Integer Sequences*
http://www.research.att.com/~njas/sequences/
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Integer Sequences

The set of equivalent resistances formed by any conceivable network (series/parallel or bridge, or non-planar configurations) of n equal resistors has over twenty Integer Sequences associated with it. Ten new Integer Sequences occurring in the following article are listed below:

1. Sameen Ahmed Khan,
The bounds of the set of equivalent resistances of n equal resistors combined in series and in parallel.
(Wednesday the 21 April 2010).

2. Sameen Ahmed Khan,
Farey Sequences and Resistor Networks,
(Publication of the Indian Academy of Sciences (IAS), Copublished with Springer),
http://dx.doi.org/10.1007/s12044-012-0066-7;

3. Sameen Ahmed Khan,
How many equivalent resistances?,
(Monthly Publication of the Indian Academy of Sciences (IAS), Copublished with Springer),
http://dx.doi.org/10.1007/s12045-012-0050-7;

*Updated on Friday the 09 December 2016
1. Sameen Ahmed Khan,  
**Sequence A174283**: 1, 2, 4, 9, 23, 57, 151, 409, ...,  
Order of the Set of distinct resistances that can be produced using \( n \) equal resistors in, series, parallel and/or bridge configurations,  
N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*,  
published electronically at: [http://oeis.org/A174283](http://oeis.org/A174283)  
(Monday the 15 March 2010).

2. Sameen Ahmed Khan,  
**Sequence A174284**: 1, 3, 7, 15, 35, 79, 193, 489, ...,  
Order of the Set of distinct resistances that can be produced using at most \( n \) equal resistors (\( n \) or fewer resistors) in series, parallel and/or bridge configurations,  
N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*,  
published electronically at: [http://oeis.org/A174284](http://oeis.org/A174284)  
(Monday the 15 March 2010).

3. Sameen Ahmed Khan,  
**Sequence A174285**: 0, 0, 0, 0, 1, 3, 17, 53, ...,  
Order of the Set of distinct resistances that can be produced using \( n \) equal resistors in, series and/or parallel, confined to the five arms (four arms and the diagonal) of a bridge configuration,  
N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*,  
published electronically at: [http://oeis.org/A174285](http://oeis.org/A174285)  
(Monday the 15 March 2010).

4. Sameen Ahmed Khan,  
**Sequence A174286**: 0, 0, 0, 0, 1, 3, 19, 67, ...,  
Order of the Set of distinct resistances that can be produced using at most \( n \) equal resistors (\( n \) or fewer resistors) in, series and/or parallel, confined to the five arms (four arms and the diagonal) of a bridge configuration,  
N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*,
published electronically at: http://oeis.org/A174286  
(Monday the 15 March 2010).

5. Sameen Ahmed Khan,  
**Sequence A176497**: 0, 0, 0, 1, 4, 9, 25, 75, 195, 475, 1265, 3135, 7983, 19697, 50003, 126163, 317629, 802945, 2035619, 5158039, 13084381, 33240845, 84478199, ...,  
**Order of the Cross Set which is the subset of the set of distinct resistances that can be produced using n equal resistors in series and/or parallel**,  
N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,  
published electronically at: http://oeis.org/A176497  
(Wednesday the 21 April 2010).

6. Sameen Ahmed Khan,  
**Sequence A176498**: 0, 0, 0, 0, 0, 0, 0, 0, 1, 6, 9, 24, 58, 124, 312, ...,  
**Number of elements less than half in the Cross Set which is the subset of the set of distinct resistances that can be produced using n equal resistors in series and/or parallel**,  
N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,  
published electronically at: http://oeis.org/A176498  
(Wednesday the 21 April 2010).

7. Sameen Ahmed Khan,  
**Sequence A176499**: 2, 3, 5, 11, 23, 59, 141, 361, 941, 2457, 6331, 16619, 43359, 113159, 296385, 775897, 2030103, 5315385, 13912615, 36421835, 95355147, 249635525, 653525857, 1710966825, 4479358275, 11726974249, 30701593527, 80377757397, 210431301141, ...,  
**Haros-Farey Sequence whose argument is the Fibonacci Number; Farey(m) where m = Fibonacci (n + 1)**,  
N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,  
published electronically at: http://oeis.org/A176499  
(Wednesday the 21 April 2010).

8. Sameen Ahmed Khan,  
**Sequence A176500**: 1, 3, 7, 19, 43, 115, 279, 719, 1879, 4911, 12659, 33235, 86715, 226315, 592767, 1551791, 4060203, 10630767, 27825227, 72843667, 190710291, 499271047, 1307051711, 3421933647, 8958716547, 23453948495, 61430187051, 160755514791, 420862602279, ...,  
**2Farey(m) - 3 where m = Fibonacci (n + 1)**,  
N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,  
published electronically at: http://oeis.org/A176500  
(Wednesday the 21 April 2010).

9. Sameen Ahmed Khan,  
**Sequence A176501**: 1, 2, 4, 9, 19, 50, 122, 317, 837, 2213, 5758, 15236, 40028, 105079, 276627, 727409, 1910685, 5020094, ...,  
**Farey(m; I) where m = Fibonacci (n + 1) and I = [1/n, 1]**,  
N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,  
published electronically at: http://oeis.org/A176501  
(Wednesday the 21 April 2010).

10. Sameen Ahmed Khan,  
**Sequence A176502**: 1, 3, 7, 17, 37, 99, 243, 633, 1673, 4425, 11515, 30471, 80055, 210157, 553253, 1454817, 3821369, 10040187, ...,  
**2Farey(m; I) - 1 where m = Fibonacci (n + 1) and I = [1/n, 1]**,  
N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,  
published electronically at: http://oeis.org/A176502  
(Wednesday the 21 April 2010).
Integer Sequences for the difference for Primes in Arithmetic Progression with the minimal start Sequence $ \{p_1 + jd\}_{j=0}^{k-1}$

11. Sameen Ahmed Khan, 
**Sequence A206037**: 2, 4, 8, 10, 14, 20, 28, 34, 38, 40, 50, 64, 68, 80, 94, 98, 104, 110, 124, 134, 154, 164, 178, 188, 190, 208, 220, 230, 238, 248, ..., 
**Values of the difference d for 3 primes in arithmetic progression with the minimal start sequence $\{3 + j*d\}$, $j = 0$ to 2.**, 
in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*, published electronically at [http://oeis.org/A206037](http://oeis.org/A206037) (Friday the 03 February 2012).

12. Sameen Ahmed Khan, 
**Sequence A206038**: 6, 12, 18, 42, 48, 84, 96, 126, 132, 252, 348, 396, 426, 438, 474, 594, 636, 642, 648, 678, 804, 858, 1176, 1218, 1272, 1302, 1314, 1362, 1428, ..., 
**Values of the difference d for 4 primes in arithmetic progression with the minimal start sequence $\{5 + j*d\}$, $j = 0$ to 3.**, 
in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*, published electronically at [http://oeis.org/A206038](http://oeis.org/A206038) (Friday the 03 February 2012).

13. Sameen Ahmed Khan, 
**Sequence A206039**: 6, 12, 42, 48, 96, 126, 252, 426, 474, 594, 636, 642, 648, 678, 804, 858, 1176, 1218, 1272, 1302, 1314, 1362, 1428, 1566, 1728, 1896, 2106, 2574, 2694, 2898, 3162, 3366, 4332, 4368, 4716, 4914, 4926, ..., 
**Values of the difference d for 5 primes in arithmetic progression with the minimal start sequence $\{5 + j*d\}$, $j = 0$ to 4.**, 
in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*, published electronically at [http://oeis.org/A206039](http://oeis.org/A206039) (Friday the 03 February 2012).

14. Sameen Ahmed Khan, 
**Sequence A206040**: 30, 150, 930, 2760, 3450, 4980, 9150, 14190, 19380, 20040, 21240, 28080, 33930, 57660, 59070, 63600, 69120, 76710, 80340, 81450, 97380, 100920, 105960, ..., 
**Values of the difference d for 6 primes in arithmetic progression with the minimal start sequence $\{7 + j*d\}$, $j = 0$ to 5.**, 
in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*, published electronically at [http://oeis.org/A206040](http://oeis.org/A206040) (Friday the 03 February 2012).

15. Sameen Ahmed Khan, 
**Sequence A206041**: 150, 2760, 3450, 9150, 14190, 20040, 21240, 63600, 76710, 117420, 122540, 134250, 184470, 184620, 189690, 237060, 274830, 312000, 337530, 379410, ..., 
**Values of the difference d for 7 primes in arithmetic progression with the minimal start sequence $\{7 + j*d\}$, $j = 0$ to 6.**, 
in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*, published electronically at [http://oeis.org/A206041](http://oeis.org/A206041) (Friday the 03 February 2012).
16. Sameen Ahmed Khan, 
**Sequence A206042**: 1210230, 2523780, 4788210, 10527720, 12943770, 19815600, 22935780, 28348950, 28688100, 32671170, 43443330, 47330640, 51767520, 54130440, ...,
Values of the difference \( d \) for 8 primes in arithmetic progression with the minimal start sequence \( \{11 + j \cdot d\}, \ j = 0 \) to 7, in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*, published electronically at [http://oeis.org/A206042](http://oeis.org/A206042) (Friday the 03 February 2012).

17. Sameen Ahmed Khan, 
**Sequence A206043**: 32671170, 54130440, 59806740, 145727400, 224494620, 246632190, 280723800, 301125300, 356845020, 440379870, 486293800, 601904940, 676987920, ..., 
Values of the difference \( d \) for 9 primes in arithmetic progression with the minimal start sequence \( \{11 + j \cdot d\}, \ j = 0 \) to 8, in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*, published electronically at [http://oeis.org/A206043](http://oeis.org/A206043) (Friday the 03 February 2012).

18. Sameen Ahmed Khan, 
**Sequence A206044**: 224494620, 246632190, 301125300, 1536160080, 1760583300, 4012387260, 1911773580, 7158806130, 8153368060, 15049362300, 13908029410, ..., 
Values of the difference \( d \) for 10 primes in arithmetic progression with the minimal start sequence \( \{11 + j \cdot d\}, \ j = 0 \) to 9, in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*, published electronically at [http://oeis.org/A206044](http://oeis.org/A206044) (Friday the 03 February 2012).

19. Sameen Ahmed Khan, 
**Sequence A206045**: 1536160080, 4911773580, 25104552900, 77375139660, 83516678490, 100070721660, 150365447400, 300035001630, 318652145070, 369822103350, 377344636200, ..., 
Values of the difference \( d \) for 11 primes in arithmetic progression with the minimal start sequence \( \{11 + j \cdot d\}, \ j = 0 \) to 10, in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*, published electronically at [http://oeis.org/A206045](http://oeis.org/A206045) (Friday the 03 February 2012).
Integer Sequences for the difference for Primes in Geometric-Arithmetic Progression with the minimal start and minimal ratio Sequence \( \{p \cdot p^n + jd\}_{j=0}^{k-1} \)

- Sameen Ahmed Khan,
  Primes in Geometric-Arithmetic Progression,
  (Friday the 09 March 2012).

20. Sameen Ahmed Khan,
  Sequence A209202: 2, 8, 10, 20, 22, 28, 38, 50, 52, 62, 70, 92, 98, 100, 118, 122, 128, 140, 142, 170, 202, 218, 220, 230, 232, 248, 260, 268, 272, 302, . . . ,
  Values of the difference \(d\) for the geometric-arithmetic progression \(\{3 \cdot 3^j + jd\}_{j=0}^2\)
  to be a set of 3 primes,
  in N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,
  published electronically at http://oeis.org/A209202
  (Tuesday the 06 March 2012).

21. Sameen Ahmed Khan,
  Sequence A209203: 6, 12, 16, 28, 34, 36, 54, 76, 78, 84, 114, 124, 132, 138, 142, 148, 154, 166, 168, 208, 226, 258, 288, 324, 348, 376, 414, 436, 442, . . . ,
  Values of the difference \(d\) for the geometric-arithmetic progression \(\{5 \cdot 5^j + jd\}_{j=0}^3\)
  to be a set of 4 primes,
  in N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,
  published electronically at http://oeis.org/A209203
  (Tuesday the 06 March 2012).

22. Sameen Ahmed Khan,
  Sequence A209204: 84, 114, 138, 168, 258, 324, 348, 462, 552, 588, 684, 714, 744, 798, 882, 894, 972, 1176, 1602, 1734, 2196, 2256, 2442, 2478, 2568, 2646, . . . ,
  Values of the difference \(d\) for the geometric-arithmetic progression \(\{5 \cdot 5^j + jd\}_{j=0}^4\)
  to be a set of 5 primes,
  in N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,
  published electronically at http://oeis.org/A209204
  (Tuesday the 06 March 2012).

23. Sameen Ahmed Khan,
  Sequence A209205: 144, 1494, 1740, 2040, 3324, 4044, 6420, 12804, 13260, 13464 13620, 15444, 25824, 31524, 31674, 31680, 32124, 33720, 38064, 40410, . . . ,
  Values of the difference \(d\) for the geometric-arithmetic progression \(\{7 \cdot 7^j + jd\}_{j=0}^5\)
  to be a set of 6 primes,
  in N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,
  published electronically at http://oeis.org/A209205
  (Tuesday the 06 March 2012).

24. Sameen Ahmed Khan,
  Sequence A209206: 3324, 13260, 38064, 46260, 51810, 54510, 58914, 76050, 81510, 82434, 109800, 119340, 120714, 132390, 141480, 154254, 167904, 169734, 185040, . . . ,
  Sameen Ahmed Khan, Values of the difference \(d\) for the geometric-arithmetic progression \(\{7 \cdot 7^j + jd\}_{j=0}^6\)
  to be a set of 7 primes,
  in N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,
  published electronically at http://oeis.org/A209206
  (Tuesday the 06 March 2012).
25. Sameen Ahmed Khan, 
**Sequence A209207**: 62610, 165270, 420300, 505980, 669780, 903030, 932400, 1004250, 1052610, 1230270, 1231020, 1248120, . . . ,

Values of the difference $d$ for the geometric-arithmetic progression $\{11 * 11^j + jd\}_{j=0}^{7}$

to be a set of 8 primes,
in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*,
published electronically at [http://oeis.org/A209207](http://oeis.org/A209207) (Tuesday the 06 March 2012).

26. Sameen Ahmed Khan, 
**Sequence A209208**: 903030, 1004250, 3760290, 7296450, 7763520, 17988210, 28962390, 29956950, 33316320, 37265160, 39013800, 39768150, 43920480, 50110620, 54651480, 56388810, 74306610, 74679810, 75911850, 89115210, 92619690, 98518800, . . . ,

Values of the difference $d$ for the geometric-arithmetic progression $\{11 * 11^j + jd\}_{j=0}^{8}$

to be a set of 9 primes,
in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*,
published electronically at [http://oeis.org/A209208](http://oeis.org/A209208) (Tuesday the 06 March 2012).

27. Sameen Ahmed Khan, 
**Sequence A209209**: 903030, 17988210, 28962390, 39768150, 74306610, 89115210, 116535300, 173227980, 186013380, 237952050, 359613030, 386317920, 392253990, 443687580, 499153200, 548024610, 591655080, . . . ,

Values of the difference $d$ for the geometric-arithmetic progression $\{11 * 11^j + jd\}_{j=0}^{9}$

to be a set of 10 primes,
in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*,
published electronically at [http://oeis.org/A209209](http://oeis.org/A209209) (Tuesday the 06 March 2012).

28. Sameen Ahmed Khan, 
**Sequence A209210**: 443687580, 591655080, 1313813550, 2868131100, 325848580, 3598823970, 4453413120, 6075076800, 6644124480, 7429693770, 9399746580, . . . ,

Values of the difference $d$ for the geometric-arithmetic progression $\{11 * 11^j + jd\}_{j=0}^{10}$

to be a set of 11 primes,
in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*,
published electronically at [http://oeis.org/A209210](http://oeis.org/A209210) (Tuesday the 06 March 2012).

29. Sameen Ahmed Khan, 
**Sequence A227280**: 81647160420, 170655787050, 211212209880, 227961624450, . . . ,

Values of the difference $d$ for 12 primes in geometric-arithmetic progression with the minimal sequence $\{13 * 13^j + j * d\}_{j=0}^{11}$,
in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*,
published electronically at [http://oeis.org/A227280](http://oeis.org/A227280) (Friday the 05 July 2013).
Integer Sequences for the First primes of arithmetic progressions of $k$ primes each with the common difference $k#$

Minimal Difference Sequence $\{p_1 + j\cdot(k\#)\}_{j=0}^{k-1}$

30. Sameen Ahmed Khan,
Sequence A227281: 7, 11, 37, 107, 137, 151, 277, 359, 389, 401, 541, 557, 571, 877, 1033, 1493, 1663, 2221, 2251, 2879, 3271, 6269, 6673, 6703, 7457, 7487, 9431, 10103, 10133, 10567, 11981, 12457, 12973, 14723, 17047, 19387, 24061, 25643, 25673, 26861, 26891, 27337, ...,
First primes of arithmetic progressions of 5 primes each with the common difference 30,
in N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,
published electronically at http://oeis.org/A227281
(Friday the 05 July 2013).

31. Sameen Ahmed Khan,
Sequence A227282: 47, 179, 199, 409, 619, 829, 881, 1091, 1453, 3499, 3709, 3919, 10529, 10627, 10837, 10859, 11069, 11279, 14423, 20771, 22697, 30097, 30307, 31583, 31793, 32363, 41669, 75703, 93281, 95747, 120661, 120737, 120871, 120947, 129287, 140603, 153319, ...,
First primes of arithmetic progressions of 7 primes each with the common difference 210,
in N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,
published electronically at http://oeis.org/A227282
(Friday the 05 July 2013).

32. Sameen Ahmed Khan,
Sequence A227283: 199, 409, 619, 881, 3499, 3709, 10627, 10859, 11069, 11279, 14423, 20771, 22697, 30097, 30307, 31583, 31793, 32363, 41669, 75703, 93281, 95747, 120661, 120737, 120871, 120947, 129287, 140603, 153319, ...,
First primes of arithmetic progressions of 8 primes each with the common difference 210,
in N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,
published electronically at http://oeis.org/A227283
(Friday the 05 July 2013).

33. Sameen Ahmed Khan,
Sequence A227284: 199, 409, 3499, 10859, 564973, 1288607, 1288817, 1302281, 1302491, 1305209, 1982599, 2358841, 2359051, 2439571, ...,
First primes of arithmetic progressions of 9 primes each with the common difference 210,
in N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,
published electronically at http://oeis.org/A227284
(Friday the 05 July 2013).

34. Sameen Ahmed Khan,
Sequence A227285: 60858179, 186874511, 291297353, 1445838451, 2943023729, 4597225889, 702485393, 8620560607, 8656181357, 19033631401, 20711172773, 25366690189, 27187842601, 32022299977, 34351919351, ...,
First primes of arithmetic progressions of 11 primes each with the common difference 2310,
in N. J. A. Sloane (Editor), The On-Line Encyclopedia of Integer Sequences,
published electronically at http://oeis.org/A227285
(Friday the 05 July 2013).
35. Sameen Ahmed Khan, 
**Sequence A227286**: 14933623, 2085471361, ..., 
First primes of arithmetic progressions of 13 primes each with the common difference 30030, 
in N. J. A. Sloane (Editor), *The On-Line Encyclopedia of Integer Sequences*, 
published electronically at [http://oeis.org/A227286](http://oeis.org/A227286) 
(Friday the 05 July 2013).

36. Sameen Ahmed Khan, 
**Sequence A23????**: 