Ways to represent different types of numbers in mathematical proofs:

n => any integer

$2n$ => any even integer

$2n+1$ => any odd integer

m => a different (any) integer

$2m$ => a different even integer

$2m+1$ => a different odd integer

Consecutive integers: $n, n+1, n+2$ etc

Consecutive even integers: $2n, 2n+2, 2n+4$ etc.

Consecutive odd integers: $2n+1, 2n+3, 2n+5$ etc.