Theorem: Every odd natural number is of one of the forms 4n+1 or 4n+3, where n is an integer.

Proof: By induction.
Define an odd number as 2m + 1
Assume n = 0, then:

$$4\cdot0+1=1$$

$$4\cdot0+3=3$$

These are the first two natural numbers, so we can assume n, and deduce n+1 by induction:

$$4\cdot(n+1)+1=4n+4+1=4n+5$$

$$4n+5=(4n+3)+2$$

5 is the next natural odd number after 3, since if m = 1, then using the definition of an odd number:

$$3=2\cdot1+1$$

and if m = 2, then:

$$5=2\cdot2+1$$

Hence, by induction, the theorem is proved.