

نسبت سرعت به سرعت نور را داریم

$$1 \leq \alpha + \beta \leq 1 + \frac{a}{r} \leq 1 + \frac{a}{r} \leq 1 + \frac{a}{r}$$

$$\left. \begin{aligned} p &= 1 + \beta^2 \Rightarrow r \alpha \leq \frac{r}{p} \Rightarrow \alpha \leq \frac{1}{p} \Rightarrow a \leq \frac{r}{p} \end{aligned} \right\} \Rightarrow a \leq \frac{r}{p}$$

$$1 - (1 - \frac{a}{r}) \leq 1 + \frac{a}{r}$$

$$\frac{1}{\sqrt{a}} + \frac{1}{\sqrt{b}} = \frac{\sqrt{a} + \sqrt{b}}{\sqrt{ab}} = \frac{\sqrt{5} + \sqrt{p}}{\sqrt{p}} = \sqrt{\frac{m+1}{1}} = \omega$$

$$m+1 = \omega^2 \Rightarrow \omega = \sqrt{m+1} \quad a \approx r \approx r_s \quad p = \frac{r}{a}$$

$$\text{از } \beta \leq \frac{a}{r} \quad \alpha + \frac{r}{a} \leq 1 \Rightarrow \alpha \leq 1 - \frac{r}{a} \begin{cases} \alpha \leq \frac{r}{a}, \beta \leq 1 \\ \alpha \leq 1, \beta \leq r \end{cases}$$

$$\text{بنابراین } \Rightarrow -\frac{r}{a} \leq \alpha \leq 1 - \frac{r}{a} \Rightarrow \alpha \leq 1 - \frac{r}{a}$$

$$\frac{r}{a} \leq \frac{r}{a} \quad r \alpha + r \beta = (r \alpha + r \beta) + (r \alpha + r \beta) \\ r \alpha + r \beta = (r \alpha + r \beta) + (r \alpha + r \beta)$$

$$r \alpha + r \beta = (r \alpha + r \beta) + (r \alpha + r \beta)$$

$$1 - \frac{a}{r} + \frac{a}{r} \leq 1 + \frac{a}{r} \Rightarrow 1 - \frac{a}{r} \leq 1 + \frac{a}{r} \Rightarrow a \leq r$$

از آنجا که $\frac{v}{c} = \frac{r}{a}$ پس داریم $\frac{v}{c} \leq 1$ یعنی سرعت کمتر از سرعت نور است

$$r \alpha + r \beta = r \alpha + r \beta \Rightarrow \frac{v}{c} = \frac{r}{a} \Rightarrow \frac{v}{c} = \frac{r}{a} \Rightarrow \frac{v}{c} = \frac{r}{a}$$

$$\alpha + \beta = \left(\frac{v + \sqrt{4a}}{r} \right) \left(\frac{a + v \sqrt{4a}}{r} \right)$$

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$$1 \leq a \leq \frac{1}{p} \Rightarrow \frac{1}{p} \leq \frac{1}{q} \quad p \leq -\frac{1}{q} \quad p \leq -\frac{1}{q}$$

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$$-\frac{1}{p} \leq \frac{1}{q} \Rightarrow q \leq p$$

$$(a+b)(p+q) \leq a(p+q) + b(p+q) \Rightarrow -\frac{1}{p} \leq -\frac{1}{q} \Rightarrow b \leq q$$

$$\left[\frac{1}{p} \right] \leq \left[\frac{1}{q} \right] \leq 1$$

$$s \leq 1 \quad a \leq p \leq 1 \quad a \leq 1-p \quad a \leq p \leq 1-p \leq 1$$

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$$1 \leq p \leq \frac{1}{p} \Rightarrow 1 \leq p \leq \frac{1}{p} \Rightarrow 1 \leq p \leq \frac{1}{p}$$

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مطلوبه

$$n = (a+1)na \leq \left\{ \begin{matrix} n \leq 1 \\ n \leq a \end{matrix} \right\} \Rightarrow a \leq p \quad p \leq p$$

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$$n = (a+1)na \leq \left\{ \begin{matrix} n \leq 1 \\ n \leq a \end{matrix} \right\} \Rightarrow a \leq p \quad p \leq p$$

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$$a \leq p \leq \frac{1}{p} \Rightarrow \min \leq p$$

1.

$$A(ay) \Rightarrow n \leq \frac{1}{p} \leq 1 \Rightarrow \frac{1}{p} \leq 1 \Rightarrow \frac{1}{p} \leq 1$$

$$1 \leq p \leq \frac{1}{p} \Rightarrow 1 \leq p \leq \frac{1}{p} \Rightarrow 1 \leq p \leq \frac{1}{p}$$