В8	ЗД-210

К 2

при $t_0 = 0$(с) $\quad x_0$

$C_2 \cdot 0 + C_1 \cdot 0 + C_0 = 6$ [см] $\quad C_0 = 6$ см

$V = \frac{dx}{dt} = 2C_2 t + C_1 \left[\frac{см}{с}\right]$

$2C_2 \cdot t_0 + C_1 = V_0, \; C_1 = V_0 = 2\left[\frac{см}{с}\right]$

при $t_2 = 3$с:

$x_2 = C_2 t_2^2 + C_1 t_2 + C_0$ [см]

$111 = 9C_2 + 2 \cdot 3 + 6, \; C_2 = 11\left[\frac{см}{с^2}\right]$

$x = 11t^2 + 2t + 6$ [см] $\quad V_x = dx/dt$

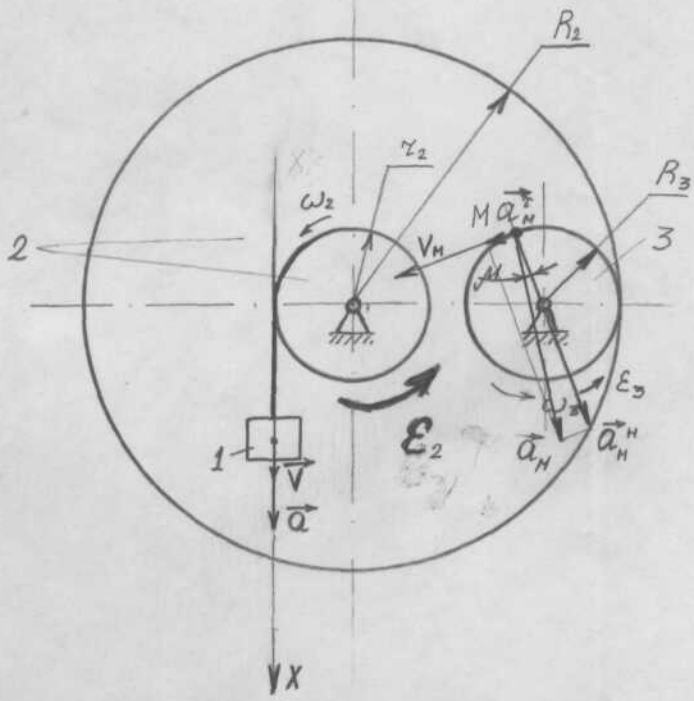
$V = 22t + 2\left[\frac{см}{с}\right]$

$V_1 = 22 \cdot 2 + 2 = 46\left[\frac{см}{с}\right]$

$a_1 = dV/dt = 22\left[\frac{см}{с^2}\right]$

$R_2 = 35$ см
$r_2 = 10$ см
$R_3 = 10$ см.
$x_0 = 6$ см ($t_0 = 0$с)
$V_0 = 2$ см/с
$x_2 = 111$ см
$t_2 = 3$ с
$t_1 = 2$ с
$x = C_2 t^2 + C_1 t + C_0$ (см.

$C_0, C_1, C_2,$
V_1, a, a_M, V_M?



$$\begin{cases} V = \omega_2 \cdot r_2 \\ R_2 \omega_2 = R_3 \omega_3, \; \omega_2 = V / r_2 \end{cases}$$

$$\omega_3 = \frac{R_2 V}{r_2 R_3} = \frac{(22t+2)R_2}{r_2 \cdot R_3} \left[\frac{рад}{с}\right]$$

$$V_M = \omega_3 \cdot R_3 = \frac{22t+2}{r_2} \cdot R_2 \Big|_{t_1 = 2с} =$$

$$= \frac{22 \cdot 2 + 2}{10} \cdot 35 = 161\left[\frac{см}{с}\right]$$

$$\varepsilon_3 = \dot{\omega}_3 = \frac{22 R_2}{r_2 \cdot R_3} \left[\frac{рад}{с^2}\right]$$

$$a_M^{\tau} = \varepsilon_3 \cdot R_3 = \frac{22 R_2}{r_2} = \frac{22 \cdot 35}{10} = 77\left[см/с^2\right], \; a_M^{n} = R_3 \cdot \omega_3^2 = R_3 \left(\frac{(22t+2)R_2}{r_2 \cdot R_3}\right)^2 = \frac{(22 \cdot 2 + 2)^2 \cdot 35^2}{10^2 \cdot 10} = 2592{,}1\left[\frac{см}{с^2}\right]$$

$$a_M = \sqrt{a_M^{\tau 2} + a_M^{n 2}} = \sqrt{2592^2 + 77^2} = 2593\left[\frac{см}{с^2}\right]; \; \mu = \operatorname{arctg} \frac{a_M^{\tau}}{a_M^{n}} = \operatorname{arctg} \frac{77}{2592{,}1} = 1{,}7^\circ$$

V_1, $\frac{см}{с}$	a_1, $\frac{см}{с^2}$	a_M, $\frac{см}{с^2}$	$V_{1,M}$, $\frac{см}{с}$	a_M^{τ}, $\frac{см}{с^2}$	a_M^{n}, $\frac{см}{с^2}$
46	22	2593	161	77	2592

26.11.09