

设 $p_1, p_2, p_3, \dots, p_n$ 为前 n 个质数 ($n \geq 1$), 即:

$$p_1 = 2, p_2 = 3, p_3 = 5, p_4 = 7, p_5 = 11, \dots$$

证明:

$$\sqrt{p_1} + \sqrt{p_2} + \dots + \sqrt{p_n}$$

为无理数.