t	(a) For three body problem.
-	con the body placem.
	$\ddot{R}_{1} = -GM(\frac{\Gamma_{1}-\Gamma_{2}}{ \Gamma_{1}-\Gamma_{2} ^{3}} - \frac{\Gamma_{1}-\Gamma_{3}}{ \Gamma_{1}-\Gamma_{3} ^{3}})$
	$\hat{R}_2 = -GM(\frac{\hat{r}_2 - \hat{r}_3}{1 + \hat{r}_2 - \hat{r}_3})$
	$R_3 = -GM \left(\frac{r_3 - r_1}{1r_3 - r_1} - \frac{r_3 - r_2}{1r_3 - r_2} \right)$
	If we apply $\frac{1}{\text{GH}} \frac{\partial \hat{R}}{\partial t^2} = \frac{\partial^2 r}{\partial t^2}$, then we have
173	$\ddot{r}_{1} = \frac{r_{1} - r_{2}}{(r_{1} - r_{2})^{3}} - \frac{r_{1} - r_{3}}{(r_{1} - r_{3})^{3}} \qquad \ddot{r}_{2} = -\frac{r_{2} - r_{1}}{(r_{1} - r_{2})^{3}} \qquad r_{3} - r_{3}$
	$\frac{n}{n^2} = -\frac{12-11}{11-131^3} - \frac{13-12}{112-131^3}$
V	elocity of 1 km/s, : GM. R = r-
	P= V= R = 1 Km/s
	$\frac{r \cdot GM}{t} = \frac{10 \text{ m/s}}{5} \Rightarrow \frac{r}{t} = V = \frac{10^3}{GM}$

50	o). $\dot{r}_{i}^{2} = -\frac{r_{i}-r_{2}}{(r_{i}-r_{2})^{3}} - \frac{r_{i}-r_{3}}{(r_{i}-r_{3})^{3}}$
	[ri-r2 3 1ri-r3 3
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	La Professional Andrews and the Company of the Comp
180 · .	We have $Y_1 = (0, 0)$ $Y_2 = -Y_3$
	$\ddot{r}_{1} = \frac{1 - \frac{1}{1 - r_{2}}}{1 - r_{2}} - \frac{(-r_{3})}{1 - r_{2}}$
	1313
	$=\frac{r_2}{r_3} + \frac{r_3}{r_3}$ Since $r_2 = -r_3$
	$= \frac{r_2}{ r_2 ^3} + \frac{r_3}{ r_3 ^3}, \text{ since } r_2 = -r_3$
4	$\frac{f^2}{ r_2 ^3} + \frac{r_3}{ r_{21} ^3} = 0 \implies \hat{r} = 0$
	(15)
	thus, it is remain origin foor all time.