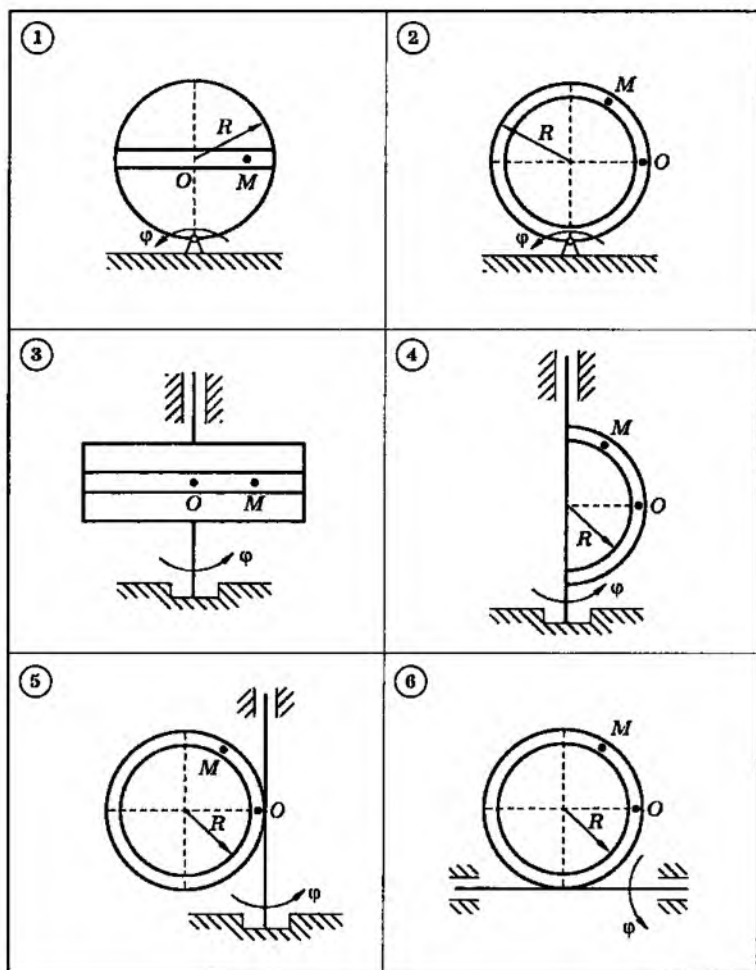


## СЛОЖНОЕ ДВИЖЕНИЕ ТОЧКИ

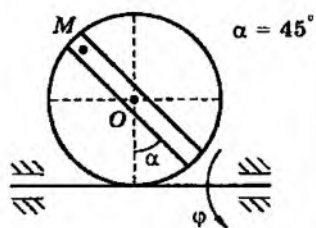
В приведенных ниже схемах 1-30 рассматривается движение точки  $M$  в желобе вращающегося тела. По заданным в таблице уравнениям относительного движения  $OM(t)$ , переносного движения  $\varphi(t)$  и геометрическим размерам определить абсолютную скорость и абсолютное ускорение точки в указанный момент времени.

№ вар.	$OM(t)$ , м	$\varphi(t)$ , рад	$R$ или $l$ , м	$t$ , с
1	$t^2 - t$	$0,5t^2 + t$	20	1
2	$5\pi(2t^2 + t)$	$2t^2$	15	1
3	$5(t^2 - t)$	$0,5t^2 + t$		2
4	$5\pi(t^2 - 3)$	$3t^2 - 8t$	20	2
5	$10\pi t^2$	$2t^2 - t$	20	1
6	$15\pi(t^2 - 2t)$	$6t - 4t^2$	30	2
7	$t^2 + 3t - 1$	$2t^2 - 3t$		1
8	$t^3 - 4t$	$0,5t^2$	6	2
9	$2t^3 - t$	$4t - t^2$		1
10	$t^3 - t$	$4t - t^2$	4	1
11	$2t^2 + 2t$	$0,5t^2$	4	1
12	$4t^2 + 6t$	$2t^2 - 6t$	40	2
13	$5\pi(2t^2 - t)$	$t^2 + t$	10	1
14	$t^2 - 2t + 1$	$0,5t^2 + 2t$		2
15	$5\pi(t^2 - 2)$	$2(t^2 - t)$	20	1
16	$15\pi t^2$	$t^2 + t$	10	1
17	$5\pi(2t^2 - t)$	$t^2 + t$	20	1
18	$t^3 - 2t^2 + 8$	$3t^2 - 8t$		2
19	$8t^2 - 2t$	$4t^2$	2	0,5
20	$10\pi t^2$	$4t^2 - 2t$	20	1
21	$t^4 - 4t$	$3t^2 - 8t$		2
22	$3t^2 - t$	$t^2 + 3t$	2	1
23	$10\sin(\pi t/6)$	$t^2$		1

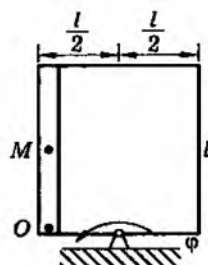
№ вар.	$OM(t)$ , м	$\varphi(t)$ , рад	$R$ или $l$ , м	$t$ , с
24	$10\pi(t^2 - t)$	$4t^2 - 2t$	10	1
25	$10\pi t^2$	$2t^2 - t$	30	1
26	$5\pi t^2$	$t^2 + t$	20	1
27	$20\pi t^2$	$t^2 + t$	20	1
28	$-3t^2$	$4(t^2 - 3t)$		2
29	$3\sqrt{2}(t^2 + t - 1)$	$t^2 - t$	6	1
30	$4t^2$	$2t - 0,5t^2$	4	1



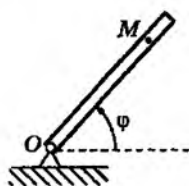
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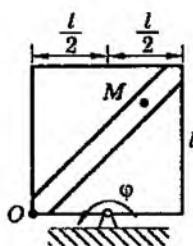
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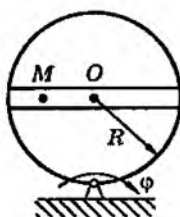
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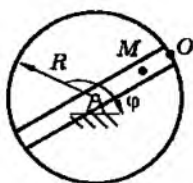
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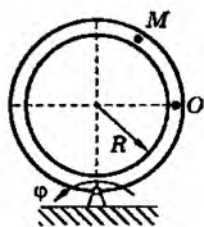
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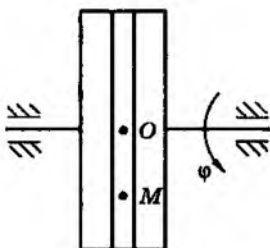
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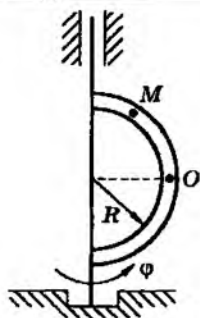
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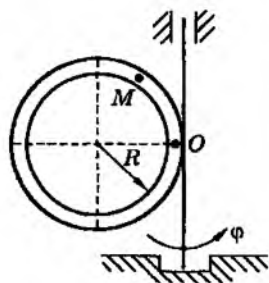
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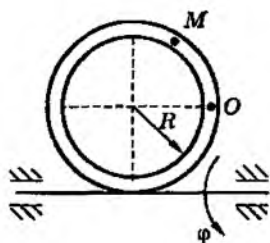
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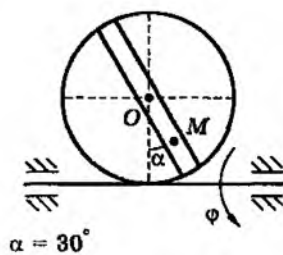
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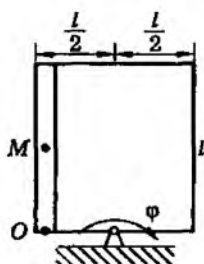
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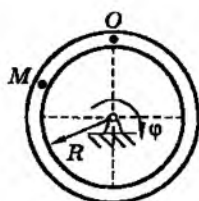
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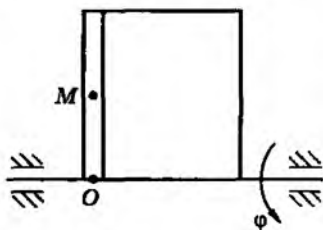
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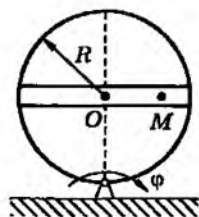
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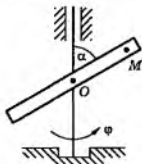
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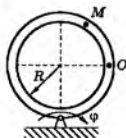


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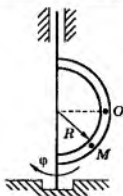


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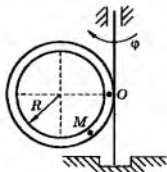
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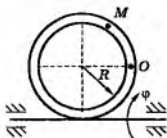
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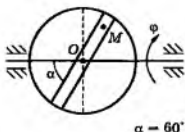
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27

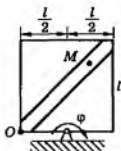


28



$$\alpha = 60^\circ$$

29



30

