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$$4a^r = \omega(a+r)d + \kappa a$$

$$r/a = a + r/d$$

$$\frac{a+r}{d} = \omega(a+r)$$

(9)

$$4(a+d)^r = \omega(a+r)d + \kappa(a+d)a$$

$$\frac{0 + \kappa a - \kappa a}{- \kappa a} = \frac{- \kappa a}{- \kappa a} = 1$$

$$4a^r + r/d + \kappa a d = \omega a^r + \omega a d + \kappa a^r + \kappa a d$$

$$- \kappa a^r + r/d - a d = 0$$

$a =$

$$-d \pm \sqrt{d^2 - \frac{r/d + \kappa a}{\kappa} d} = 0 \Rightarrow \text{نوعی از } d$$

$\div \kappa$

$$-a(\frac{r}{d} + \kappa a) + r/d = 0$$

$$d(\frac{r}{d} - a) - \kappa a = 0 \Rightarrow$$

$$a = \frac{d \pm \sqrt{d^2 - \kappa d}}{\kappa} \rightarrow a' = -r/d \rightarrow \frac{a}{d} = 1$$

c, b, a

$$\frac{c}{r}, \frac{a}{r}, b$$

$$b = c + d \quad a = c + r/d$$

$$\frac{a}{r} = \frac{c}{r} + \frac{1}{r} \Rightarrow a = \frac{c}{r} + 1$$

$$\frac{c}{r} = c + r/d$$

$$r/d = c(\frac{r}{r} - 1) \Rightarrow d = \frac{c}{r}(\frac{r}{r} - 1)$$

$$b = \frac{c}{r} + \frac{r}{r}$$

$$c + d = \frac{c}{r} + \frac{r}{r} \Rightarrow c + \frac{c}{r}(\frac{r}{r} - 1) = \frac{c}{r} + 1 \Rightarrow 1 + \frac{1}{r}(\frac{r}{r} - 1) = \frac{r}{r}$$

$$1 + \frac{1}{r} - \frac{1}{r} = \frac{r}{r}$$

$\checkmark$

$$\kappa = \frac{r}{r} = 1$$

$\leftarrow$ بر این فرض است

$$r + q = q^r$$

$$q^r - q - r = 0 \quad (q-r)(q+1) = 0$$

$$q = r \quad q = -1$$

$$b = aq, c = aq^r$$

$$\kappa b - \kappa a = c - \kappa b \quad \kappa(aq) - \kappa a = aq^r - \kappa(aq)$$

$$a, b, c \rightarrow a, aq, aq^r$$

$$\kappa aq - \kappa a = aq^r - \kappa aq \rightarrow a(r - aq + r) = 0 \quad q^r - q + r = 0$$

$$\kappa b, \kappa a, c \rightarrow \kappa aq, \kappa a, aq^r$$

$$\frac{aq}{aq^r} = \frac{aq^1}{aq^r} = q^{\frac{1}{r}} \rightarrow (r \pm \sqrt{r^2 - 1})^{\frac{1}{r}}$$

$$\kappa aq + aq^r = \kappa a$$

$$\frac{\kappa aq + aq^r}{a} = \kappa a \Rightarrow q^r + r - 1 = 0 \Rightarrow q = 1$$

$$a_r = aq^0$$

$$a_r = aq$$

$$\frac{aq^0}{(aq)^r} + \frac{aq}{a^r} = r$$

$$\frac{aq^0}{(aq)^r} = \frac{aq^0}{a^r q^r} = \frac{q^0}{a^r}$$

$$\frac{q^r}{a^r} + \frac{q}{a} = r$$

$$a^r \left(\frac{q^r + qa}{a^r} \right) = r a^r$$

$$q^r + qa = r a^r$$

$$a_r = a^r \Rightarrow q = a$$

$$a_r = a - \kappa a = -\kappa a \Rightarrow q = -\kappa a$$

$$q = \frac{-a \pm \sqrt{a^2 + 4a^r}}{r} = \frac{-a \pm \kappa a}{r}$$

$$q = \frac{\kappa a}{a} = \kappa$$

$$q = \frac{-a - \kappa a}{r} = \frac{-\kappa a}{r} = -\kappa a$$

$\checkmark$

$$\frac{a^r}{a^r} = 1$$

$$\frac{a^r}{a^r} = \frac{a^r}{-ra^r} = -\frac{1}{r} \checkmark$$

$$a_{\mu}^r = a_r$$

$$a_r = 1$$

$$a_{\mu}^r = rV \Rightarrow a_{\mu} = r$$

$$a_1 = \frac{1}{r}$$

$$\frac{1}{r} - \frac{1}{r} = \frac{1}{r}$$

$$1.0$$

$$a_r = r$$

$$a_1 = \frac{1}{r}$$

$$r$$

