

MEHANIKA 2

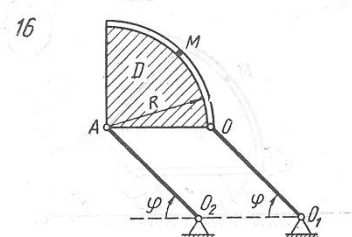
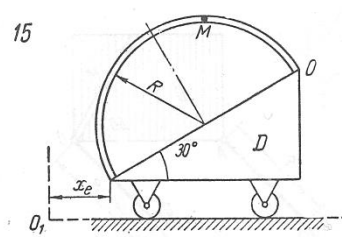
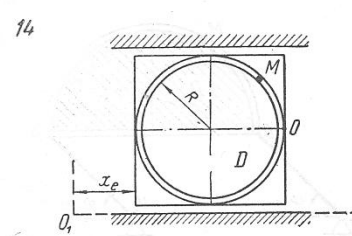
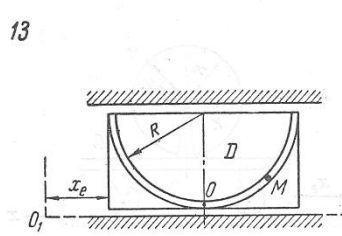
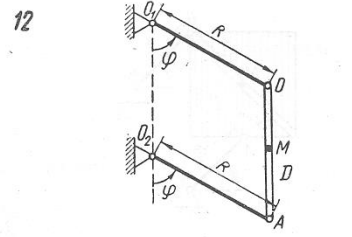
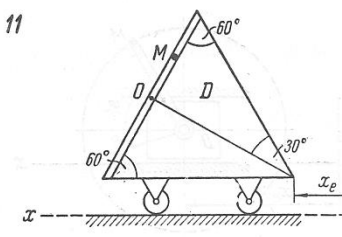
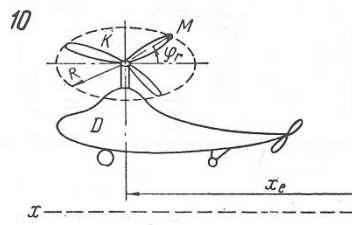
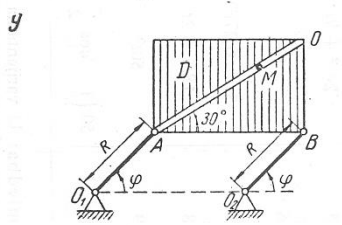
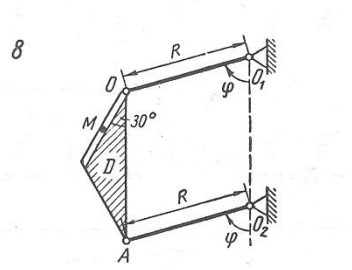
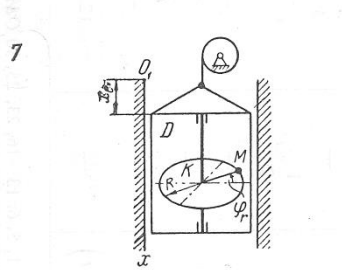
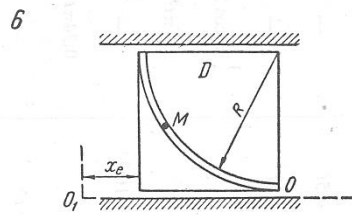
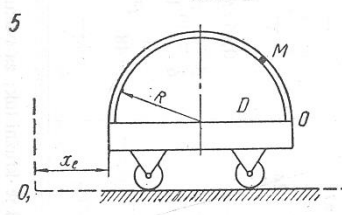
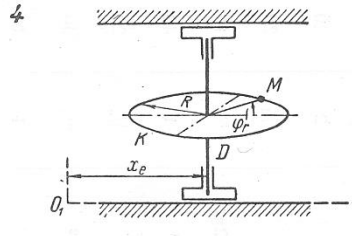
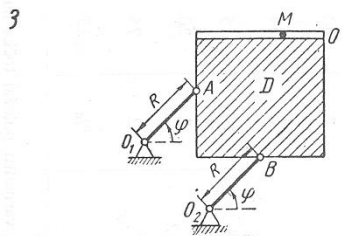
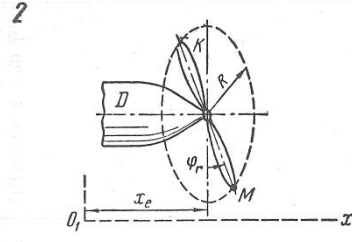
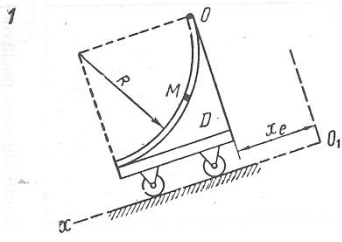
GRAFIČKI RAD BR. 2a

Određivanje apsolutne brzine i apsolutnog ubrzanja tačke za slučaj translatornog prenosnog kretanja

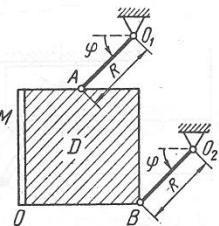
Prema zadatim jednačinama relativnog kretanja tačke M i prenosnog kretanja tijela D odrediti za trenutak t_1 apsolutnu brzinu i apsolutno ubrzanje tačke M.

Varijanta (sl. K-8ab i c)	$x_e = f_1(t)$ cm	$\varphi = f_2(t)$ radijana	Jednadžba relativnog gibanja		s_r, t_1	cm, R	Primjedba
			točke M	tijela K			
			$OM = s_r = f_3(t)$ cm	$\varphi_r = f_4(t)$ rad			
1	$t^3 + 4t$	—	$4\pi t^2$	—	2	48	
2	$60t^2$	—	—	$0,036\pi t^3$	$5/3$	80	
3	—	$\frac{1}{24}\pi t^2$	$2t^3 + 3t$	—	2	15	
4	$2t + 0,2t^3$	—	—	$\frac{1}{12}\pi t^3$	2	20	
5	$7t + 4t^3$	—	$20\pi t^2$	—	$1/2$	30	
6	$20\left(1 + \sin \frac{\pi}{3} t\right)$	—	$\pi(2t^3 + 3t)$	—	1	30	
7	$20t^2 + 3t$	—	—	$\frac{\pi}{3} t^3$	1	20	
8	—	$1,5\pi t^2$	$9t^3 + 5t$	—	$1/3$	25	
9	—	$\frac{8}{3}\pi t^3$	$16t^2 - 2t + 2$	—	$1/2$	30	
10	$250t^2$	—	—	$3\pi t^2$	$5/3$	60	
11	$-8t + 3t^2$	—	$4 \sin \frac{\pi}{3} t$	—	2	—	
12	—	$\frac{4}{27}\pi t^2$	$2t^3$	—	$3/2$	25	
13	$4(t + 4t^2)$	—	$10\pi \sin \frac{\pi}{6} t$	—	1	30	
14	$20\left(\cos \frac{\pi}{8} t + 1\right)$	—	$5\pi t^2$	—	2	24	
15	$10t^2 - 0,6t^3$	—	$2\pi t^2$	—	3	54	
16	—	$\frac{1}{8}\pi t^2$	$\frac{5}{4}\pi t^3$	—	2	30	$O_1O = O_2A = 40$ cm
17	—	$\frac{1}{24}\pi t^2$	$3t^3 + 5t$	—	2	20	
18	—	$\frac{2}{3}\pi t^2$	$4t^3 + 9t$	—	$1/2$	20	
19	$20t^2 + 15t$	—	—	$\frac{1}{3}\pi \cos 2\pi t$	$1/6$	15	
20	$25\left(1 + \sin \frac{\pi}{3} t\right)$	—	—	$\frac{2}{3}\pi t^2$	1	40	
21	—	$\frac{2}{3}\pi t^2$	$1,5t + 10t^3$	—	$1/2$	20	
22	$10 + 3 \sin \frac{\pi}{2} t$	—	—	$0,24\pi t^2$	$5/3$	30	
23	—	$\frac{5}{6}\pi t^3$	$6\pi t^2$	—	1	18	$O_1O = O_2A = 20$ cm
24	$20\left(1 + \sin \frac{\pi}{2} t\right)$	—	—	$0,36\pi t^2$	$5/6$	50	
25	$24t^2 + 7t$	—	$\frac{5}{3}\pi t^3$	—	2	40	
26	—	$\frac{1}{12}\pi t^2$	$t^3 + 2t$	—	2	35	
27	$3t + 0,27t^3$	—	—	$0,15\pi t^2$	$3^{1/3}$	15	
28	$18t^2 + 2t$	—	—	$\frac{5}{6}\pi \sin \frac{\pi}{12} t$	2	20	
29	$50t^2$	—	—	$\frac{5}{48}\pi t^3$	2	75	
30	$50\left(1 - \cos \frac{\pi}{2} t\right)$	—	$12\pi t^2$	—	$5/6$	25	

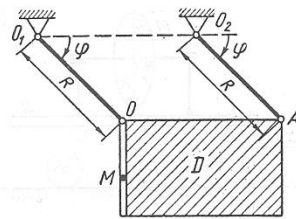
Napomena: U varijantama 1, 5, 6, 13-16, 23, 25 i 30 OM je kružni luk. Za svaku varijantu položaj tačke na shemi odgovara pozitivnoj vrijednosti s_r .



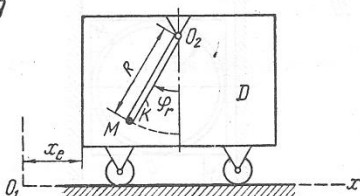
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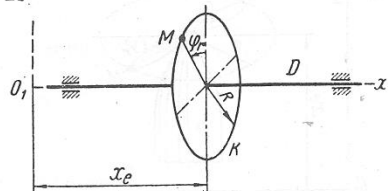
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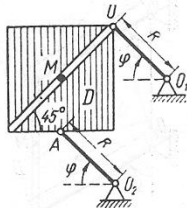
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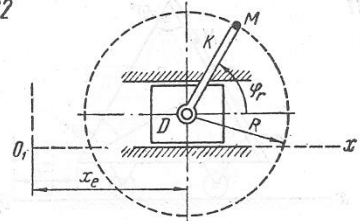
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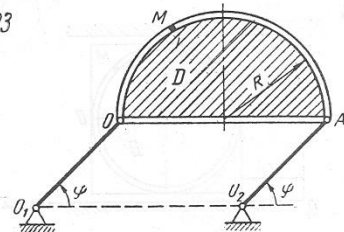
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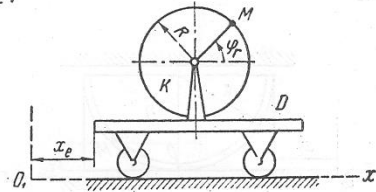
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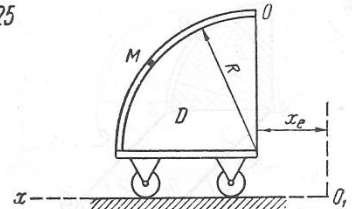
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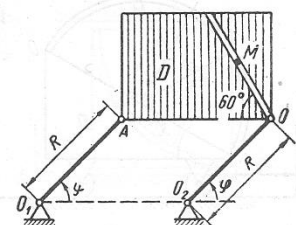
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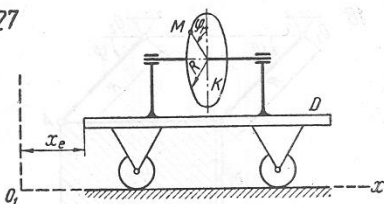
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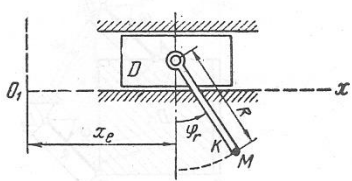
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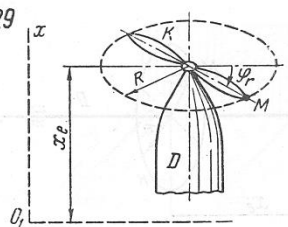
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