is Abelian. This group is known as the *Klein 4-group*. The Klein 4-group and C_4, which is also Abelian, are the only two distinct (i.e. non-isomorphic) groups.

Example 2.5. For any positive integer $n \geq 2$, the set

$$\mathbb{Z}_n = \{0, 1, 2, \ldots, n-1\}$$

of *integers* mod n with operations of product, inverse and identity given by addition mod n ($a +_n b$, defined to be the remainder obtained when dividing the sum $a + b$ by n), negation mod n ($a^{-1} = n - a$, we denote a^{-1} by $-a$) and the number 0 respectively *is* Abelian.

Example 2.6. $n = 6$

Consider $\mathbb{Z}_6 = \{0, 1, 2, 3, 4, 5\}$. For example, we have that $4 + 5 = 9$. Dividing 9 by 6 and taking the remainder gives 3. Hence $4 +_6 5 = 3$. It can be seen that $\mathbb{Z}_6$ has product table

	0	1	2	3	4	5
0	0	1	2	3	4	5
1	1	2	3	4	5	0
2	2	3	4	5	0	1
3	3	4	5	0	1	2
4	4	5	0	1	2	3
5	5	0	1	2	3	4

Since $1 +_6 5 = 2 +_6 4 = 3 +_6 3 = 0$, we have that

$$-1 = 5, \quad -2 = 4, \quad -3 = 3, \quad -4 = 2, \quad -5 = 1.$$