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1 message

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$x = \sqrt{2} + \sqrt[3]{5}$ 가 rational이라고 하면,

$$(x - \sqrt{2})^3 = 5,$$

$$x^3 - 3\sqrt{2}x^2 + 6x - 2\sqrt{2} = 5,$$

$$-\sqrt{2} * (3x^2 + 2) = 5 - x^3 - 6x \text{ 가 rational.}$$

$3x^2 + 2 > 0$ 이므로

$-\sqrt{2}$ 가 rational이 됩니다.

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