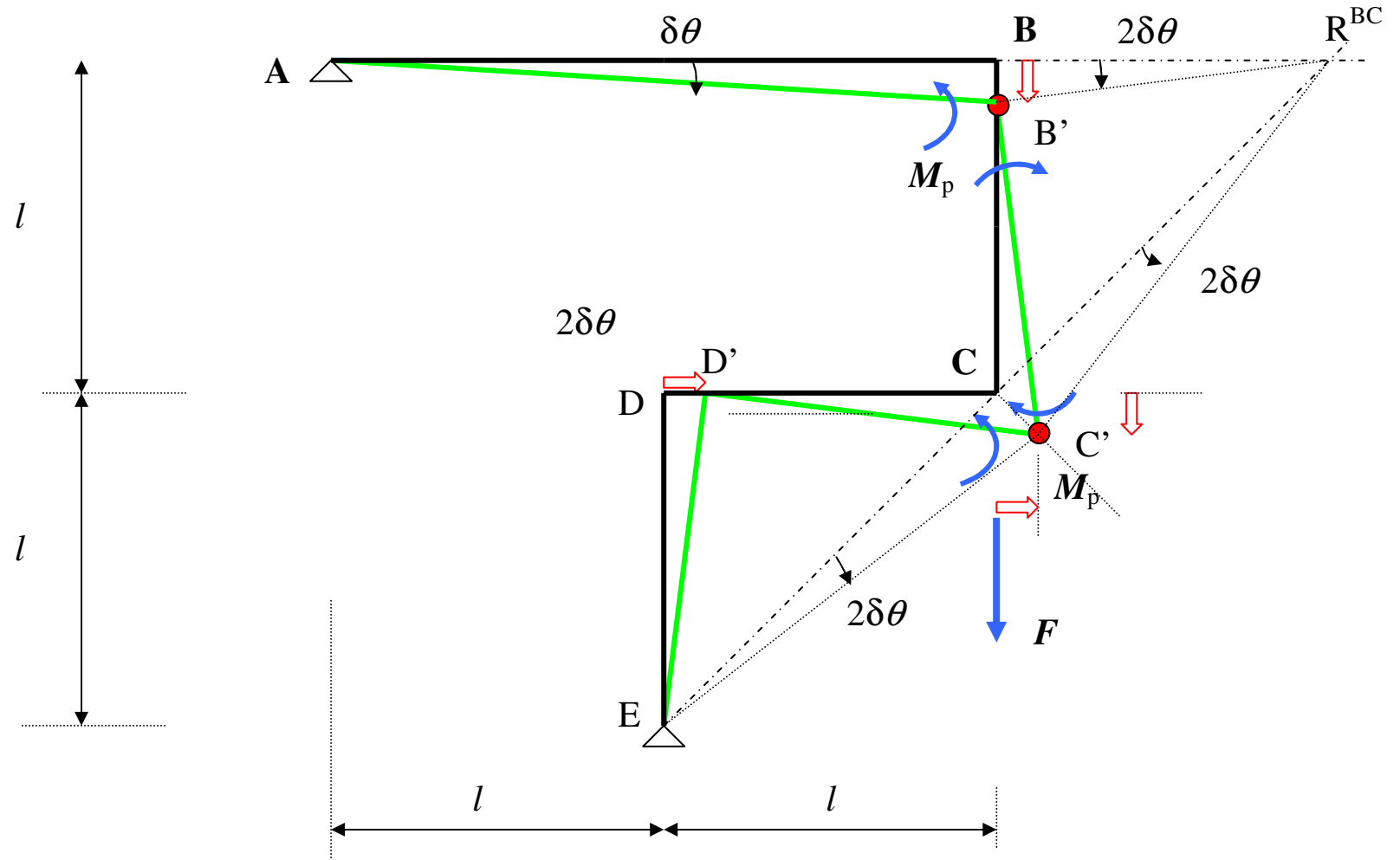
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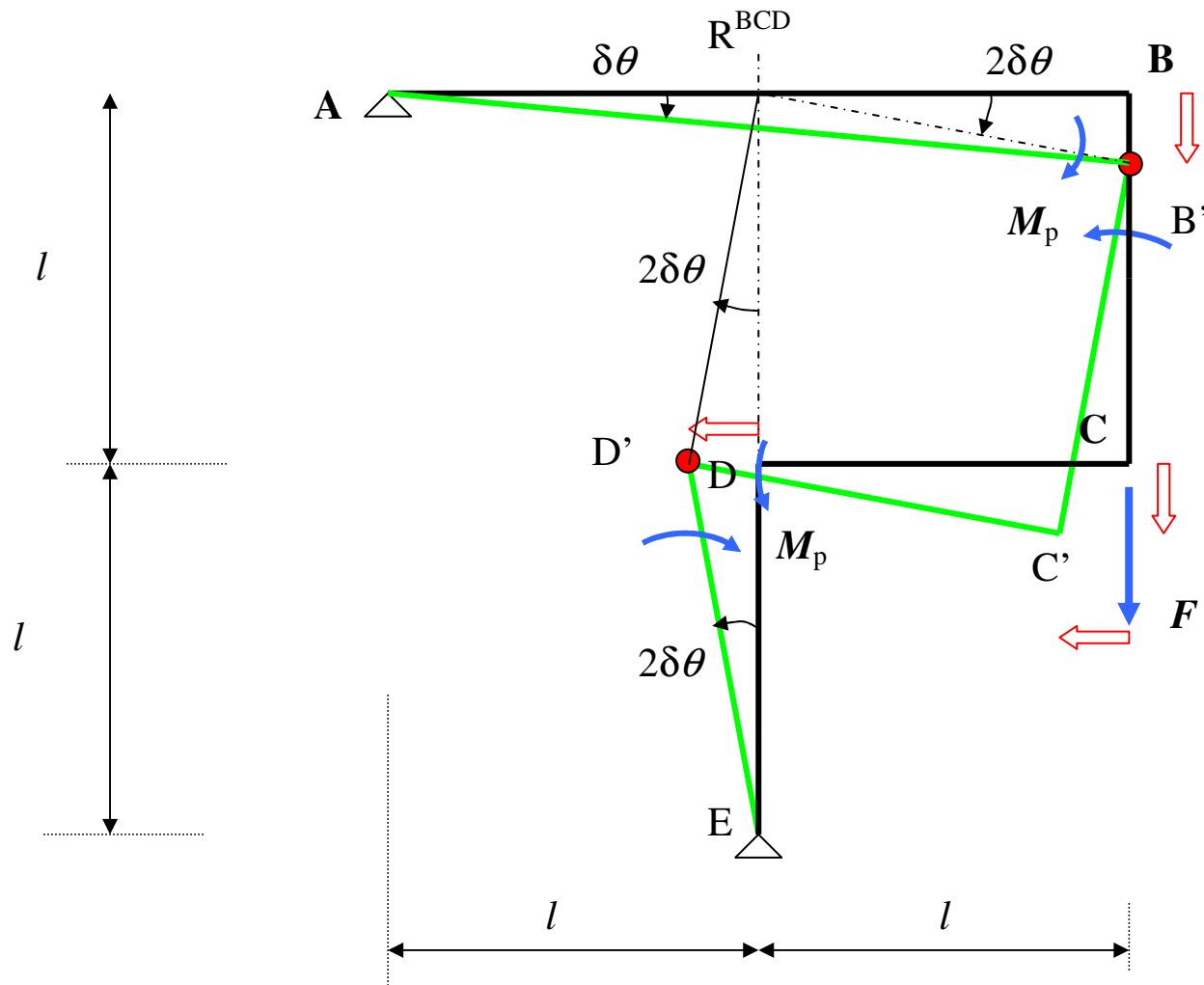


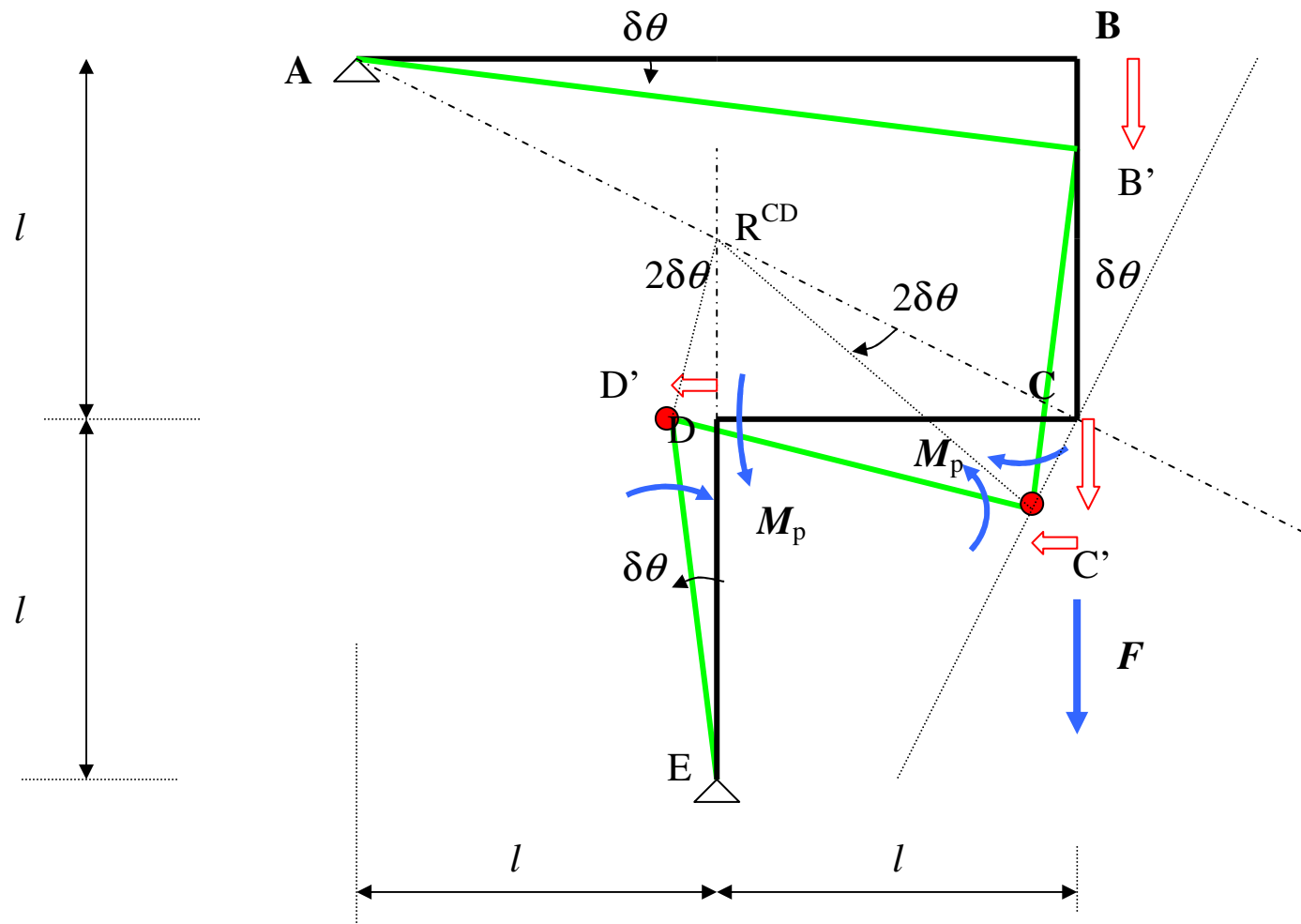
2



3







Virtuele arbeidsvergelijkingen

Mechanisme 1

$$\delta A = -M_p \times \delta \theta - M_p \times 2\delta \theta - M_p \times 2\delta \theta - M_p \times 2\delta \theta + F \times 2\delta \theta \times l = 0$$

$$F_{p-1} = \frac{7M_p}{2l}$$

Mechanisme 2

$$\delta A = +M_p \times \delta \theta - M_p \times 2\delta \theta - M_p \times 2\delta \theta - M_p \times 2\delta \theta + F \times 2\delta \theta \times l = 0$$

$$F_{p-2} = \frac{5M_p}{2l}$$

Mechanisme 3

$$\delta A = +M_p \times \delta \theta - M_p \times 2\delta \theta - M_p \times 2\delta \theta - M_p \times \delta \theta + F \times 2\delta \theta \times l = 0$$

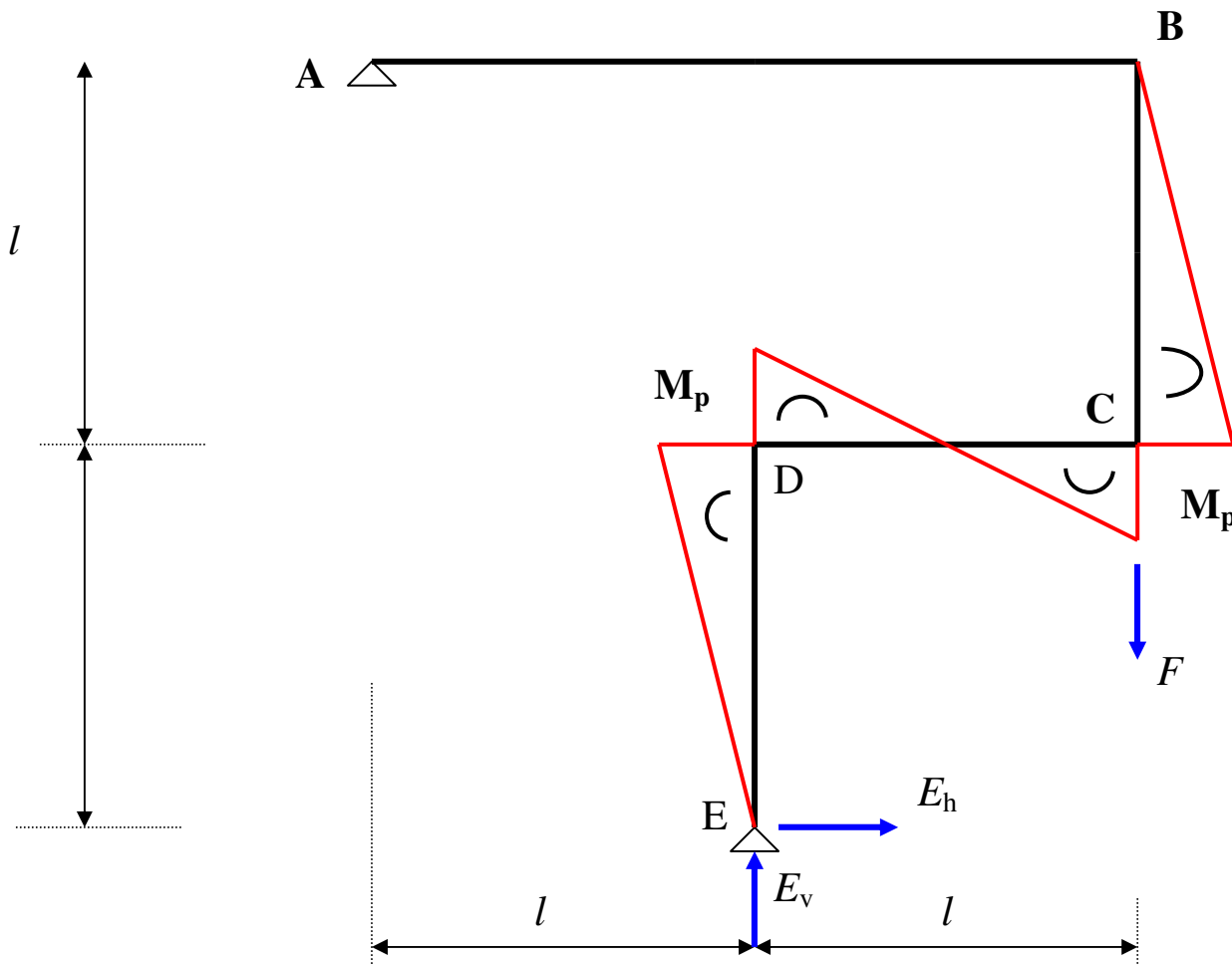
$$F_{p-3} = \frac{2M_p}{l}$$



LAAGSTE BEZWIJKLAST !

MOMENTENLIJN VOOR MECHANISME 3

$$F_p = \frac{2M_p}{l}$$



Het moment in **B** ?

1 De horizontale oplegreactie in E:

$$\sum T|D = 0 \Rightarrow E_h \times l = M_p \Rightarrow E_h = \frac{M_p}{l} = \frac{1}{2} F_p$$

2 Bepaal met het momentenevenwicht om A de verticale oplegreactie in E:

$$\sum T|A = 0 \Rightarrow E_v \times l + E_h \times 2l - F_p \times 2l = 0$$

$$E_v = F_p$$

3 Bepaal moment in B:

$$A_v = 0 \Rightarrow M_B = 0$$