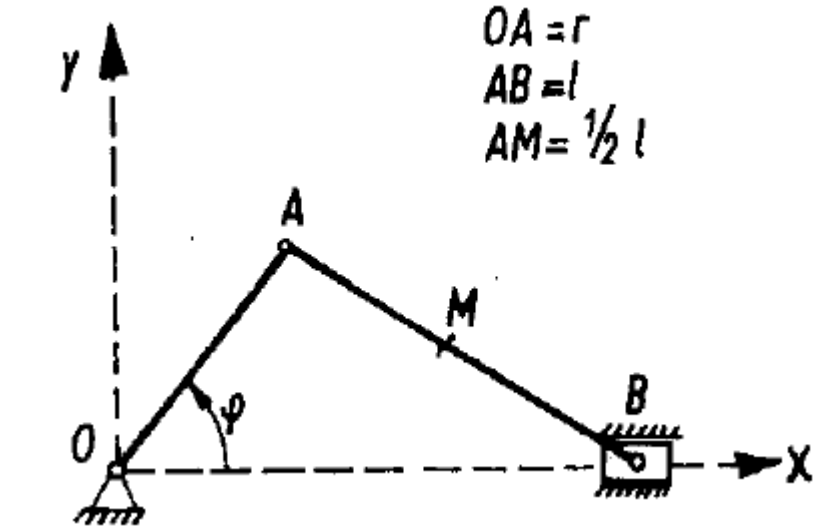
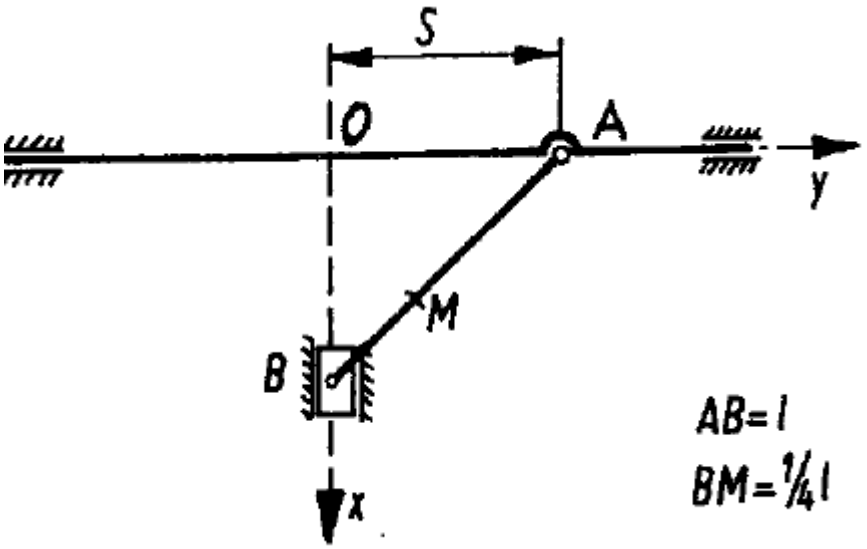
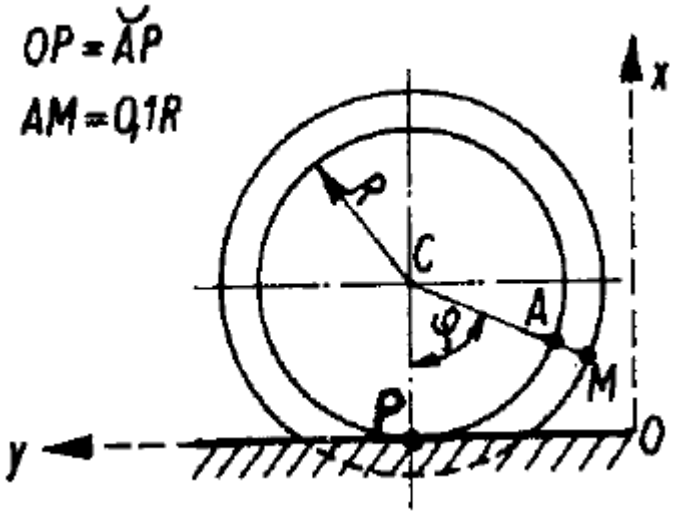
1. Having the equation of motion of point M, determine its trajectory and for the given time t_1 determine: position, velocity, accelerations and radius of curvature.

$x = x(t)$	$y = y(t)$	t_1
$-2t^2 + 3$	$-5t$	0,5
$-\cos\frac{\pi}{3}t^2 + 3$	$\sin\frac{\pi}{3}t^2 - 1$	1
$-\frac{3}{t+2}$	$3t + 6$	2
$3 - 3t^2 + t$	$4 - 5t^2 + \frac{5}{3}t$	1

2. For the M point located on the presented mechanism, determine its trajectory and for the given time t_1 determine: position, velocity, accelerations and radius of curvature

	$l = 54cm$ $r = 30cm$ $\varphi(t) = \pi t$ $t_1 = \frac{1}{6}s$
	$l = 40cm$ $s(t) = 40\sin\pi t$ $t_1 = \frac{1}{4}s$

	$R = 50cm$ $\varphi(t) = 5\pi t$ $t_1 = \frac{1}{15}s$