

## Table for Example

•	I	-I	i	-i	j	-j	k	-k
I	I	-I	i	-i	j	-j	k	-k
-I	-I	I	-i	+i	-j	j	-k	k
i	i	-i	-I	I	k	-k	-j	j
-i	-i	I	I	-I	-k	k	j	-j
j	j	-j	-k	k	-I	I	i	-i
-j	-j	+j	k	-k	I	-I	-i	i
k	k	-k	j	-j	-i	i	-I	I
-k	-k	k	-j	j	i	-i	I	-I

$$ij = k, \quad jk = i, \quad ki = j$$

$$ji = -k, \quad kj = -i, \quad ik = -j$$

$$i^2 = j^2 = k^2 = -I$$

$$-i^2 = -(-I) = I$$

$$\begin{aligned} i(-k) &= -ik \\ &= -(-j) \\ &= j \end{aligned}$$

$$i(-j) = -(ij) = -(k)$$

$$-ik = -(-j)$$