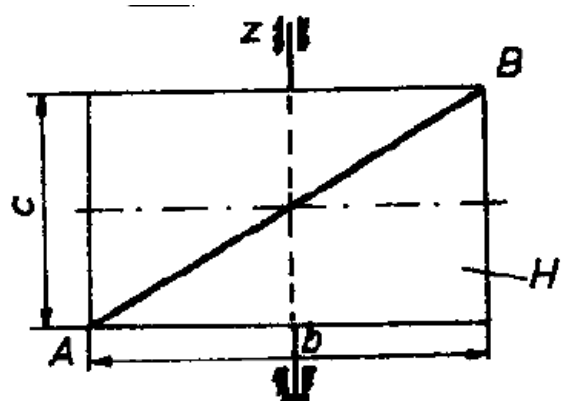
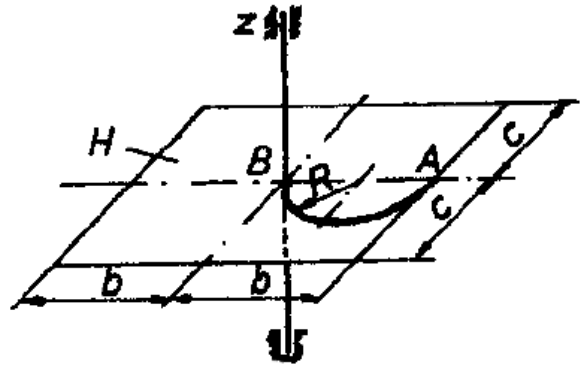
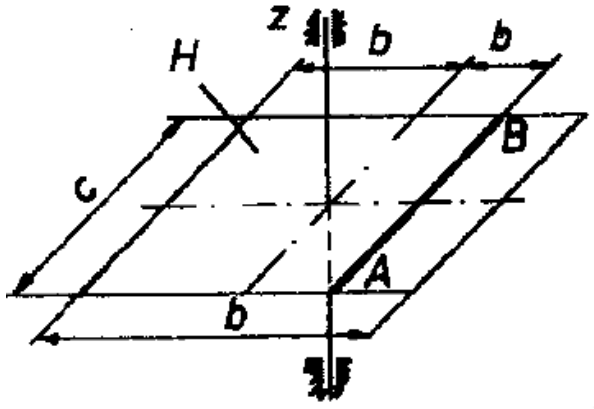
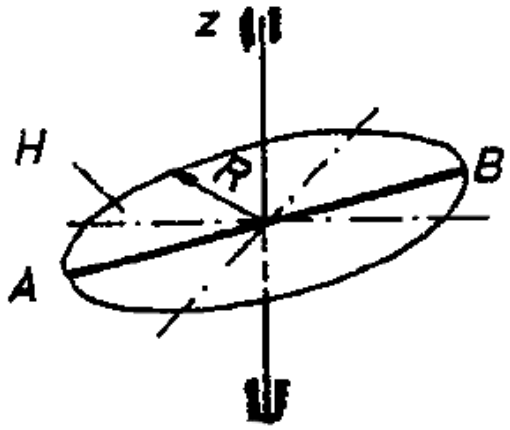
A body N with mass m_1 rotates around the vertical axis "z" with a constant angular velocity ω_o, where at the point O of the groove AB of the body N, at a distance AO from point A along the groove, there is a material point of mass m_2. At a certain moment (t = 0), a torque Mz starts acting on the system. At the moment t = τ the torque stops to acting, and at the same time the point L starts relative motion from point O along the groove AB towards point B according to the formula OL. Determine the angular velocity of the body N for the times t = τ and t = T, disregarding the resistance to rotation of the body H. Show the vectors.

	$m_1 = 66\ kg$ $m_2 = 10\ kg$ $\omega_o = 1{,}5\ s^{-1}$ $b = 2m$ $c = 1{,}5m$ $AO = 0\ m$ $Mz = 15\sqrt{t}\ Nm$ $\tau = 4\ s$ $T = 6{,}5\ s$ $OL = 0{,}5\ (t - \tau)$
	$m_1 = 300\ kg$ $m_2 = 50\ kg$ $\omega_o = -2\ s^{-1}$ $b = 1{,}6m$ $c = 1m$ $R = 0{,}8m$ $AO = 0\ m$ $Mz = 968\ Nm$ $\tau = 1\ s$ $T = 2\ s$ $OL = \frac{\pi R}{2}\ (t - \tau)^2$
	$m_1 = 100\ kg$ $m_2 = 40\ kg$ $\omega_o = 2\ s^{-1}$ $b = 2\ m$ $c = \sqrt{2}m$ $R = -$ $\alpha = -$ $AO = \frac{\sqrt{2}}{2}\ m$ $Mz = -90\sqrt{t}\ Nm$ $\tau = 4\ s$ $T = 5\ s$ $OL = \frac{\sqrt{2}}{4}\ (t - \tau)$

	$m_1 = 40\ kg$ $m_2 = 10\ kg$ $\omega_o = 2\ s^{-1}$ $b = -$ $c = -$ $R = 1\ m$ $\alpha = -$ $AO = 0\ m$ $Mz = 120t\ Nm$ $\tau = 1\ s$ $T = 4\ s$ $OL = 0{,}5\ (t - \tau)$