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On arithmetic progression with equal products. (English) Zbl 0812.11023

Acta Arith. 68, No. 1, 89-100 (1994).

Let d_1 and d_2 be given integers. It is shown by an effective method that the equation

$$x(x + d_1) \dots (x + (L - 1)d_1) = y(y + d_2) \dots (y + (M - 1)d_2)$$

in positive integers $L > 1$, $M > 1$, x, y subject to $L \neq M$ and $(L, M) \neq (2, 4), (4, 2)$ admits only finitely many solutions if (i) $L \in \{2, 4\}$ and $M > 2$ is given, or (ii) $\gcd(L, M)$ and L/M has a given ratio.

The cases $L = M$ and $(L, M) = (2, 4)$ or $(4, 2)$ have been treated in other papers and both admit infinitely many solutions.

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MSC:

[11D61](#) Exponential Diophantine equations

Cited in **1** Review
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Keywords:

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