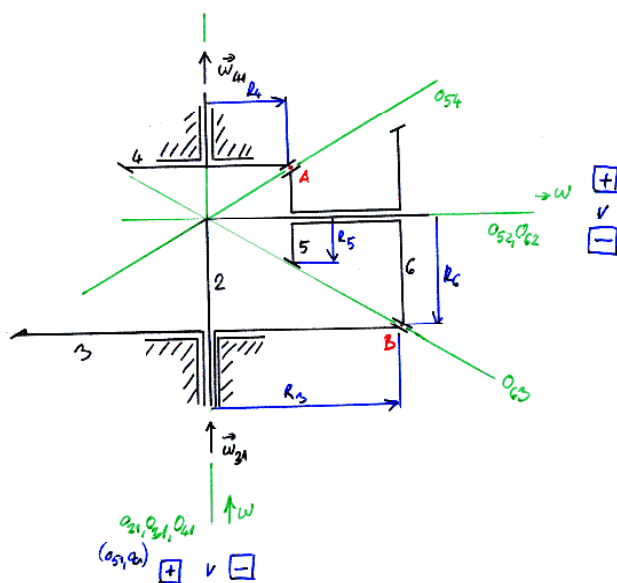


Znáš ω_{31} a ω_{41} , urči ω_{52}



1) osy, kladné smysly $\vec{\omega}$

2) kladné smysly $\vec{v}$

3) Body styku v ozubení

4) rovnice SP

$$\begin{aligned} A: \quad 51 &= 54 + 41 & B: \quad 61 &= 63 + 31 \\ 51 &= 52 + 21 & 61 &= 62 + 21 \end{aligned}$$

5) rovnice vektorové

$$a) \quad \vec{v}_{51}^A = \vec{v}_{54}^A + \vec{v}_{41}^A$$

$$\vec{v}_{51}^A = \vec{v}_{54}^A + \vec{v}_{41}^A$$

$$b) \quad \vec{v}_{61}^B = \vec{v}_{65}^B + \vec{v}_{51}^B$$

$$\vec{v}_{61}^B = \vec{v}_{65}^B + \vec{v}_{51}^B$$

$$c) \quad \vec{\omega}_{62} = \vec{\omega}_{52}$$

$$d, e) \quad \vec{v}_{51}^A = \vec{v}_{52}^A + \vec{v}_{21}^A \quad \vec{v}_{61}^B = \vec{v}_{62}^B + \vec{v}_{21}^B$$

6) řešení rovnic

$$a) \quad -v_{51}^A = -v_{41}^A \quad -v_{51}^A = -\omega_{41} r_4 \quad v_{51}^A = \omega_{41} r_4$$

$$b) \quad -v_{61}^B = -v_{51}^B \quad -v_{61}^B = -\omega_{51} r_5 \quad v_{61}^B = \omega_{51} r_5$$

$$d, e) \quad -v_{51}^A = v_{52}^A - v_{21}^A \quad -v_{61}^B = -v_{62}^B - v_{21}^B$$

$$-\omega_{41} r_4 = \omega_{52} r_5 - \omega_{21} r_4 \quad -\omega_{51} r_5 = -\omega_{62} r_6 - \omega_{21} r_3$$

$$-\omega_{41} r_4 = \omega_{52} r_5 - \omega_{21} r_4 \quad / \cdot r_6$$

$$-\omega_{51} r_5 = -\omega_{62} r_6 - \omega_{21} r_3 \quad / \cdot r_5$$

$$+\omega_{41} r_4 r_6 + \omega_{51} r_3 r_5 = +\omega_{21} (r_3 r_5 + r_4 r_6)$$

$$\omega_{21} = \omega_{51} \frac{r_3 r_5}{r_3 r_5 + r_4 r_6} + \omega_{41} \frac{r_4 r_6}{r_3 r_5 + r_4 r_6}$$

$$\omega_{52} r_5 = \omega_{21} r_4 - \omega_{41} r_4 \quad \dots \quad \omega_{52} = (\omega_{21} - \omega_{41}) \frac{r_4 r_6}{r_3 r_5 + r_4 r_6}$$