$$m_a+ \ m_b+ \ m_c \leq \frac{9R}{2}$$

$$m_a \ + \ m_b \ + \ m_c \leq 4R + r$$

$$m_a \ + \ m_b \ + \ m_c \geq \frac{a^2 + b^2 + c^2}{2R}$$

$$\frac{1}{m_a} + \frac{1}{m_b} + \frac{1}{m_c} \geq \frac{2}{R}$$

$$m_a m_b m_c \leq \frac{27R^3}{8}$$

$$\frac{1}{m_a^\alpha} + \frac{1}{m_b^\alpha} + \frac{1}{m_c^\alpha} \geq 3^{1-\alpha}(\frac{2}{R})^\alpha$$

$$\frac{a}{m_a} + \frac{b}{m_b} + \frac{c}{m_c} \geq 2\sqrt{3}$$

$$\frac{m_a}{a} + \frac{m_b}{b} + \frac{m_c}{c} \geq \frac{3\sqrt{3}}{2}$$

$$(\frac{a}{m_a})^n + (\frac{b}{m_b})^n + (\frac{c}{m_c})^n \geq 3(\frac{2}{\sqrt{3}})^n \text{ (Με } n \geq 1 \text{)}$$

$$(\frac{m_a}{a})^n + (\frac{m_b}{b})^n + (\frac{m_c}{c})^n \geq 3(\frac{\sqrt{3}}{2})^n \text{ (Με } n \geq 1 \text{)}$$

$$\frac{m_a m_b m_c}{m_a^2 + m_b^2 + m_c^2} \geq r$$

$$m_a m_b m_c \geq abccos(A/2)cos(B/2)cos(C/2)$$

$$m_a + m_b + m_c \geq \sqrt{p}(\sqrt{p-a} + \sqrt{p-b} + \sqrt{p-c})$$

$$m_a^2 + m_b^2 + m_c^2 \geq p^2$$

$$m_a m_b m_c \geq p^2 r$$

$$\frac{a^2 + b^2}{m_c} + \frac{b^2 + c^2}{m_a} + \frac{a^2 + c^2}{m_b} \leq 12R$$

$$abm_c + bcm_a + cam_b \geq 4m_am_bm_c$$

$$a^2m_a + b^2m_b + c^2m_c \geq 4m_am_bm_c$$

$$\frac{m_am_bm_c}{a^2+b^2+c^2} \leq \frac{am_a+bm_b+cm_c}{4(a+b+c)}$$

$$\frac{m_a}{\sin\frac{A}{2}} + \frac{m_b}{\sin\frac{B}{2}} + \frac{m_c}{\sin\frac{C}{2}} \geq \frac{a^2+b^2+c^2}{2r}$$

$$\frac{1}{m_a+m_b-m_c} + \frac{1}{m_a-m_b+m_c} + \frac{1}{-m_a+m_b+m_c} \geq \frac{2}{R}$$

$$\frac{1}{(m_a+m_b-m_c)^n} + \frac{1}{(m_a-m_b+m_c)^n} + \frac{1}{(-m_a+m_b+m_c)^n} \geq 3^{1-n}(\frac{2}{R})^n$$

$$am_a^2 + bm_b^2 + cm_c^2 \geq \frac{9}{4}abc$$

$$2(am_a + bm_b + cm_c) \leq (b+c)m_a + (a+b)m_c + (c+a)m_b$$

$$\frac{m_am_b}{ab} + \frac{m_bm_c}{bc} + \frac{m_cm_a}{ca} \geq \frac{9}{4}$$

$$\frac{m_a}{m_bm_c} + \frac{m_b}{m_cm_a} + \frac{m_c}{m_am_b} \leq 2R(\frac{1}{ab} + \frac{1}{bc} + \frac{1}{ca})$$

$$4(m_am_b + m_bm_c + m_am_c) \leq 2(a^2+b^2+c^2) + ab + bc + ca$$

$$4(m_am_b + m_bm_c + m_am_c) \geq 9(a^2+b^2+c^2) + 2(ab+bc+ca)$$

$$4(m_am_b + m_bm_c + m_am_c) < 5(ab+bc+ca)$$

$$20(m_am_b + m_bm_c + m_am_c) > 9(ab+bc+ca)$$

$$abm_c + bcm_a + cam_b \geq a^2m_a + b^2m_b + c^2m_c$$

$$\frac{3(6abc-a^3-b^3-c^3)}{4} \leq am_bm_c+bm_cm_a+cm_am_b \leq \frac{3abc}{4}+\frac{a^3+b^3+c^3}{2}$$

$$m_a+m_b+m_c \leq \frac{sqrt3(a+b+c)}{2}+\frac{|b-c|+|c-a|+|a-b|}{4}$$

$$S \leq \frac{a^2m_a^2+b^2m_b^2+c^2m_c^2}{\sqrt{3}(a^2+b^2+c^2)}$$

$$am_a^2+bm_b^2+cm_c^2 \geq \sqrt{3}S(a+b+c)$$

$$\frac{1}{a^2m_a}+\frac{1}{b^2m_b}\frac{1}{c^2m_c} > \frac{3}{abc}$$

$$bc(b+c)+ca(c+a)+ab(a+b) \leq 4(am_a+bm_b+cm_c)R$$

$$S \leq \frac{m_am_bm_c}{\sqrt{m_a^2+m_b^2+m_c^2}}$$

$$m_a+m_b+m_c \geq 9r$$

$$\frac{m_a^2}{h_a}+\frac{m_b^2}{h_b}+\frac{m_c^2}{h_c} \geq \frac{9}{2}R$$

$$\frac{m_a^2}{a}+\frac{m_b^2}{b}+\frac{m_c^2}{c} \geq \frac{9}{4}(\frac{a^3+b^3+c^3}{ab+bc+ca})$$

$$m_abc+m_bca+m_cab \leq \sqrt{\frac{3}{4}(a^2+b^2+c^2)(a^4+b^4+c^4)}$$

$$\frac{m_a^2}{a}+\frac{m_b^2}{b}+\frac{m_c^2}{c} \leq \frac{(a+b+c)(a^3+b^3+c^3)}{3}$$

$$m_a+m_b+m_c \leq \frac{a+b+c}{2}\sqrt{\frac{a^3+b^3+c^3}{abc}}$$

$$am_a+bm_b+cm_c \leq \frac{3}{2}\sqrt{a^2b^2+b^2c^2+c^2a^2}$$