1 Prblm2

5. $\quad\quad \sum \vec{F_i}$

$\quad\quad$ 支える力を $\vec{F}$ とすると.

$\dot{\vec{P}} = (全外力) = 0 \implies Mg + \vec{F} = 0 \implies \vec{F} = -Mg$

$\dot{\vec{L}} = (\underbrace{外力のモーメントの合計}) = 0$

$\quad\quad\quad\quad\quad\quad\quad\quad \hookrightarrow \implies R \times Mg + r \times (-Mg) = 0$

$\vec{F} = -Mg$

$(R-r) \times Mg = 0$

$(R-r)$ と Mg は平行

(diagram: circle with center points O and G, labeled with vectors $(R-r)$, r, R, and Mg)