

$$f(t, 3, 1) = \frac{E}{H} t(4) - \frac{1}{EH} \sqrt{\alpha z^2 + 2\beta z + c}$$

【1c2b2】 $\exists z \in \mathbb{R}; z = E f(t, 1, 1) + b$ and

$$t(4) = 2nt_0 - \frac{1}{\alpha} \sqrt{\alpha z^2 + 2\beta z + c} - \frac{\beta}{\alpha \sqrt{-\alpha}} \cos^{-1} \left(\frac{-\alpha z - \beta}{\sqrt{\beta^2 - \alpha c}} \right) \text{ and}$$

$$f(t, 2, 1) = a(2) \left[2nA + \frac{1}{\sqrt{-\alpha}} \cos^{-1} \left(\frac{-\alpha z - \beta}{\sqrt{\beta^2 - \alpha c}} \right) \right] \text{ and}$$

$$f(t, 3, 1) = \frac{E}{H} t(4) + \frac{1}{EH} \sqrt{\alpha z^2 + 2\beta z + c}$$

【1c3】とは【1c3a】and【1c3b】のことだ。

【1c3a】 $\alpha < 0$ and $a(3) = b E/H$

【1c3b】 $\forall t \in \mathbb{R} \setminus \{4\}; f(t, 1, 1) = 0$ and $f(t, 2, 1) = a(2)t(4)/b$

$$\text{and } f(t, 3, 1) = a(3)t(4)/b$$

【1c4】とは【1c4a】and【1c4b】のことだ。

【1c4a】 $\alpha = 0$

【1c4b】 $\forall t \in \mathbb{R} \setminus \{4\}; [t(4) \leq 0 \Rightarrow \text{【1c4b1】}] \text{ and } [t(4) \geq 0 \Rightarrow \text{【1c4b2】}]$

【1c4b1】 $\exists z \in \mathbb{R}; z = E f(t, 1, 1) + b$ and

$$t(4) = -\frac{1}{3\beta^2} (\beta z - c) \sqrt{2\beta z + c} \text{ and}$$

$$f(t, 2, 1) = -\frac{a(2)}{\beta} \sqrt{2\beta z + c} \text{ and}$$

$$f(t, 3, 1) = \frac{E}{H} t(4) + \frac{1}{EH} \sqrt{2\beta z + c}$$

【1c4b2】 $\exists z \in \mathbb{R}; z = E f(t, 1, 1) + b$ and

$$t(4) = \frac{1}{3\beta^2} (\beta z - c) \sqrt{2\beta z + c} \text{ and}$$

$$f(t, 2, 1) = \frac{a(2)}{\beta} \sqrt{2\beta z + c} \text{ and}$$