



$$L_{cm} = l$$

$$I = Ml^2$$

$$P = 2\pi \sqrt{\frac{Ml^2}{gMl}} = 2\pi \sqrt{\frac{l}{g}}$$

b)  $L_{cm} = \frac{l}{2}$  ,  $I = \frac{Ml^2}{3}$

$$P = 2\pi \sqrt{\frac{Ml^2/3}{gMl/2}} = 2\pi \sqrt{\frac{2l}{3g}}$$

c)  $I = \frac{M_R l^2}{3} + M_B l^2$  ,  $\neq$

M	distance of CoG from pivot	Moment
$M_R$	$\frac{l}{2}$	$M_R l/2$
$M_B$	$l$	$M_B l$
$M_R + M_B$	$x$	$x(M_R + M_B)$

$$x(M_R + M_B) = M_R \frac{l}{2} + M_B l$$

$$x = \frac{M_R \frac{l}{2} + M_B l}{M_R + M_B}$$