Proof.

$$C_m = C_{2^e} \times C_{p_1^{e_1}} \times \cdots \times C_{p_n^{e_n}} A(C_m) = A(C_{2^e}) \times A(C_{p_1^{e_1}}) \times \cdots \times A(C_{p_n^{e_n}})$$

$$A(C_{2^e}) = \begin{cases} (1) & \text{if } e = 0 \text{ or } 1 \\ C_2 & \text{if } e = 2 \\ C_{2^{e-2}} \times C_2 & \text{if } e \geq 3. \end{cases}$$

REFERENCE

1. H. S. Sun, "A Group-Theoretical Proof of a Theorem in Elementary Number Theory," *The Fibonacci Quarterly*, Vol. 11, No. 2 (April 1973), pp. 161–162.

[Continued from P. 328.]

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TABLE 3

Jacobi Symbols: $b = 5$

a	(a/b)	(b/a)	$(a/-b)$	$(-b/a)$
−7	−1	−1	1	−1
−5	0	0	0	0
−3	−1	−1	1	−1
−1	1	1	−1	−1
1	1	1	1	1
3	−1	−1	−1	1
5	0	0	0	0
7	−1	−1	−1	1

TABLE 4

Jacobi Symbols: $b = 7$

a	(a/b)	(b/a)	$(a/-b)$	$(-b/a)$
−7	0	0	0	0
−5	1	−1	−1	1
−3	1	1	−1	1
−1	−1	1	1	−1
1	1	1	1	1
3	−1	1	−1	−1
5	−1	−1	−1	−1
7	0	0	0	0

Then

$$\left(\frac{(a/-1)}{(b/-1)} \right) = 1$$

if and only if a is positive and/or b is positive; and

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