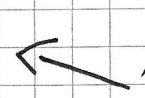


$$(\sqrt{a+2} + \sqrt{b+2} + \sqrt{c+2})^2 \geq 9 + (\sqrt{a+1} + \sqrt{b+1} + \sqrt{c+1})^2$$

$$(\sqrt{a+2} + \sqrt{b+2} + \sqrt{c+2})^2 - (\sqrt{a+1} + \sqrt{b+1} + \sqrt{c+1})^2 \geq 9$$

$$(a+b+c)^2 = a^2 + b^2 + c^2 + 2ab + 2ac + 2bc$$

Користанушы



и разбужены:

$$\begin{aligned} & (\sqrt{a+2})^2 + (\sqrt{b+2})^2 + (\sqrt{c+2})^2 + 2\sqrt{a+2}\sqrt{b+2} + 2\sqrt{a+2}\sqrt{c+2} + 2\sqrt{b+2}\sqrt{c+2} - (\sqrt{a+1})^2 \\ & + 2\sqrt{a+1}\sqrt{b+1} + 2\sqrt{a+1}\sqrt{c+1} + 2\sqrt{b+1}\sqrt{c+1} + 2\sqrt{bc} + 2\sqrt{ca} + 2\sqrt{cb} + 4 \\ & - (\sqrt{b+1})^2 + (\sqrt{c+1})^2 + 2\sqrt{(a+1)(b+1)} + 2\sqrt{(a+1)(c+1)} + 2\sqrt{(b+1)(c+1)} \geq 9 \end{aligned}$$

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$$\begin{aligned} & a+2+b+2+c+2+2\sqrt{ab}+2a+2b+4+2\sqrt{ac}+2a+2c+4+2\sqrt{bc}+2b+2c+4 - \\ & -1-2\sqrt{ab}+a+b+1-2\sqrt{ac}+a+c+1-2\sqrt{bc}+b+c+1 \geq 9 \\ & 3+2 \cdot (\sqrt{ab}+2a+2b+4 + \sqrt{ac}+2a+2c+4 + \sqrt{bc}+2b+2c+4) - \sqrt{ac+a+c+1} - \sqrt{bc+b+c+1} \geq 9 \end{aligned}$$

$$\sqrt{bc+b+c+1} \geq 9$$