

Mathematicians

vs

Physicists

$$m \in \mathbb{N}$$

even
odd

$$j \in \frac{1}{2} \mathbb{N}$$

integer
half-integer

$$m = 2j$$

H

J_3

X

$$J_+ = J_1 + iJ_2$$

Y

$$J_- = J_1 - iJ_2$$