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Seventeen Primes in Arithmetic Progression

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Abstract. Two sets of primes in arithmetic progression are listed. One is a set of 17 primes and the second is a set of six consecutive primes.

A computer search revealed the following sequence of 17 primes in arithmetic progression:

First term:	3 430 751 869
Last term:	4 827 507 229
Difference:	87 297 210

The common difference equals $2 \cdot 3^3 \cdot 5 \cdot 7 \cdot 11 \cdot 13 \cdot 17 \cdot 19$.

The previous record of 16 primes in arithmetic progression was found by S. C. Root in 1969 [1]. I have found 7 other sequences of 16 primes (the smallest starting at 13 816 843 with a common difference of 236 366 130), but the foregoing is the only case of more than 16 primes known to me.

On a related problem I found a second set of six *consecutive* primes in arithmetic progression near 10^{15}:

$$999\,900\,067\,719\,989 + 30t, \qquad t = 0(1)5.$$

The smallest such sextet was found by Lander and Parkin [2] at $121\,174\,811 + 30t$, $t = 0(1)5$.

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1. E. KARST, "12 to 16 primes in arithmetical progressions," *J. Recreational Math.*, v. 2, 1969, pp. 214–215.
2. L. J. LANDER & T. R. PARKIN, "Consecutive primes in arithmetic progression," *Math. Comp.*, v. 21, 1967, p. 489.

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