

$$S_1 = gt_1^2/2, \quad S_2 = g \cdot t_2^2/2, \quad l_1 = g/2[(t_0 + t_1)^2 - t_0^2] = g/2(2t_0 t_1 + t_1^2)$$

$$l_1 = s_1 - s_0 = g/2[(t_1^2 - t_0^2)]$$

$$l_2 = s_2 - s_1 = g/2[(t_2^2 - t_1^2)]$$

$$t_1 = t_0 + \Delta t, \quad t_2 = t_1 + \Delta t = t_0 + 2\Delta t$$

$$l_1 = g/2[(t_0 + \Delta t)^2 - t_0^2] = g/2(2t_0 \Delta t + \Delta t^2)$$

$$l_2 = g/2[(t_0 + 2\Delta t)^2 - (t_0 + \Delta t)^2 - t_0^2] = g/2(2t_0 \Delta t + 3\Delta t^2)$$

$$l_1 - l_2 = g \Delta t^2, \quad g = (l_1 - l_2) / \Delta t^2$$

5.

$$(1.4 / 3)$$

(

).

$$a = 2/3$$

$$P = 1/2$$

III

:

$$a^3/P^2 = M,$$

P

, a -

$$M = 32/27$$

M -

$$2 \cdot 2/3 = 4/3$$

$$27/64 = 1/2$$

$$\dots 0.7 / 3$$

$$32/27$$

6.

70

100

5^m,

: 11^m.