

#47. If a sum of two integers is even, then one of the summands is even. (In the expression $a + b$, a and b are called summands).

This statement is false.

Counter example:

$$\text{Let } m=5 \quad \text{and} \quad n=3$$

$$m+n = 5+3=8$$

- 8 is an even number
- 3 and 5 are integers
- However, neither 3 nor 5 are even which proves that this statement is false.

Another counterexample:

$$11 + 3 = 14$$

- 14 is even,
- 11 and 3 are integers
- neither 11 nor 3 are even.