The word “modulo” in mathematics means, generally, that something can be ignored. If a mathematician says “I liked the new movie modulo the silly special effects,” it means that his or her opinion of the movie would be positive if you ignore that the special effects were really silly.

When we say that two numbers, say $a$ and $b$, are equal modulo some other number, say $c$, it means that you can get from $a$ to $b$ by adding or subtracting $c$ a number of times (maybe zero). For instance,

$10 = 16 \pmod{3}$, because $10 + 3 + 3 = 16$;
$7 = 1 \pmod{2}$, because $7 - 2 - 2 - 2 = 1$;
$3 = -10 \pmod{13}$, because $3 - 13 = -10$.

When we write $a \pmod{c} = b$, this means two things:

- $a = b \pmod{c}$; and
- $b$ is a number between 0 and $c - 1$.

For example,

$10 \pmod{3} = 1$;
$7 \pmod{5} = 2$;
$-7 \pmod{5} = 3$;
$4 \pmod{10} = 4$;
$22 \pmod{11} = 0$. 