Aufgabe 3.1

a) $\Gamma' = \frac{t \cdot a_D}{f'_{Obj} \cdot f'_{Ok}} = -400$

b.) $a'_{Obj} = f'_{Okj} + t \qquad 164\,mm$

$$\frac{1}{a'_{Obj}} - \frac{1}{a_{Obj}} = \frac{1}{f'_{Okj}} \Rightarrow a_{Obj} = \left(\frac{1}{a'_{Obj}} - \frac{1}{f'_{Objj}}\right)^{-1} = -4.1\,mm$$

$$\Rightarrow z_{Obj} = a_{Obj} - f_{Obj} = -4.1\,mm - (-4\,mm) = -0.1\,mm$$

c.) $a_{Ok} = -26\,mm$

$$\Rightarrow a'_{Ok} = \left(\frac{1}{a_{Ok}} + \frac{1}{f'_{Ok}}\right)^{-1} = 650\,mm$$

Gesamt-Vergrößerung

$$\Gamma' = \Gamma'_{Obj} \cdot \Gamma'_{Ok} = -\frac{t}{f'_{Obj}} \cdot \frac{a'_{Ok}}{a_{Ok}} = 1000$$