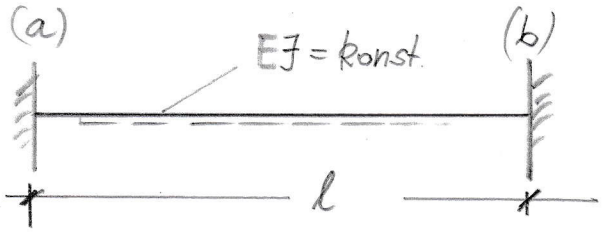
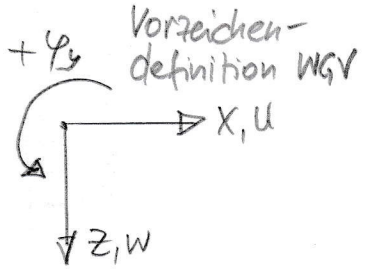
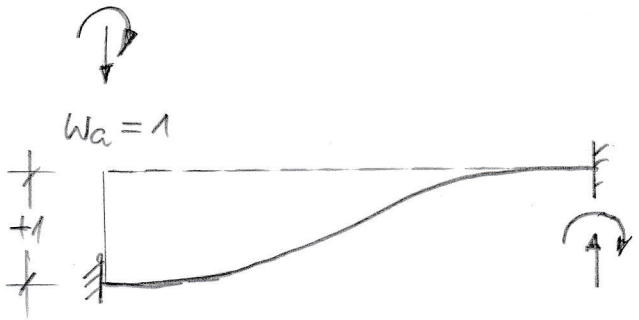
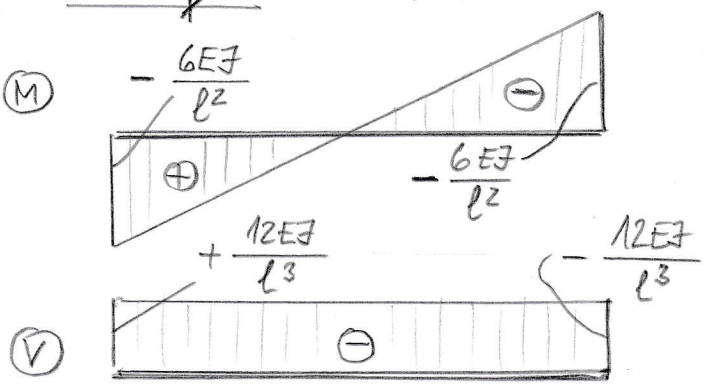
ARBEITSBLATT

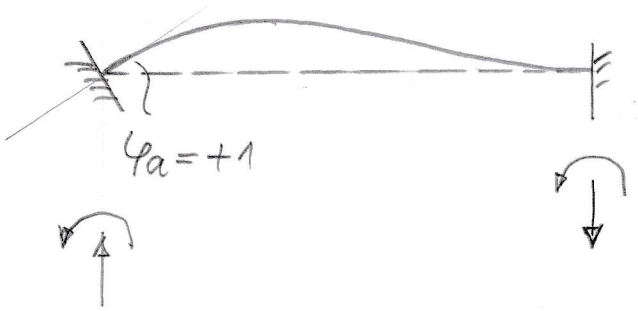
(1)

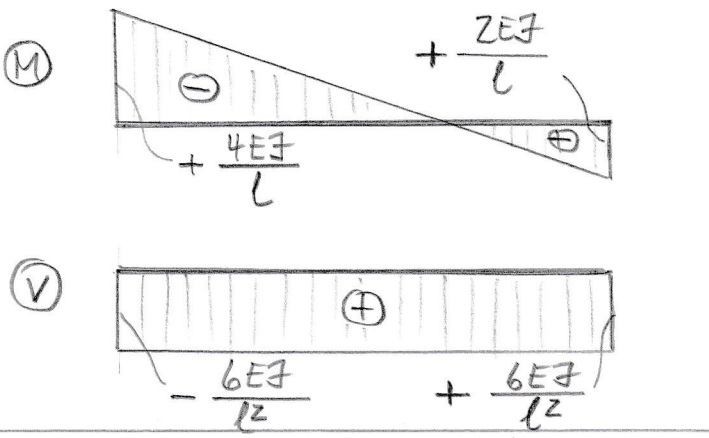


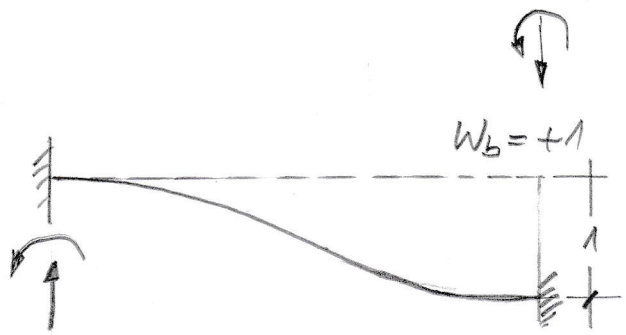


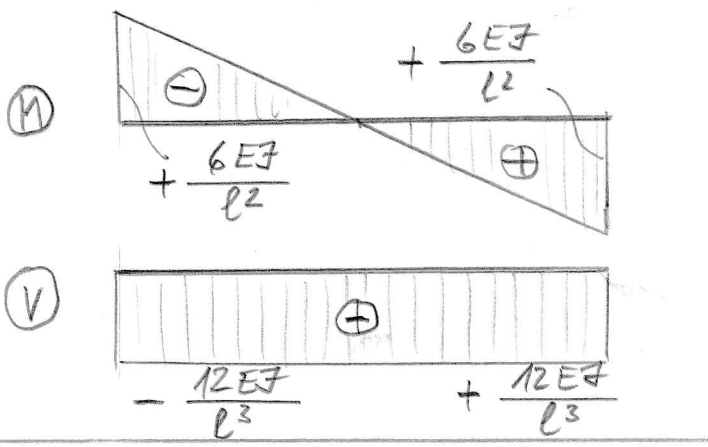


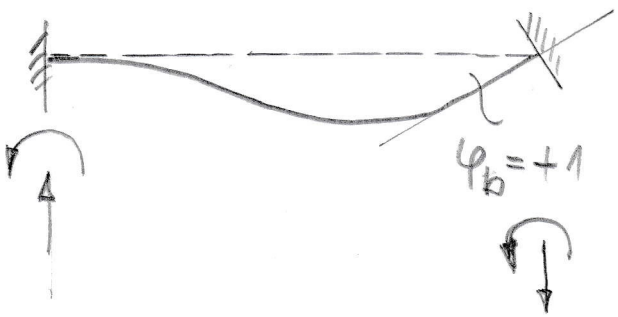


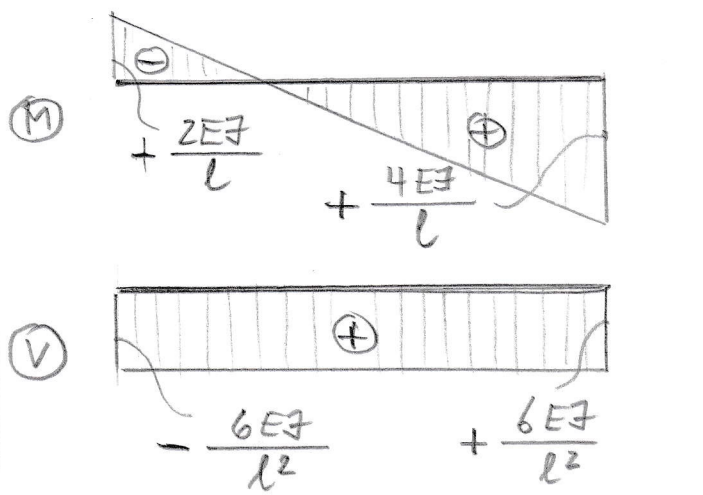






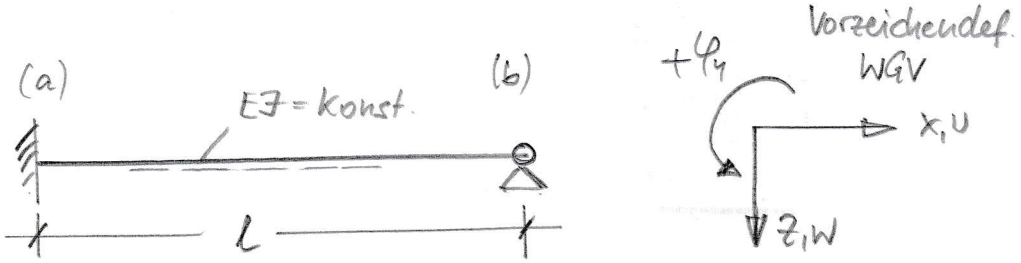


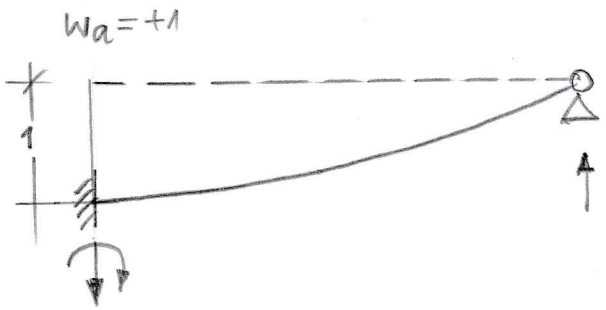




ARBEITSBLATT

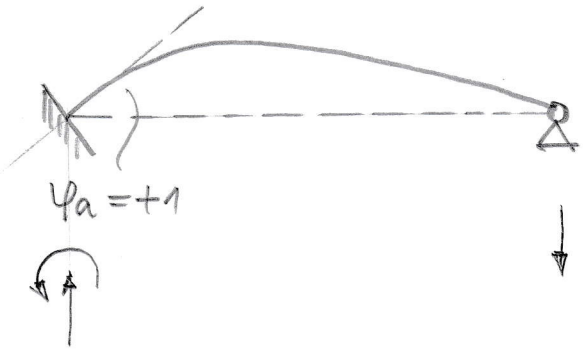
(2)





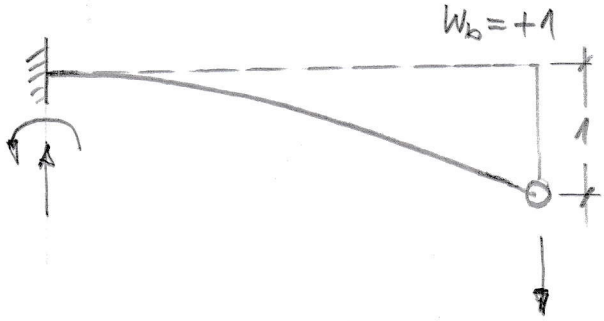
(M) $-\frac{3EJ}{l^2}$ $-\frac{3EJ}{l^3}$

(V) $+\frac{3EJ}{l^3}$



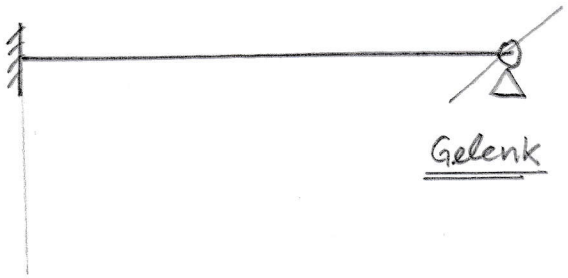
(M) $+\frac{3EJ}{l}$

(V) $-\frac{3EJ}{l^2}$ $+\frac{3EJ}{l^2}$



(M) $+\frac{3EJ}{l^2}$

(V) $-\frac{3EJ}{l^3}$ $+\frac{3EJ}{l^3}$

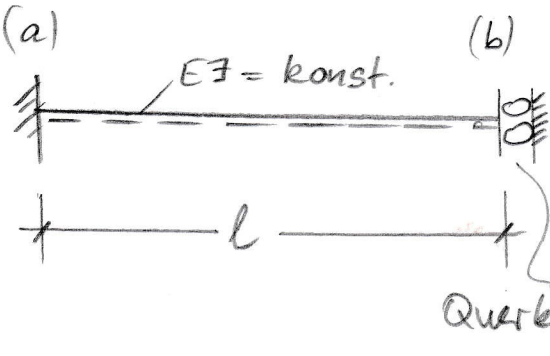


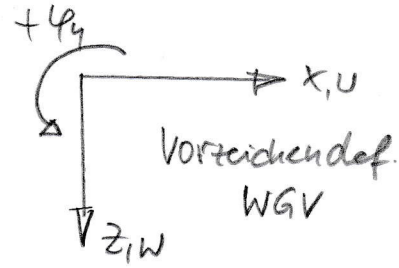
(M) ≡ 0

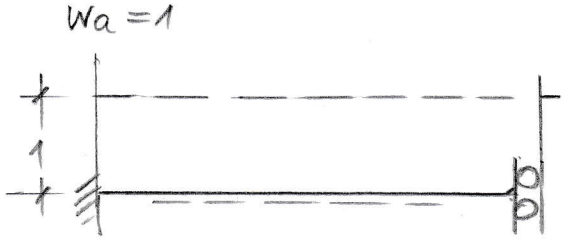
(V) ≡ 0

ARBEITSBLATT:

(2.1)

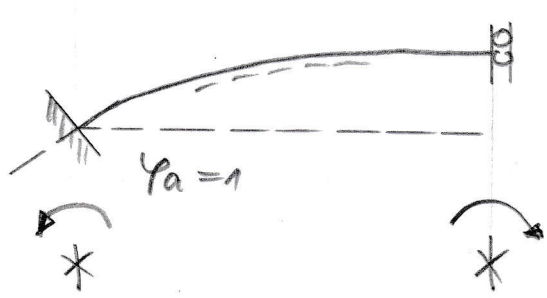


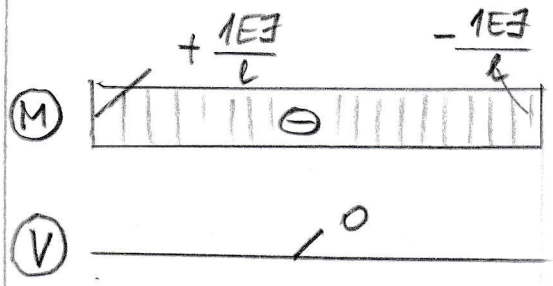


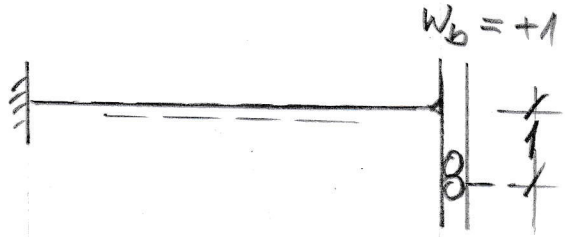


M ≡ 0

V ≡ 0

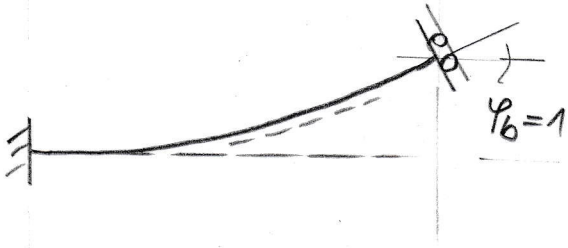


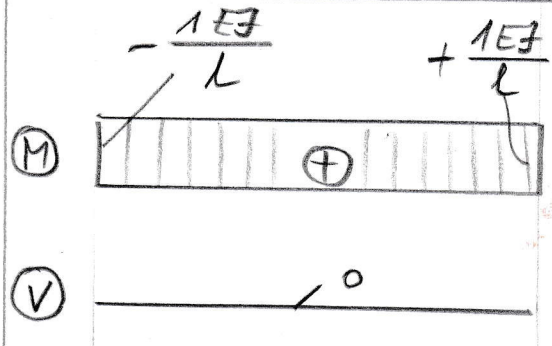




M ≡ 0

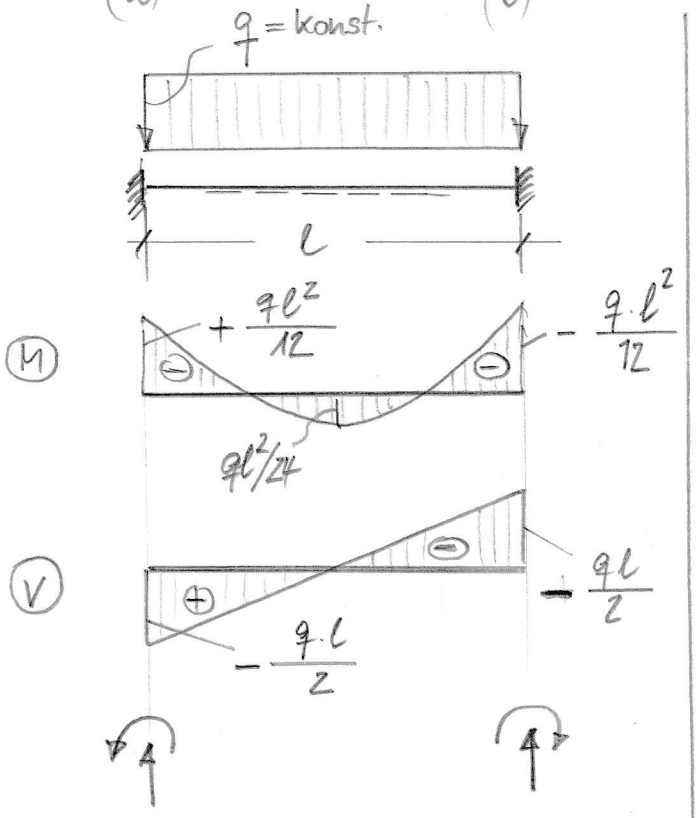
V ≡ 0

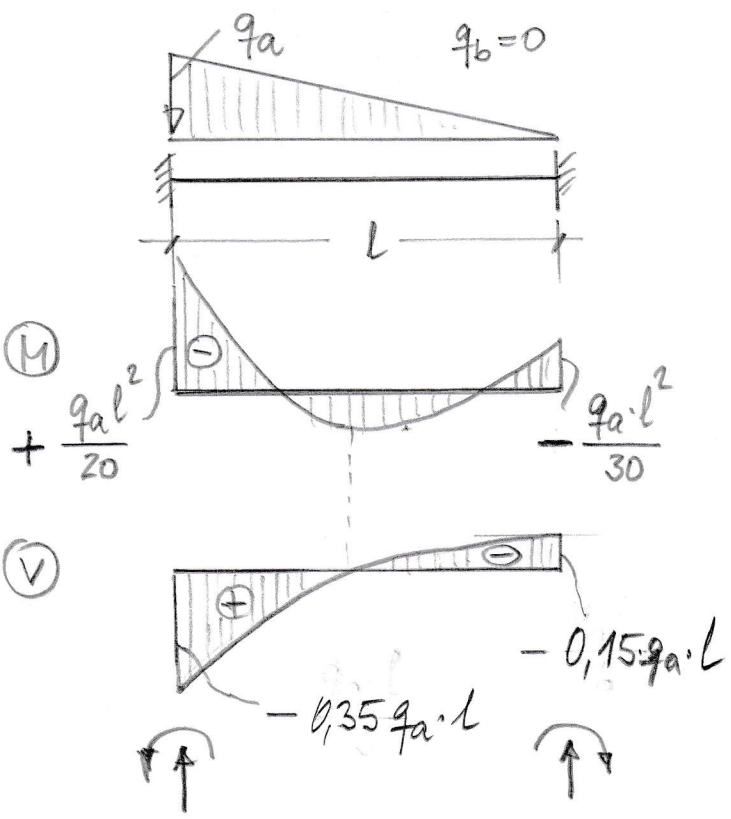


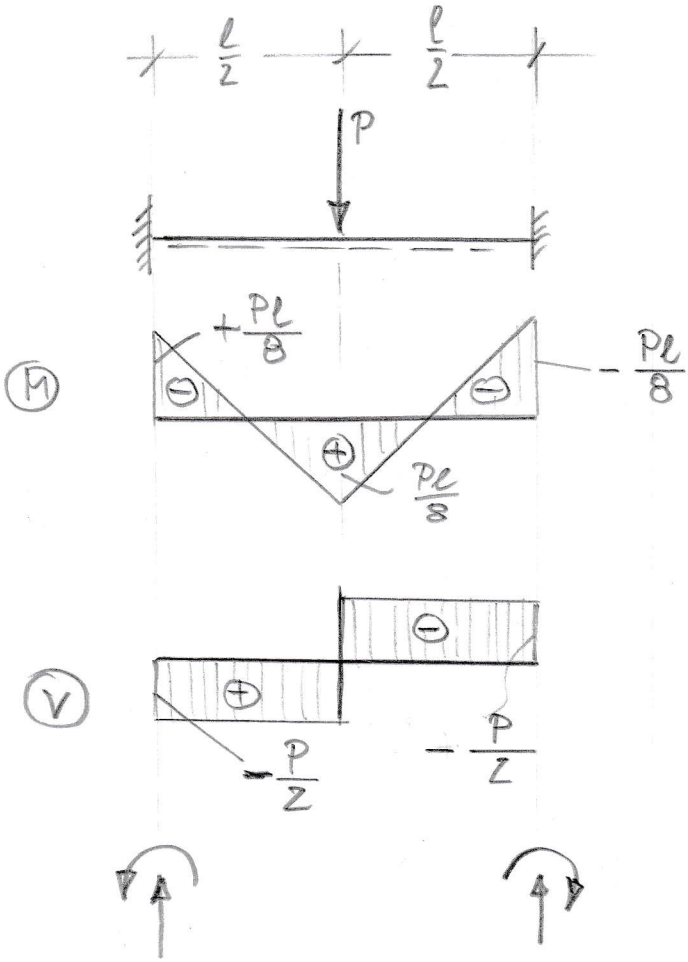


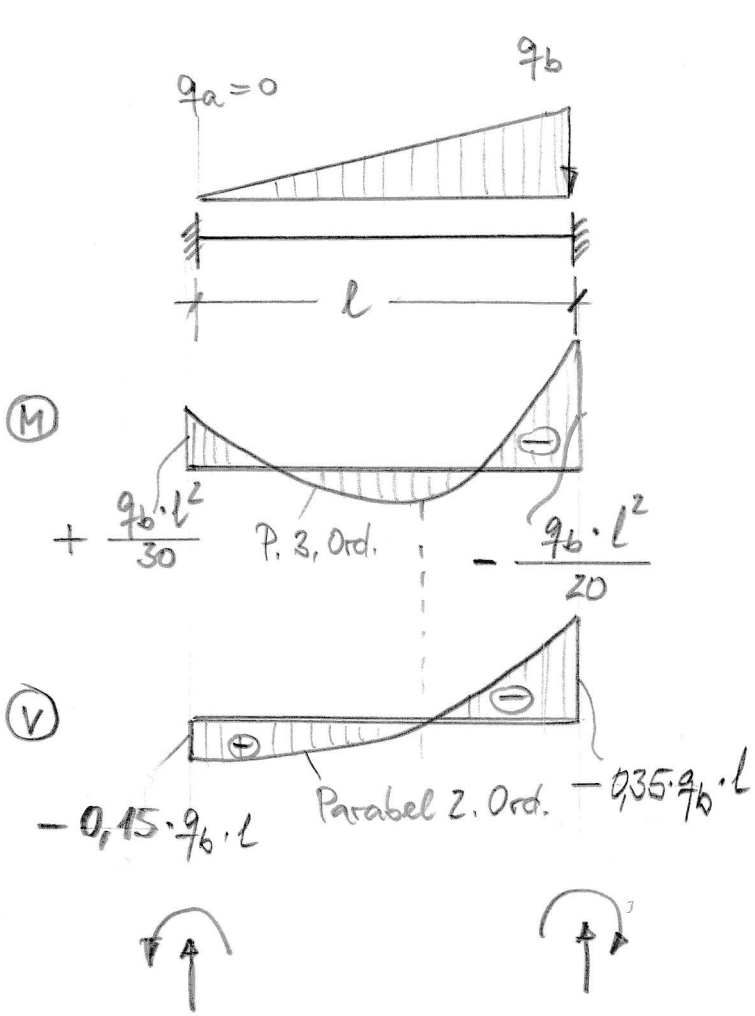
ARBEITSBLATT (3) Stabendschnittgrößen mit Vorteichen nach WGV !

(a) (b)





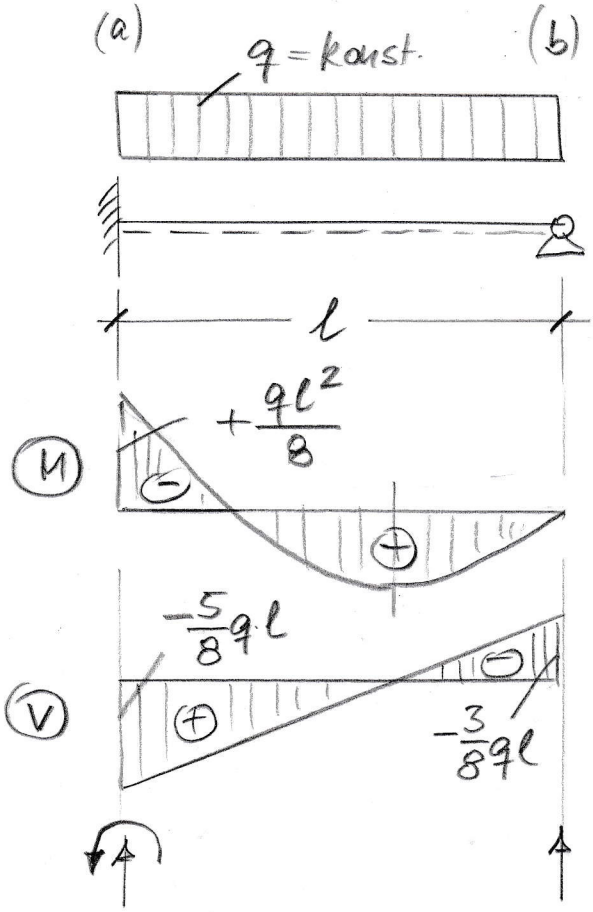




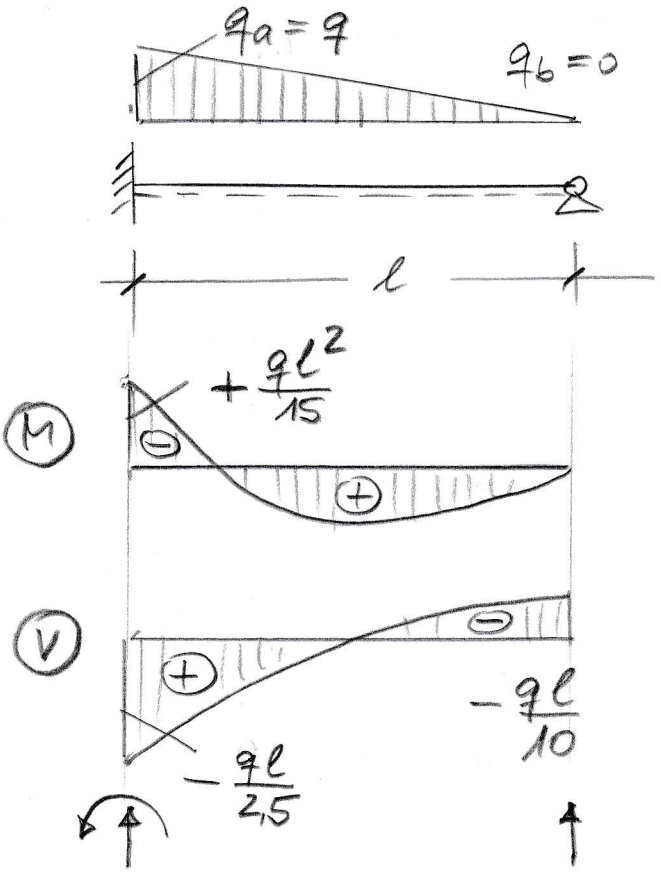
16.04.2015

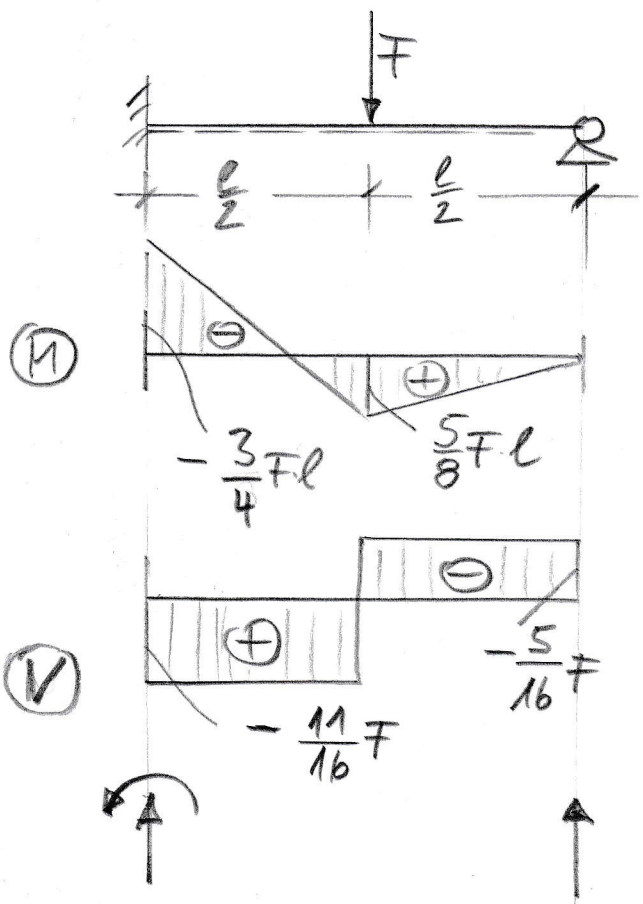
ARBEITSBLATT (3.1) Stabendschnittgrößen mit Vorzeichen nach WGV !

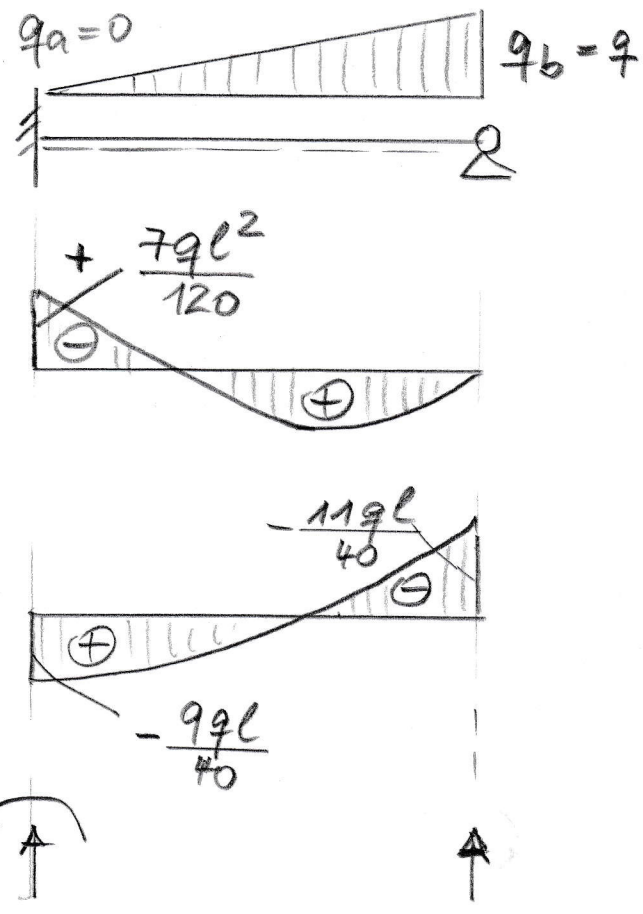
(a)



(b)

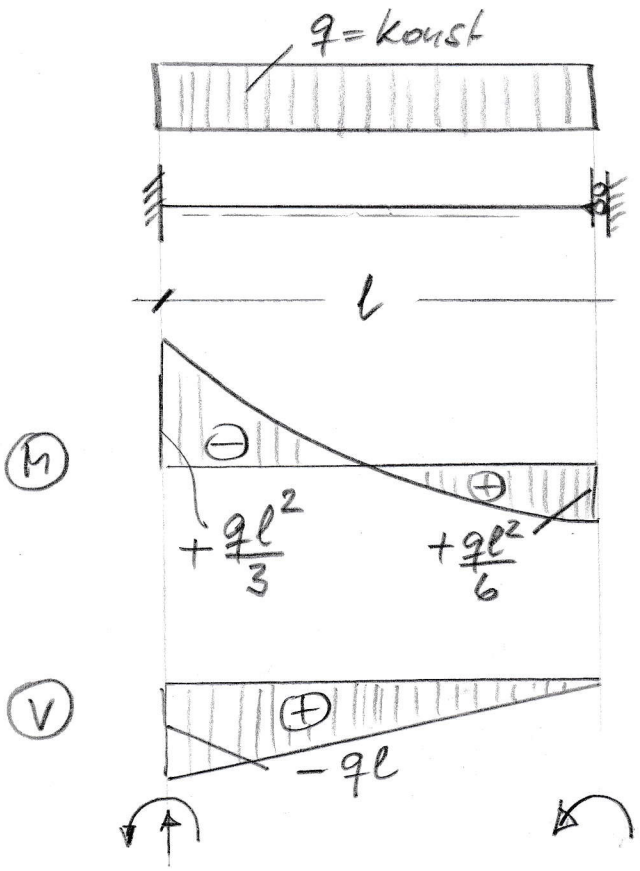


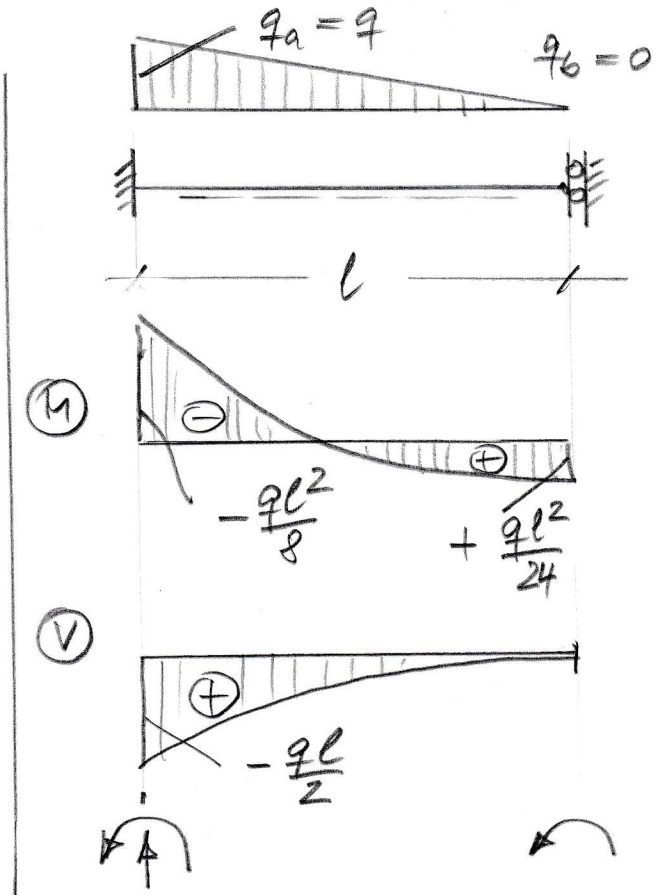


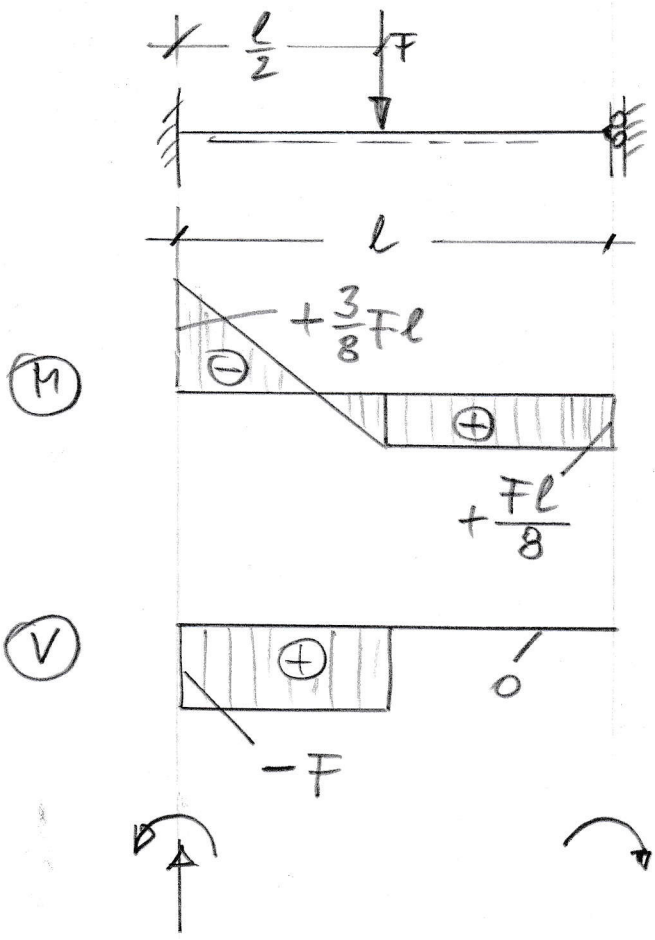


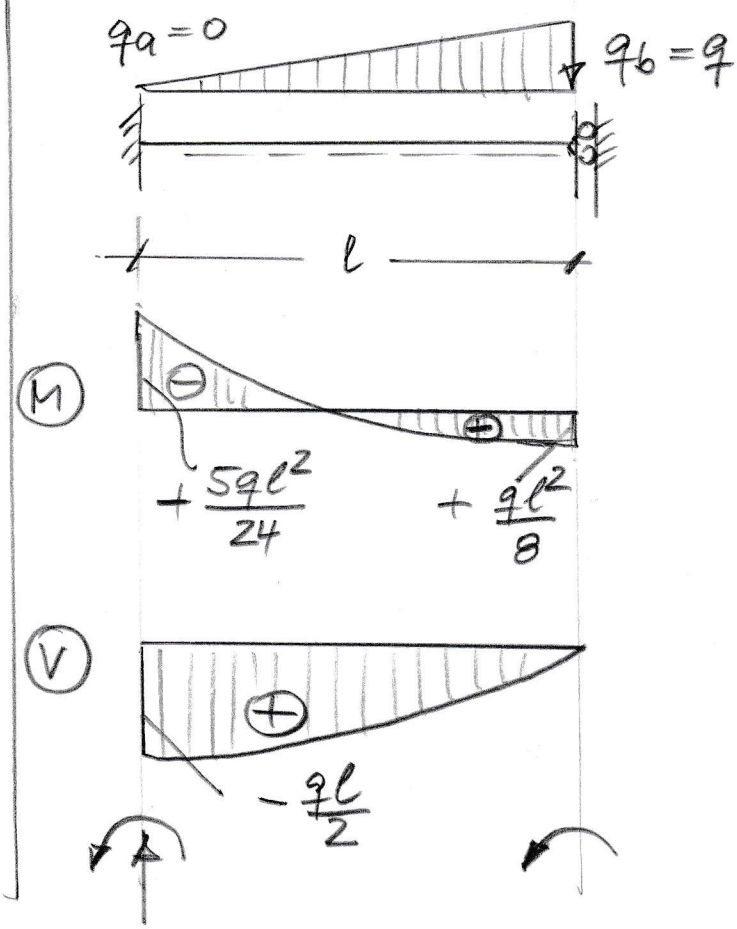
ARBEITSBLATT (3.2)

Stabendschnittgrößen mit Vorzeichen nach WGV







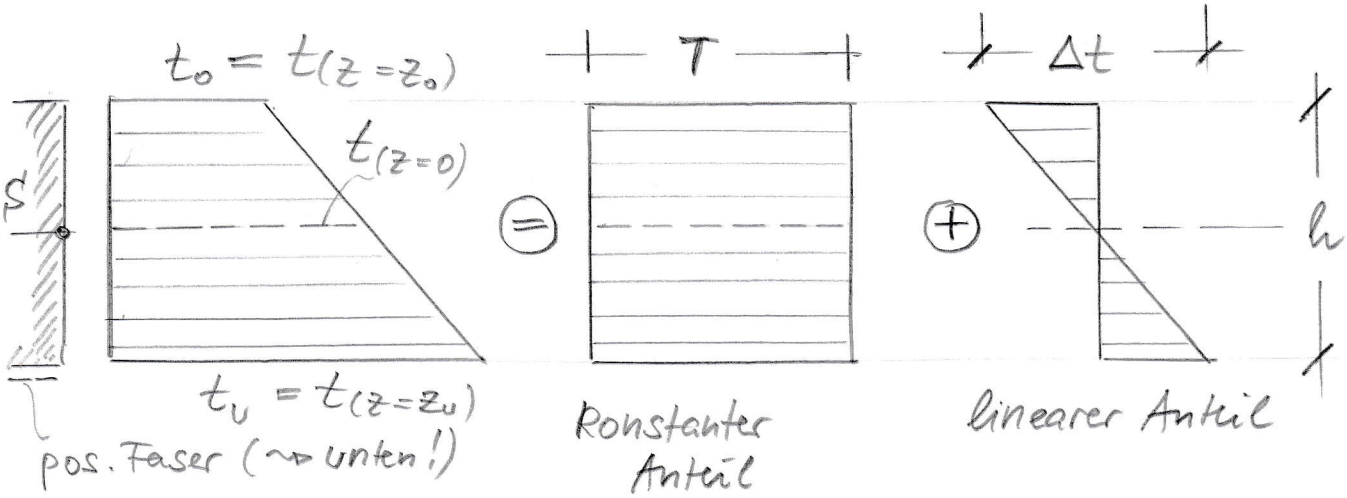


ARBEITSBLATT (4)

Temperatureinwirkung

$$T = \frac{t_u + t_o}{2} \quad *)$$

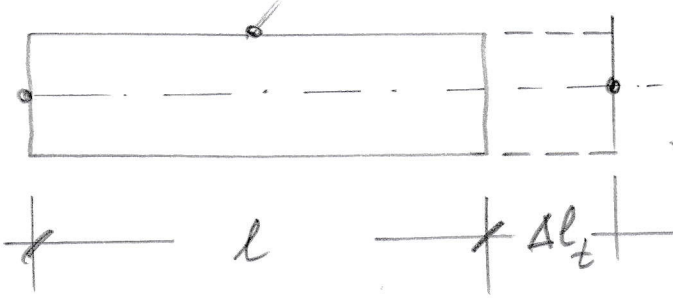
$$\Delta t = t_u - t_o$$



Wirkung auf Stabachse

Längsdehnung

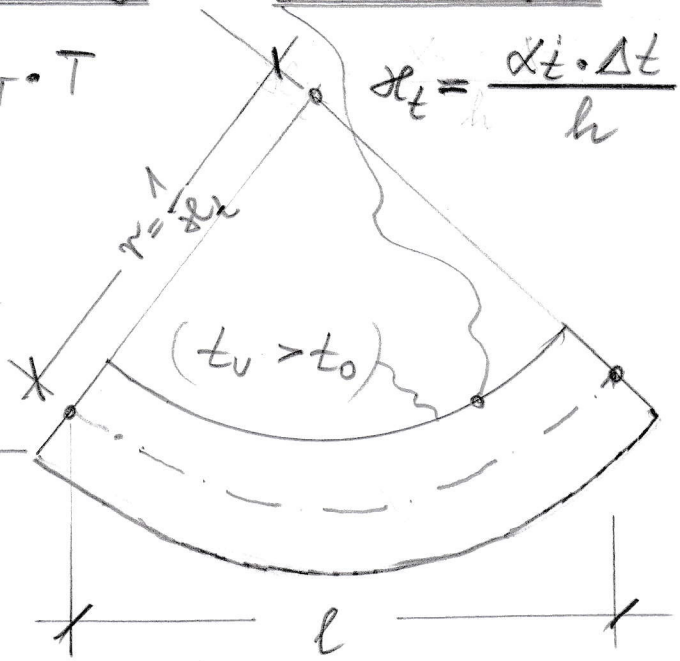
$$\varepsilon_t = \alpha_T \cdot T$$



$$\Delta l_t = \varepsilon_t \cdot l$$

Verkrümmung

$$\varkappa_t = \frac{\alpha_t \cdot \Delta t}{h}$$



Generell gilt: t_u und t_o sind Temp.-veränderungen gegenüber dem Bauzustand

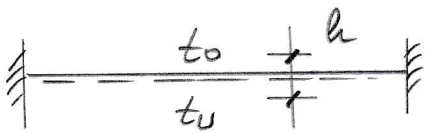
t_u und t_o müssen vorzeichengerecht eingesetzt werden

α_T = Wärmeausdehnungskoeff.

*) gilt nur für Querschnitte mit Schwerachse auf halber Höhe!

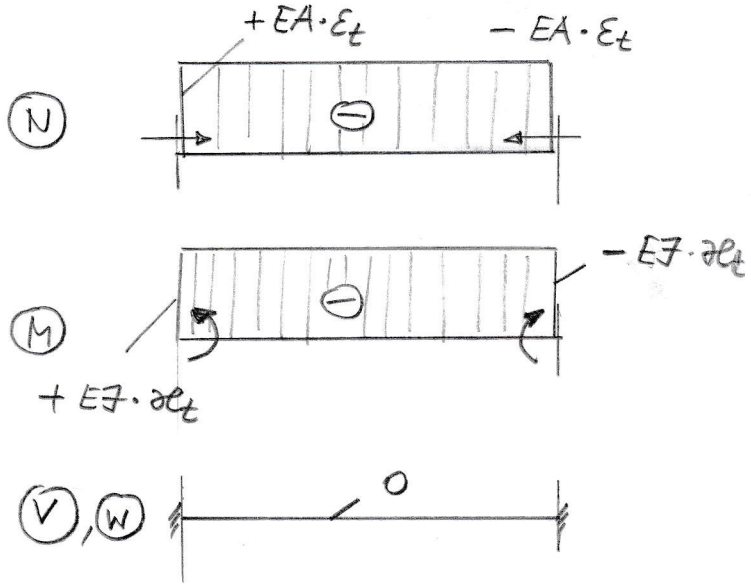
ARBEITSBLATT (5)

Parameter:
$EA;\ EJ;\ \alpha_T;\ h$

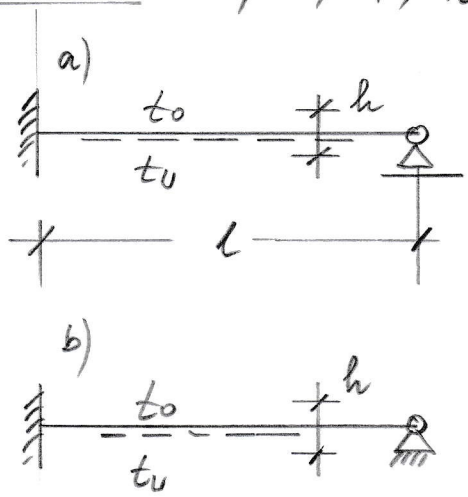


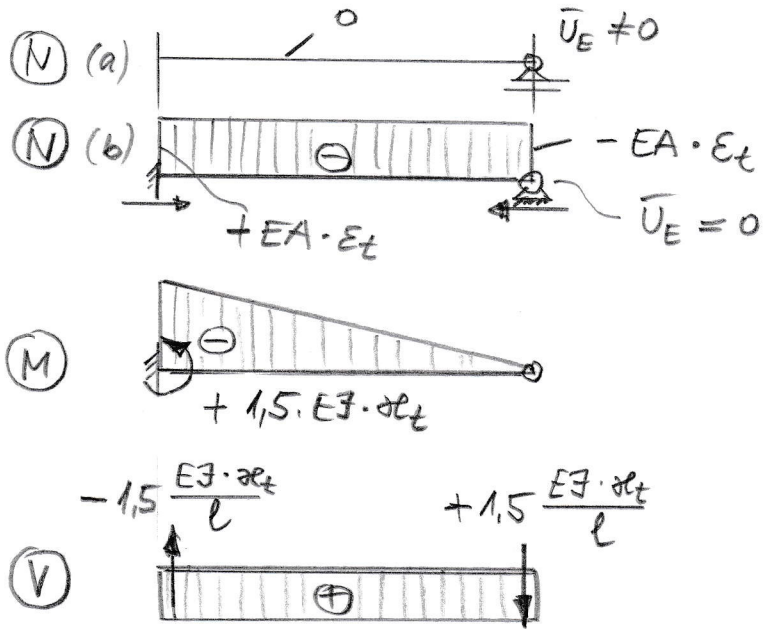
$$\varepsilon_t = \alpha_T \cdot T = \alpha_T \cdot \frac{t_u + t_o}{2}$$

$$\varkappa_t = \frac{\alpha_T \cdot \Delta t}{h} = \frac{\alpha_t}{h}(t_u - t_o)$$



Parameter: $EA;\ EJ;\ \alpha_T;\ h$





Parameter: $EA;\ EJ;\ \alpha_t;\ h$