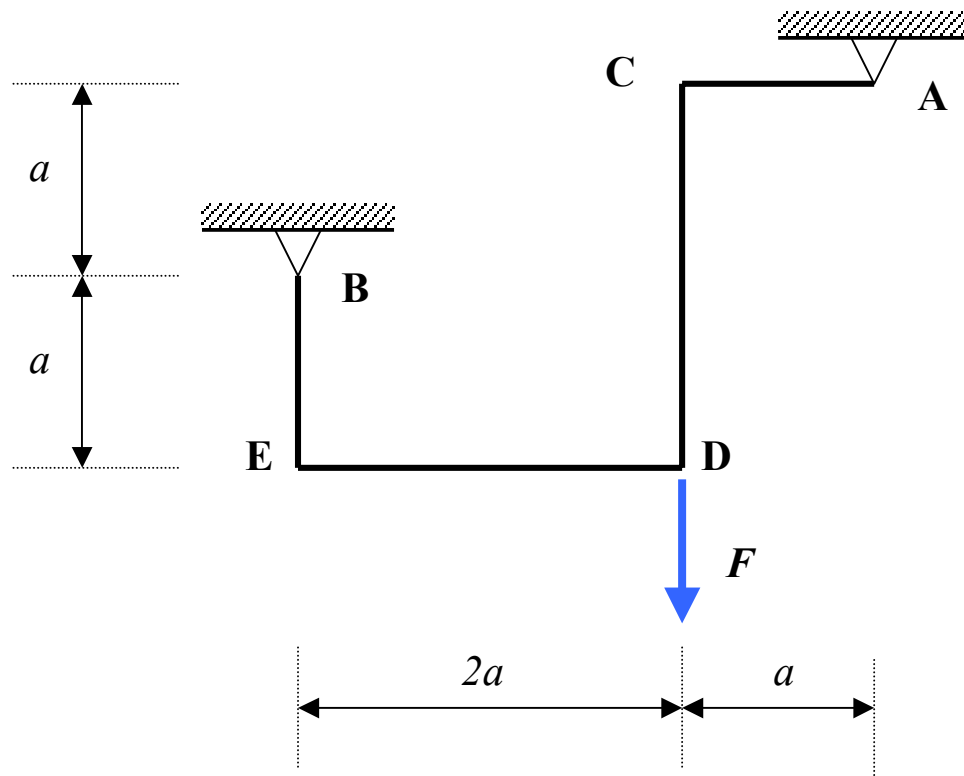
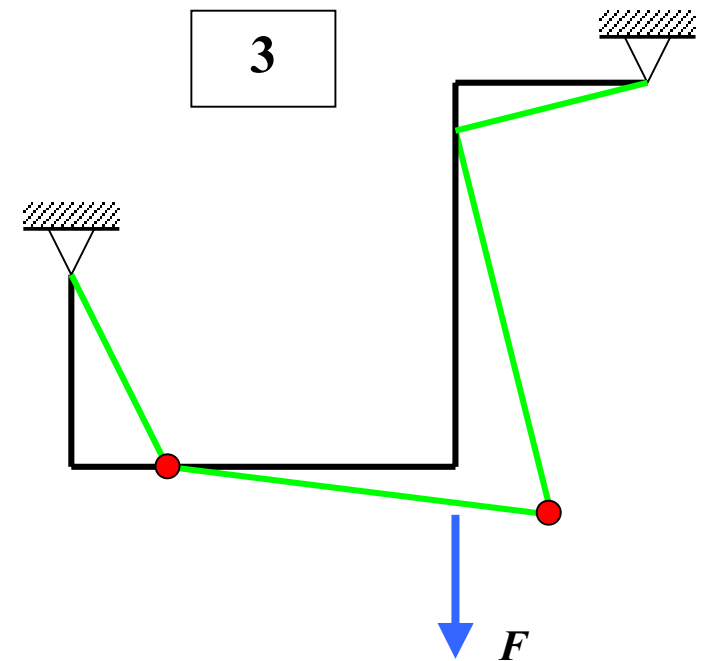
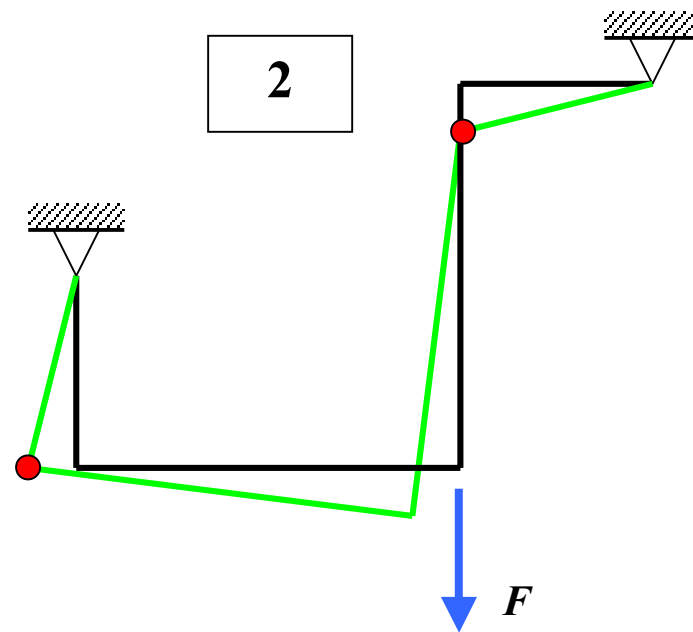
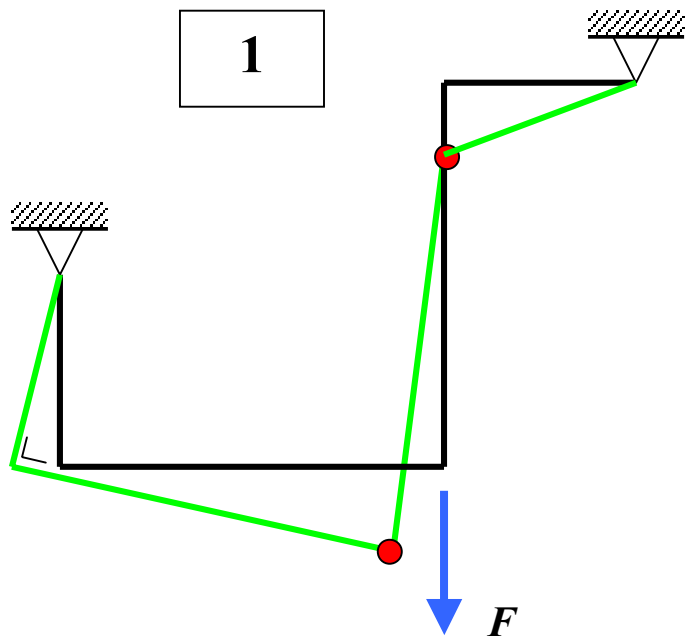


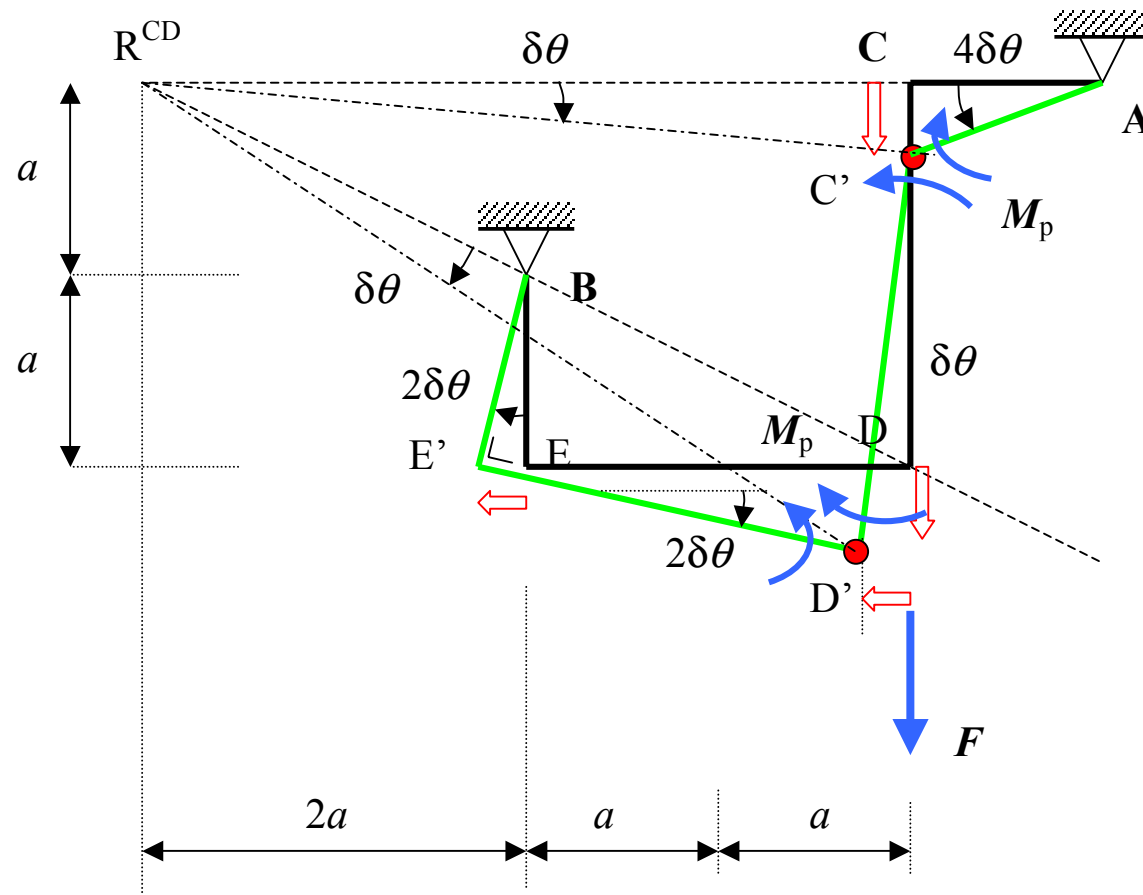
BEPAAAL DE BEZWIJKBELASTING F_p



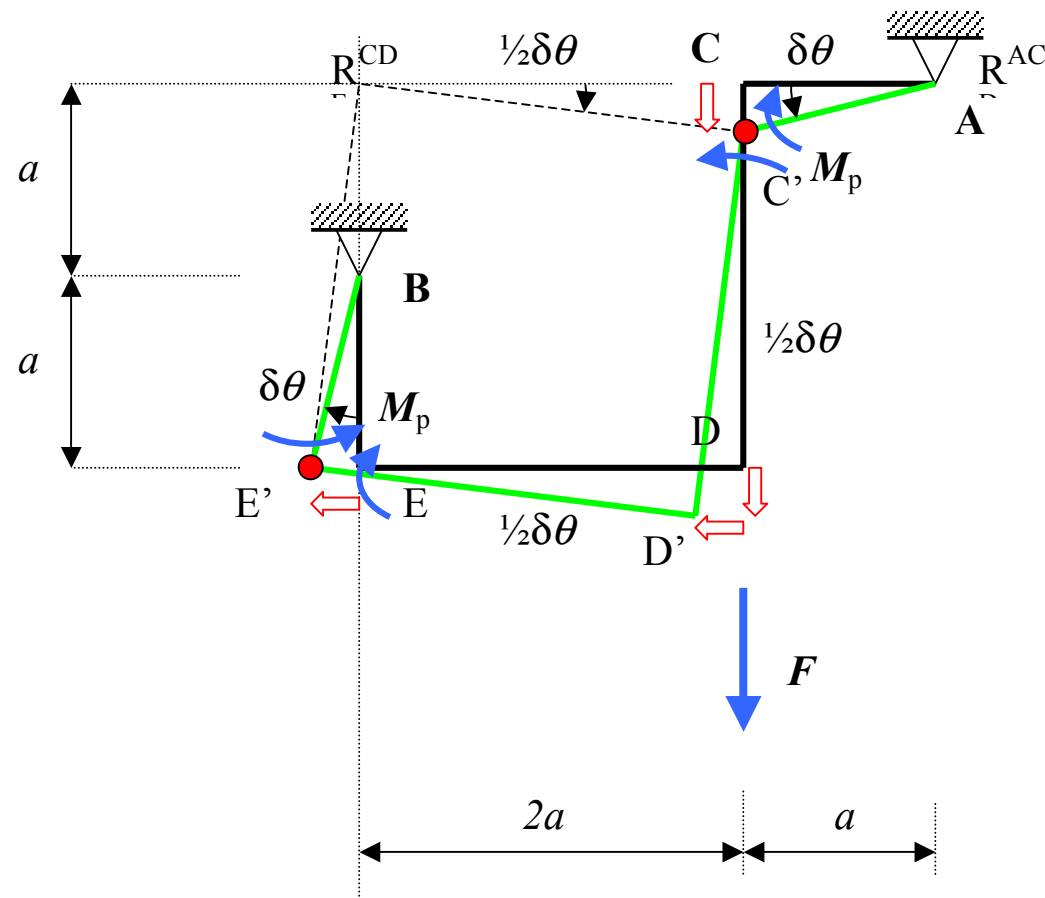
Analyse :

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

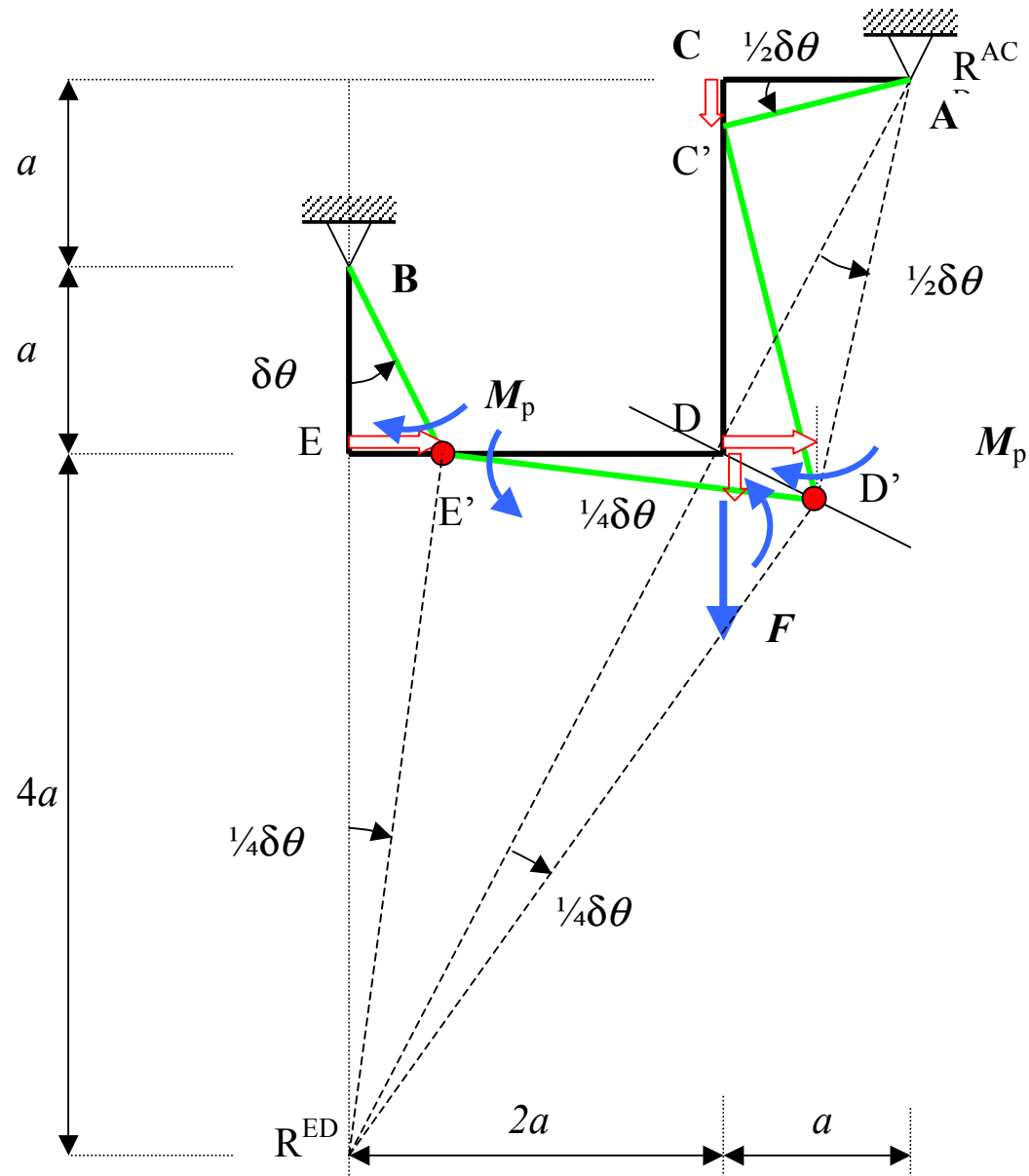




2^e mécanisme



3^e mécanisme



Virtuele arbeidsvergelijkingen

Mechanisme 1

$$\delta A = -M_p * 4\delta\theta - M_p * \delta\theta + M_p * \delta\theta - M_p * 2\delta\theta + F * 4\delta\theta * a = 0$$

$$F_p = \frac{1,5M_p}{a}$$



LAAGSTE BEZWIJKLAST !

Mechanisme 2

$$\delta A = -M_p * \delta\theta - M_p * \frac{1}{2}\delta\theta + M_p * \frac{1}{2}\delta\theta - M_p * \delta\theta + F * \delta\theta * a = 0$$

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

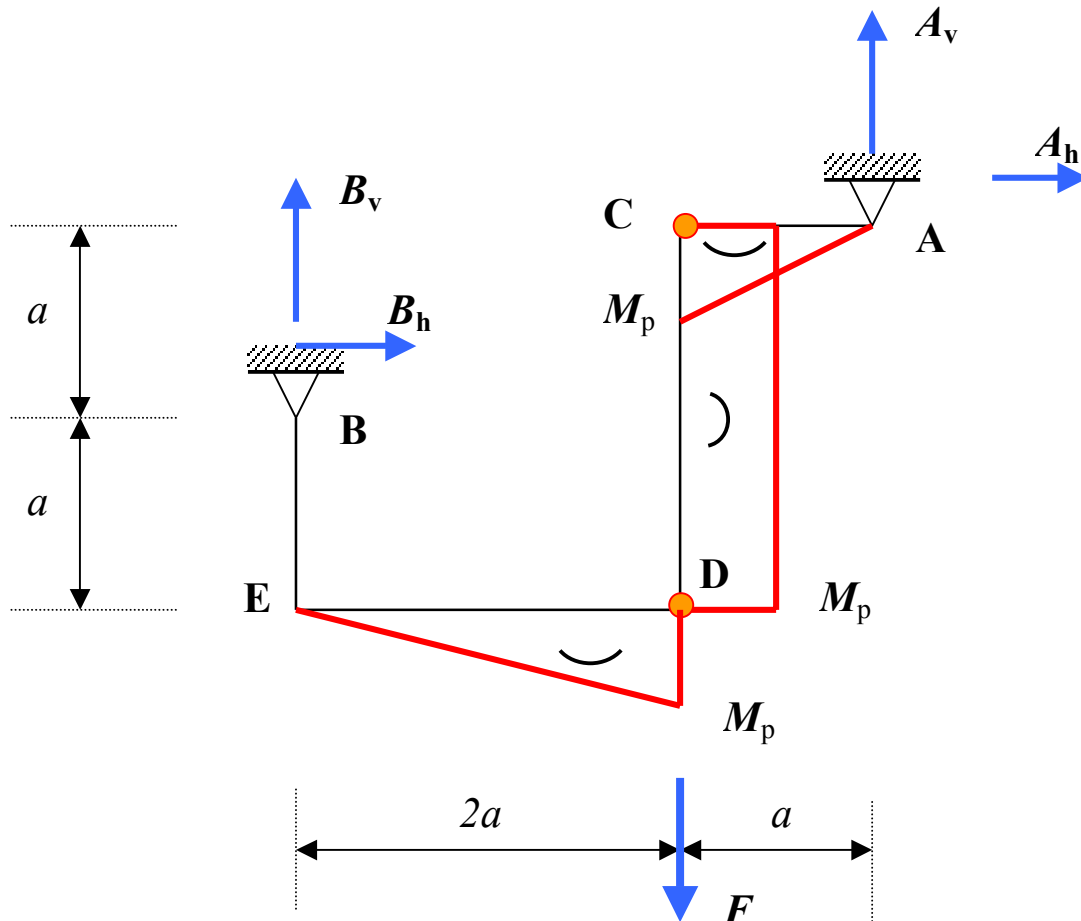
Mechanisme 3

$$\delta A = -M_p * \frac{1}{2}\delta\theta - M_p * \frac{1}{4}\delta\theta - M_p * \frac{1}{4}\delta\theta - M_p * \delta\theta + F * \frac{1}{2}\delta\theta * a = 0$$

$$F_p = \frac{4M_p}{a}$$

MOMENTENLIJN VOOR MECHANISME 1

$$F_p = \frac{1,5M_p}{a}$$



Het moment in **E** ?

1 Bepaal eerst de verticale oplegreactie in **A**:

$$\sum T|C = 0 \Rightarrow A_v * a = M_p \Rightarrow A_v = \frac{M_p}{a}$$

$$A_v = \frac{4F_p}{6}$$

2 Bepaal met het momentenevenwicht om **B** de horizontale oplegreactie in **A**:

$$\sum T|B = 0 \Rightarrow \frac{4F_p}{6} * 3a - F_p * 2a - A_h * a = 0$$

$$A_h = 0$$

3 Bepaal het moment in **E**:

$$\sum T|E \Rightarrow \frac{4F_p}{6} * 3a - F_p * 2a + M_E = 0$$

$$M_E = 0$$