

e_07_1_313

$$a_t = \alpha \rightarrow v = \alpha t \quad (1)$$

$$s = \int |v| dt = \frac{1}{2} \alpha t^2 \quad (2)$$

$$t = \sqrt{\frac{2s}{\alpha}} \quad (3)$$

$$R = \frac{v^2}{a_n} = \frac{\alpha^2 t^2}{\beta t^4} = \frac{\alpha^3}{2\beta s} \quad (4)$$

$$a = \sqrt{a_t^2 + a_n^2} = \sqrt{\alpha^2 + \beta^2 t^8} = \frac{\sqrt{\alpha^6 + 16\beta^2 s^4}}{\alpha^2} \quad (5)$$