【1d8b2】 $\exists z \in \mathbb{R};\ z = r(t) - \mathrm{Q}\, m(2,1)/\mathrm{E}$ and

$$t = 2nt_0 - \frac{1}{\alpha}\sqrt{\alpha z^2 + 2\beta z + c} + \frac{\beta}{\alpha\sqrt{-\alpha}}\cos^{-1}\left(\frac{\alpha z + \beta}{\sqrt{\beta^2 - \alpha c}}\right)$$

and $\theta(t) = 2n\theta_0 - \dfrac{h}{\sqrt{-\alpha'}}\cos^{-1}\left(\dfrac{-\alpha'/r(t) - \beta'}{\sqrt{\beta'^2 - \alpha' \mathrm{A}}}\right)$

【1d8b3】 $\exists z \in \mathbb{R};\ z = r(t) - \mathrm{Q}\, m(2,1)/\mathrm{E}$ and

$$t = 2nt_0 + \frac{1}{\alpha}\sqrt{\alpha z^2 + 2\beta z + c} - \frac{\beta}{\alpha\sqrt{-\alpha}}\cos^{-1}\left(\frac{\alpha z + \beta}{\sqrt{\beta^2 - \alpha c}}\right)$$

and $\theta(t) = 2n\theta_0 + \dfrac{h}{\sqrt{-\alpha'}}\cos^{-1}\left(\dfrac{-\alpha'/r(t) - \beta'}{\sqrt{\beta'^2 - \alpha' \mathrm{A}}}\right)$

【1d9】とは【1d9a】and【1d9b】のことだ。

【1d9a】 $\mathrm{Q}\, m(2,1) = -\mathrm{Z}_0 + am(1,1)$

【1d9b】 $\forall t \in \mathbb{R};$ [$t \leqq 0 \Rightarrow$【1d9b1】] and [$t \geqq 0 \Rightarrow$【1d9b2】]

【1d9b1】 $\exists z \in \mathbb{R};\ z = r(t) - \mathrm{Q}\, m(2,1)/\mathrm{E}$ and

$$t = -\frac{1}{3\beta^2}(\beta z - c)\sqrt{2\beta z + c}$$

and $\theta(t) = -\dfrac{h}{\sqrt{-\alpha'}}\cos^{-1}\left(-\dfrac{\alpha'}{\beta' r(t)} - 1\right)$

【1d9b2】 $\exists z \in \mathbb{R};\ z = r(t) - \mathrm{Q}\, m(2,1)/\mathrm{E}$ and

$$t = \frac{1}{3\beta^2}(\beta z - c)\sqrt{2\beta z + c}$$

and $\theta(t) = \dfrac{h}{\sqrt{-\alpha'}}\cos^{-1}\left(-\dfrac{\alpha'}{\beta' r(t)} - 1\right)$