The set of odd integers under the operation of addition, denoted as ⟨O, +⟩, is **not an abelian group** because it fails to satisfy the basic properties required for a group.

A group must be closed under its operation, have an identity element, and every element must have an inverse within the set. However, if we take any two odd integers, say 333 and 555, their sum is 888, which is even. This shows that the sum of two odd numbers is not an odd number, meaning the set is **not closed** under addition.

Moreover, the additive identity is 000, since for any integer aaa, a+0=aa + 0 = aa+0=a. But 000 is an even number and therefore not contained in the set of odd numbers, so **no identity element** exists in this set. Without closure and an identity, it's impossible for every element to have an inverse within the set.

Although addition of integers is associative and commutative, the failure of closure and the absence of an identity element are enough to conclude that the set of odd numbers under addition does **not** form an abelian group.