



## Übungsblatt 6 - Zahlenwerte der Lösungen

### (6.1)

(a)  $\tau = 40 \text{ N m}$

(b)  $\tau = 28.28 \text{ N m}$

### (6.2)

(a)

$$I_{\text{vk}} = \frac{2}{5} M R_a^2$$

$$I_{\text{ks}} = \frac{2}{3} M R_a^2$$

(b)  $I_{\text{vk}} = 0.6 \text{ kg m}^2$

(c)  $I_{\text{ks}} = 1 \text{ kg m}^2$

### (6.3)

(a)  $\tau = 203.58 \text{ N m}$

(b)  $W = E_{\text{kin},f} = 5.86 \text{ MJ}$

### (6.4)

(a)  $I_f = 1.25 \text{ kg m}^2$

### (6.5)

(a)

$$v = 8.09 \frac{\text{m}}{\text{s}}$$

$$v = 7.88 \frac{\text{m}}{\text{s}}$$

(b)

$$t_{\text{zm}} > t_{\text{vz}}$$

$$\Delta t = 0.07 \text{ s}$$

(6.6)  $a_1 = -a_2 := a = 0.43 \frac{\text{m}}{\text{s}^2}$

(6.7)  $\omega_f = 3.47 \frac{\text{rad}}{\text{s}} \hat{=} 33.13 \frac{\text{U}}{\text{min}}$

(6.8)  $t_R = 0.41 \text{ s}$