

$\text{Strand}[i, j]$ represents a strand from index i to index j that can be stitched with other strands into longer strands or circles.

`SetAttributes[Strand, Orderless];`

`Strand /: Strand[i_, j_] Strand[j_, k_] := Strand[i, k];`

`Strand /: Strand[i_, i_] := $-q^{1/2} - q^{-1/2}$;`

`Strand /: Strand[__]² := $-q^{1/2} - q^{-1/2}$;`