

Intervallschachtelung für $\sqrt{2}$

Nr.	Kontrolle: (Untervert) ² < $\sqrt{2}$	Untervert festlegen und vergrößern	Oberwert festlegen und verringern	Kontrolle: (Oberwert) ² > $\sqrt{2}$
1	1	1	2	4
2	1,21	1,1	1,9	3,61
3	1,44	1,2	1,8	3,24
4	1,69	1,3	1,7	2,89
5	1,96	1,4	1,6	2,56
6	2,25	1,5	1,5	2,25
7	1,9881	1,41	1,4	1,96
8	2,0164	1,42	1,49	2,2201
9	1,990921	1,411	1,48	2,1904
10	1,993744	1,412	1,47	2,1609
11	1,996569	1,413	1,46	2,1316
12	1,999396	1,414	1,45	2,1025
13	2,002225	1,415	1,44	2,0736
14	1,99967881	1,4141	1,43	2,0449
15	1,99996164	1,4142	1,42	2,0164
16	2,00024449	1,4143	1,41	1,9881
17	1,999989924	1,41421	1,419	2,013561
18	2,000018208	1,41422	1,418	2,010724
19	1,999992753	1,414211	1,417	2,007889
20	1,999995581	1,414212	1,416	2,005056
21	1,999998409	1,414213	1,415	2,002225
22	2,000001238	1,414214	1,414	1,999396
23	1,999998692	1,4142131	1,4149	2,00194201
24	1,999998975	1,4142132	1,4148	2,00165904
25	1,999999258	1,4142133	1,4147	2,00137609
26	1,999999541	1,4142134	1,4146	2,00109316
27	1,999999824	1,4142135	1,4145	2,00081025
28	2,000000106	1,4142136	1,4144	2,00052736
29	1,999999852	1,41421351	1,4143	2,00024449
30	1,99999988	1,41421352	1,4142	1,99996164
31	1,999999908	1,41421353	1,41429	2,000216204
32	1,999999937	1,41421354	1,41428	2,000187918
33	1,999999965	1,41421355	1,41427	2,000159633
34	1,999999993	1,41421356	1,41426	2,000131348
35	2,000000022	1,41421357	1,41425	2,000103063
36	1,999999996	1,414213561	1,41424	2,000074778
37	1,999999999	1,414213562	1,41423	2,000046493
38	2,000000002	1,414213563	1,41422	2,000018208
39	1,999999999	1,414213562	1,41421	1,999989924

$$\Leftrightarrow 1,414213562 \leq \sqrt{2} \leq 1,41422$$



Intervallschachtelung für $\sqrt{30}$

Nr.	Kontrolle: (Untervert) ² < $\sqrt{30}$	Untervert festlegen und vergrößern	Oberwert festlegen und verringern	Kontrolle: (Oberwert) ² > $\sqrt{30}$
1	25	5	6	36
2	26,01	5,1	5,9	34,81
3	27,04	5,2	5,8	33,64
4	28,09	5,3	5,7	32,49
5	29,16	5,4	5,6	31,36
6	30,25	5,5	5,5	30,25
7	29,2681	5,41	5,4	29,16
8	29,3764	5,42	5,49	30,1401
9	29,4849	5,43	5,48	30,0304
10	29,5936	5,44	5,47	29,9209
11	29,7025	5,45	5,479	30,019441
12	29,8116	5,46	5,478	30,008484
13	29,9209	5,47	5,477	29,997529
14	30,0304	5,48	5,4779	30,00738841
15	29,931841	5,471	5,4778	30,00629284
16	29,942784	5,472	5,4777	30,00519729
17	29,953729	5,473	5,4776	30,00410176
18	29,964676	5,474	5,4775	30,00300625
19	29,975625	5,475	5,4774	30,00191076
20	29,986576	5,476	5,4773	30,00081529
21	29,997529	5,477	5,4772	29,99971984
22	30,008484	5,478	5,47729	30,00070574
23	29,99862441	5,4771	5,47728	30,0005962
24	29,99971984	5,4772	5,47727	30,00048665
25	30,00081529	5,4773	5,47726	30,00037711
26	29,99982938	5,47721	5,47725	30,00026756
27	29,99993893	5,47722	5,47724	30,00015802
28	30,00004847	5,47723	5,47723	30,00004847
29	29,99994988	5,477221	5,47722	29,99993893
30	29,99996084	5,477222	5,477229	30,00003752
31	29,99997179	5,477223	5,477228	30,00002656
32	29,99998275	5,477224	5,477227	30,00001561
33	29,9999937	5,477225	5,477226	30,00000466
34	30,00000466	5,477226	5,477225	29,9999937
35	29,9999948	5,4772251	5,4772259	30,00000356
36	29,99999589	5,4772252	5,4772258	30,00000246
37	29,99999699	5,4772253	5,4772257	30,00000137
38	29,99999808	5,4772254	5,4772256	30,00000027
39	29,99999918	5,4772255	5,4772255	29,99999918

$$\Leftrightarrow 5,4772255 \leq \sqrt{30} \leq 5,4772256$$