table of continued fractions of $\sqrt{n}$ for $1 < n < 102$*

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2013-03-21 23:44:21

The simple continued fractions for the square roots of positive integers (which aren't perfect powers) are non-terminating but they are periodic. In the following table, the square roots of the integers from 2 to 101 (excluding perfect powers) are listed in compact form: first the integer part followed by semicolon, then the periodic part stated once, its individual terms separated by commas. For example, the notation "14; 14, 28" for 198 means

$$\sqrt{198} = 14 + \cfrac{1}{14 + \cfrac{1}{28 + \cfrac{1}{14 + \cfrac{1}{28 + \ldots}}}},$$

where the dots mean a periodic repetition of 14 and 28 in the denominators.

*⟨*TableOfContinuedFractionsOfsqrtnFor1N102*⟩* created: ⟨*2013-03-21*⟩ by: ⟨*PrimeFan*⟩ version: ⟨*39896*⟩ Privacy setting: ⟨*1*⟩ ⟨*Data Structure*⟩ ⟨*11A25*⟩

n	Continued fraction of $\sqrt{n}$
2	1; 2
3	1; 1, 2
5	2; 4
6	2; 2, 4
7	2; 1, 1, 1, 4
8	2; 1, 4
10	3; 6
11	3; 3, 6
12	3; 2, 6
13	3; 1, 1, 1, 1, 6
14	3; 1, 2, 1, 6
15	3; 1, 6
17	4; 8
18	4; 4, 8
19	4; 2, 1, 3, 1, 2, 8
20	4; 2, 8
21	4; 1, 1, 2, 1, 1, 8
22	4; 1, 2, 4, 2, 1, 8
23	4; 1, 3, 1, 8
24	4; 1, 8
26	5; 10
27	5; 5, 10
28	5; 3, 2, 3, 10
29	5; 2, 1, 1, 2, 10
30	5; 2, 10
31	5; 1, 1, 3, 5, 3, 1, 1, 10
32	5; 1, 1, 1, 10
33	5; 1, 2, 1, 10
34	5; 1, 4, 1, 10
35	5; 1, 10
37	6; 12
38	6; 6, 12
39	6; 4, 12
40	6; 3, 12
41	6; 2, 2, 12
42	6; 2, 12
43	6; 1, 1, 3, 1, 5, 1, 3, 1, 1, 12
44	6; 1, 1, 1, 2, 1, 1, 1, 12
45	6; 1, 2, 2, 2, 1, 12
46	6; 1, 3, 1, 1, 2, 6, 2, 1, 1, 3, 1, 12
47	6; 1, 5, 1, 12
48	6; 1, 12
50	7; 14
51	7; 7, 14
52	7; 4, 1, 2, 1, 4, 14
53	7; 3, 1, 1, 3, 14
54	7; 2, 1, 6, 1, 2, 14
55	7; 2, 2, 2, 14
56	7; 2, 14
57	7; 1, 1, 4, 1, 1, 14
58	7; 1, 1, 1, 1, 1, 1, 14
59	7; 1, 2, 7, 2, 1, 14
60	7; 1, 2, 1, 14
61	7; 1, 4, 3, 1, 2, 2, 1, 3, 4, 1, 14
62	7; 1, 6, 1, 14

As the table shows, the periodic part ends with $2\lfloor\sqrt{n}\rfloor$.