

Problem : Nested Square Roots with Reciprocals

Write a program that allows the user to input a whole number, n , that is greater than 1, and performs the calculation suggested by this table of examples. Your program must work for any whole number, n , that is greater than 1, not just the 2 through 7 shown in these examples.

n	Calculation
2	$\sqrt{2}$
3	$\sqrt{\frac{1}{3} + \sqrt{2}}$
4	$\sqrt{4 + \sqrt{\frac{1}{3} + \sqrt{2}}}$
5	$\sqrt{\frac{1}{5} + \sqrt{4 + \sqrt{\frac{1}{3} + \sqrt{2}}}}$
6	$\sqrt{6 + \sqrt{\frac{1}{5} + \sqrt{4 + \sqrt{\frac{1}{3} + \sqrt{2}}}}}$
7	$\sqrt{\frac{1}{7} + \sqrt{6 + \sqrt{\frac{1}{5} + \sqrt{4 + \sqrt{\frac{1}{3} + \sqrt{2}}}}}}$

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