1. Average-of-primes sequence: $s_1 = 2$, $s_n = \frac{1}{2}(p_{2n-2} + p_{2n-1})$ for all $n \geq 2$ where $p_i \equiv i$th prime

$$2, 4, 9, 15, 21, 30, 39, 45, 56, 64, 72, 81, 93, 102, 108, 120, 134,$$

$$144, 154, 165, 176, 186, 195, 205, 225, 231, 240, 254, 266, 274, 282, 300,$$

$$312, 324, 342, 351, 363, 376, 386, 399, 414, 426, 436, 446, 459, 465, 483,$$

$$495, 506, 522, 544, 560, 570, 582, 596, 604, 615, 625, 642, 650, 660, 675,$$

$$687, 705, 723, 736, 747, 759, 771, 792, 810, 822, 828, 846, 858, 870, 882,$$

$$897, 915, 933, 944, 960, 974, 987, 1003, 1016, 1026, 1036, 1050,$$

$$1062, 1078, 1092, 1100, 1113, 1126, 1152, 1167, 1184, 1197, 1215, ...$$

2. Average-of-k-primes sequence: $s_n = \left[\frac{p_{(n-1)k+1}+p_{(n-1)k+2}+\cdots+p_{nk}}{k}\right]$ where p_j is the jth prime and $[x] \doteq$ integer nearest to x. If $x = \frac{y}{2}$ for an odd integer y then set $[x] = x - \frac{1}{2}$.

   - $k = 2$:

$$2, 6, 12, 18, 26, 34, 42, 50, 60, 69, 76, 86, 99, 105, 111, 129, 138,$$

$$150, 160, 170, 180, 192, 198, 217, 228, 236, 246, 260, 270, 279, 288, 309,$$

$$315, 334, 348, 356, 370, 381, 393, 405, 420, 432, 441, 453, 462, 473, 489,$$

$$501, 515, 532, 552, 566, 574, 590, 600, 610, 618, 636, 645, 656, 667, 680,$$

$$696, 714, 730, 741, 754, 765, 780, 803, 816, 825, 834, 855, 861, 879, 885,$$

$$909, 924, 939, 950, 969, 980, 994, 1011, 1020, 1032, 1044, 1056,$$

$$1066, 1089, 1095, 1106, 1120, 1140, 1158, 1176, 1190, 1207, 1220, ...$$

   - $k = 3$:

$$3, 10, 20, 32, 44, 58, 70, 84, 100, 110, 132, 146, 162, 178, 194, 211,$$

$$230, 244, 263, 276, 294, 314, 338, 354, 373, 390, 410, 428, 444, 460, 478,$$

$$498, 518, 548, 568, 586, 602, 616, 638, 653, 670, 692, 718, 738, 756, 776,$$

$$806, 824, 840, 860, 880, 902, 928, 947, 972, 990, 1014, 1028, 1046, 1064, 1090,$$

$$1103, 1123, 1156, 1180, 1202, 1223, 1239, 1272, 1288, 1300, 1316, 1352, 1384,$$

$$1420, 1434, 1450, 1470, 1486, 1501, 1532, 1554, 1572, 1594, 1610, 1622, 1652,$$

$$1676, 1702, 1726, 1747, 1773, 1792, 1822, 1858, 1874, 1890, 1917, 1944, 1980, ...$$

- $k = 4$:

$$4, 15, 30, 46, 64, 81, 102, 120, 144, 165, 186, 207, 232, 253, 274, 298,$$

$$324, 352, 375, 399, 426, 447, 467, 495, 523, 559, 582, 605, 627, 650, 673,$$

$$705, 735, 759, 791, 820, 844, 870, 897, 931, 959, 987, 1015, 1038, 1061,$$

$$1092, 1113, 1149, 1183, 1213, 1236, 1274, 1294, 1312, 1357, 1403, 1432, 1452,$$

$$1480, 1498, 1536, 1562, 1590, 1612, 1635, 1673, 1706, 1736, 1768, 1797, 1840,$$

$$1872, 1894, 1931, 1972, 1998, 2021, 2056, 2085, 2113, 2138, 2174, 2219, 2250, 2277, 2302,$$

$$2340, 2364, 2386, 2412, 2446, 2480, 2533, 2559, 2602, 2639, 2667, 2688, 2707, 2730, ...$$

3. Prime-pairs-and-sums sequence (Two rules: One – Any prime p such that $p-2$ or $p+2$ is also prime is included in the sequence; Two – For primes p and $q = p+2$, $p+q$ is also included, unless both $p+q-1$ and $p+q+1$ are both prime. The latter rule is enforced so as to ensure the absence of consecutive triples a, $a+1$, $a+2$ in the sequence):

$$3, 5, 7, 8, 11, 13, 17, 19, 24, 29, 31, 36, 41, 43, 59, 61, 71, 73, 84, 101,$$

$$103, 107, 109, 120, 137, 139, 144, 149, 151, 179, 181, 191, 193, 197, 199, 204, 216...$$

4. 2−adic expansion sequence for primes (1 if the 2−adic expansion of prime p has an odd number of terms, and 0 otherwise):

$$1, 0, 0, 1, 1, 1, 0, 1, 0, 0, 1, 1, 1, 0, 1, 0, 1, 1, 1, 0, 1, 1, 0, 0, 1,$$

$$0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, ...$$

5. 3−adic expansion sequence for primes (1 if the 3−adic expansion of prime p has an odd number of terms, and 0 otherwise):

$$1, 1, 0, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 0, 1, 1, 0, 0, 1, 0, 0, 1, 0,$$

$$1, 0, 0, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 1, 1, 0, 1, 1, 0, 0, 0, 1, 0, 0, 1, ...$$