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If $a \equiv 0$, $b \not\equiv 0 \pmod p$, then every term of the primary sequence from the second one on will be $\equiv 0 \pmod p$ and this sequence will satisfy the theorem since

$$J_{p-(k/p)} \equiv J_p \equiv 0 \pmod p .$$

If $a \equiv 0$, $b \not\equiv 0 \pmod p$, then we will get the sequence $(1,0,b,0,b^2,0,b^3,0,\cdots)$ and every second term will be divisible by p. Thus, whether $p - (k/p) = p+1$ or $p - 1$, the theorem will be satisfied.

I will close the paper by investigating which terms of primary sequence are divisible by the prime 2. If a,b are both odd, we obtain the repetitive sequence $(1,1,0,\cdots)$, and $J_3 = J_{2+1} \equiv 0 \pmod 2$.

If a is odd and b is even, then $\{J_n\}$ is a Fibonacci-like group (mod 2) and we get the sequence $(1, 1, 1, \cdots)$.

If a is even and b odd, we get the sequence $(1,0,1,0,1,0,\cdots)$ and $J_2 = J_{2+0} \equiv 0 \pmod 2$.

If a,b are both even, we obtain the sequence $(1,0,0,0,\cdots)$ and $J_2 \equiv 0 \pmod 2$.

Note. The Fibonacci group was pointed out to me by Stan Perlo, currently a graduate student at the University of Michigan.

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