



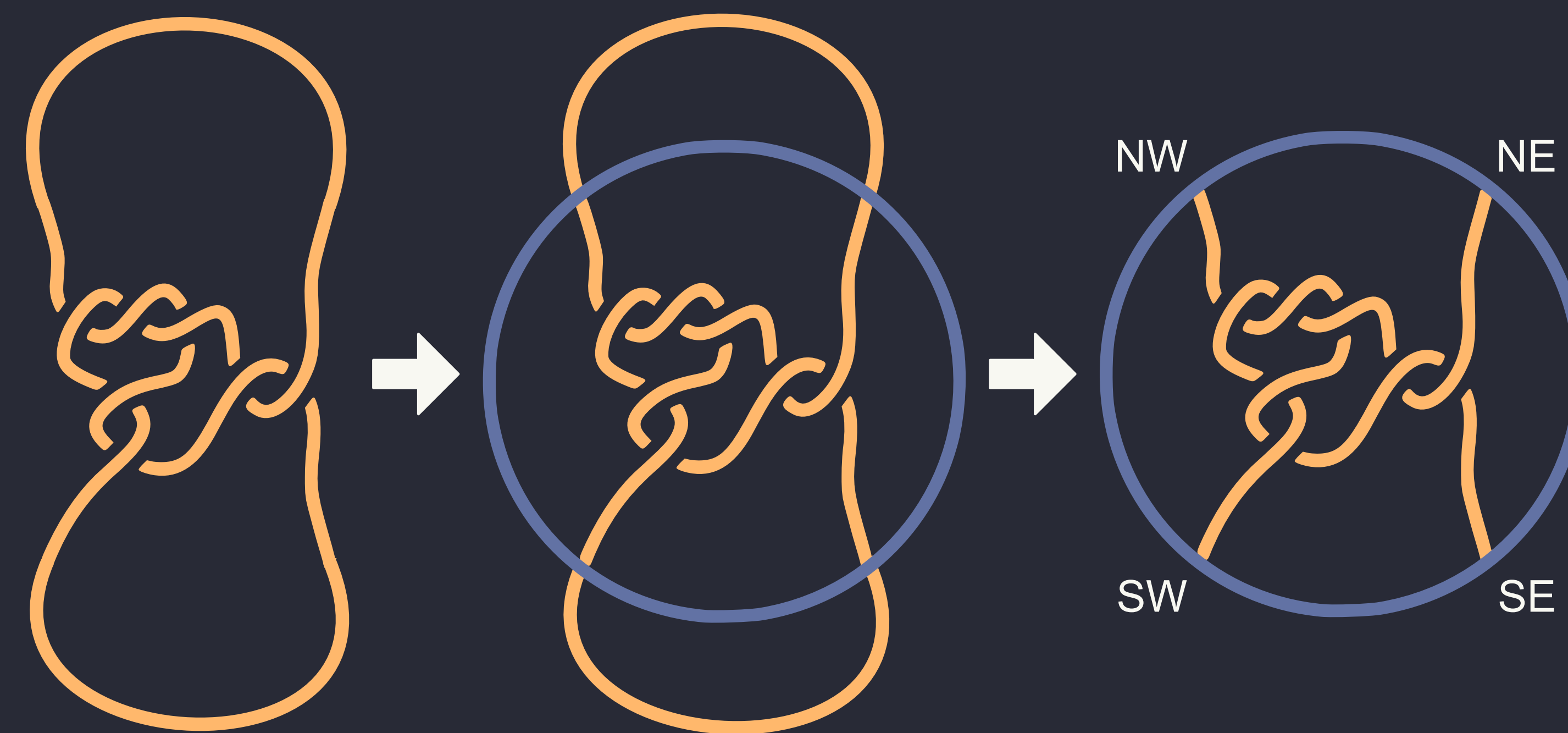
# IOWA

# The Tanglenomicon: Tabulation of two string tangles

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## Two String Tangles

We define a **tangle** as a portion of a knot diagram from which there emerge just 4 arcs pointing in the compass directions NW, NE, SW, SE.

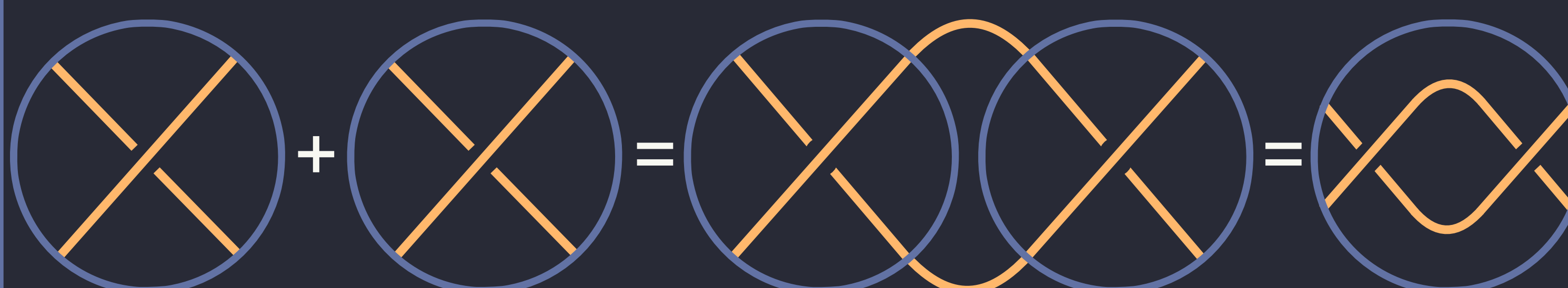


## Operations on Tangles

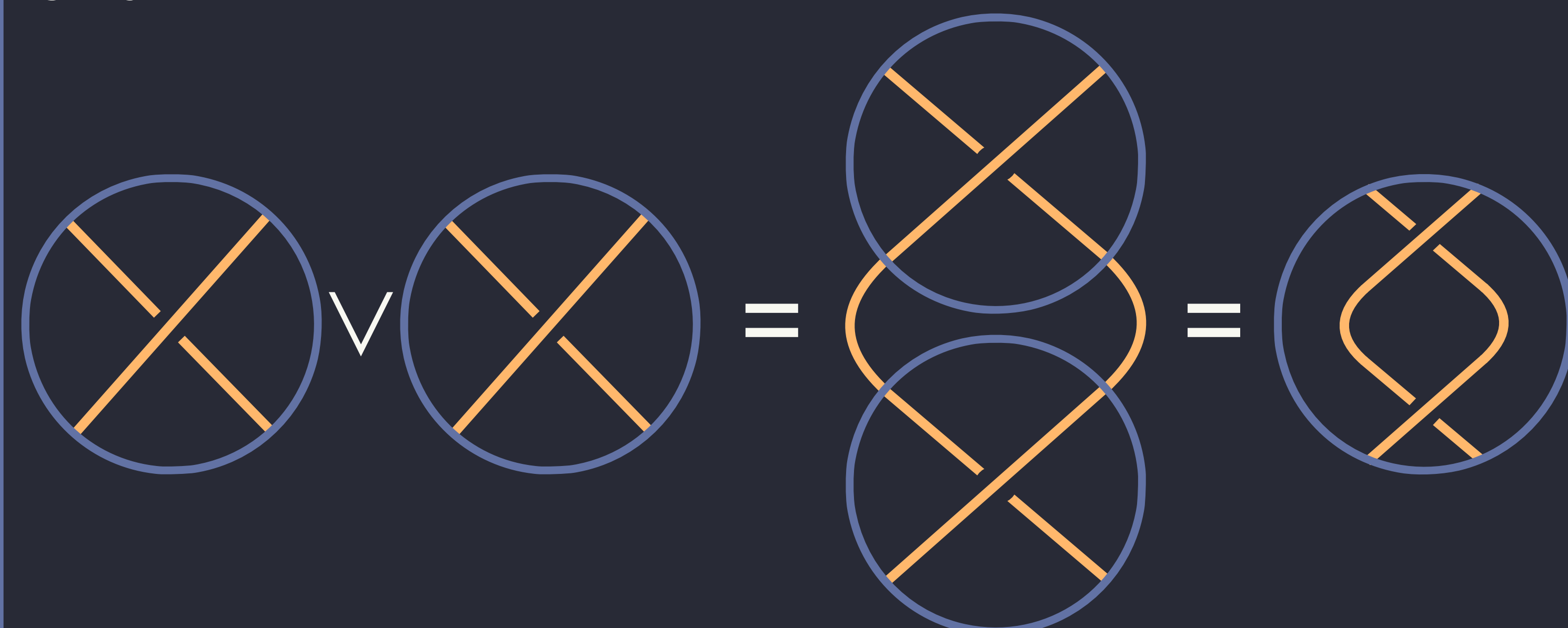
To generate the **two string tangles** we build up from the four basic tangles  $\infty$ , 1, 0, and -1



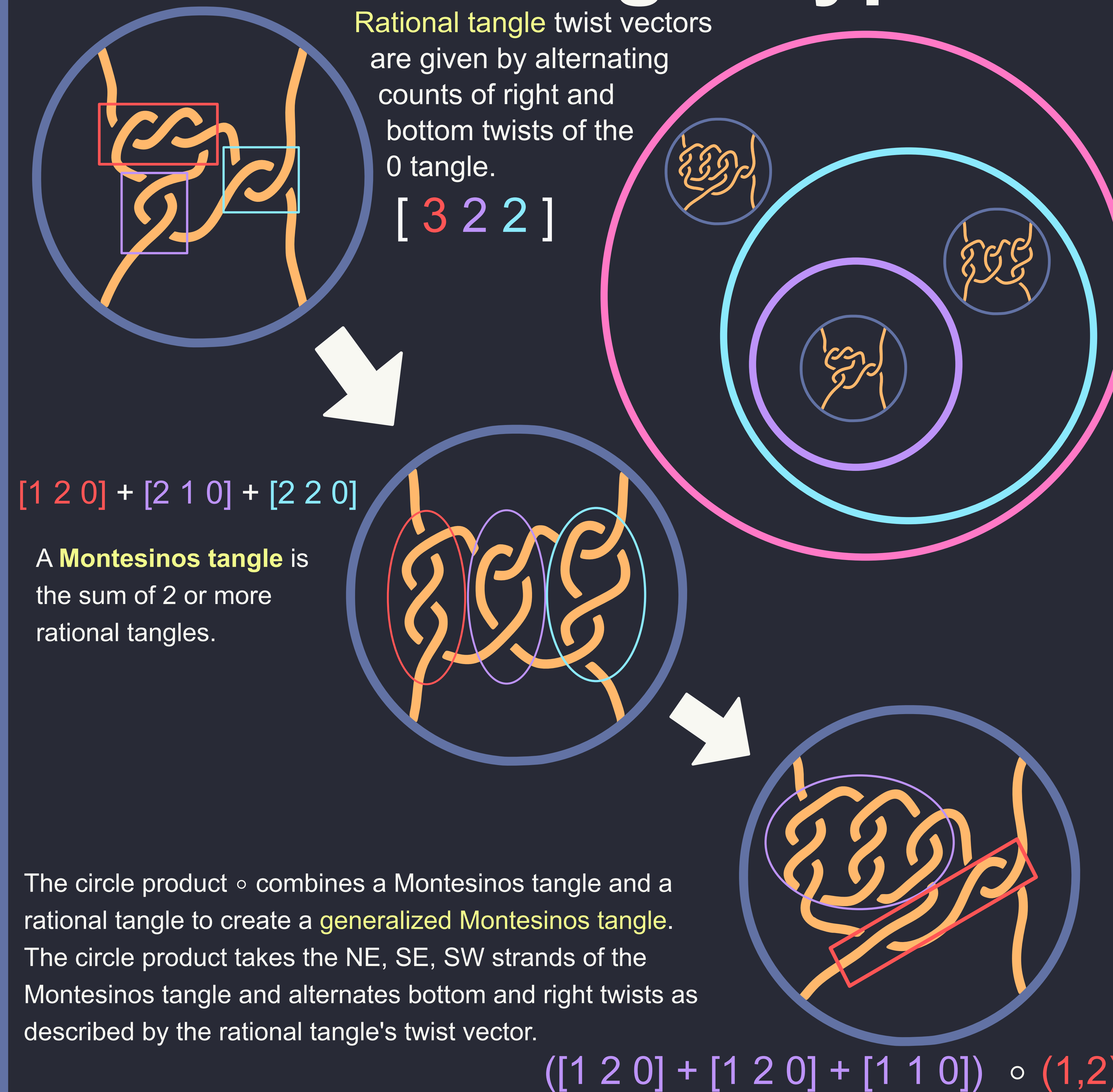
with two basic operations +



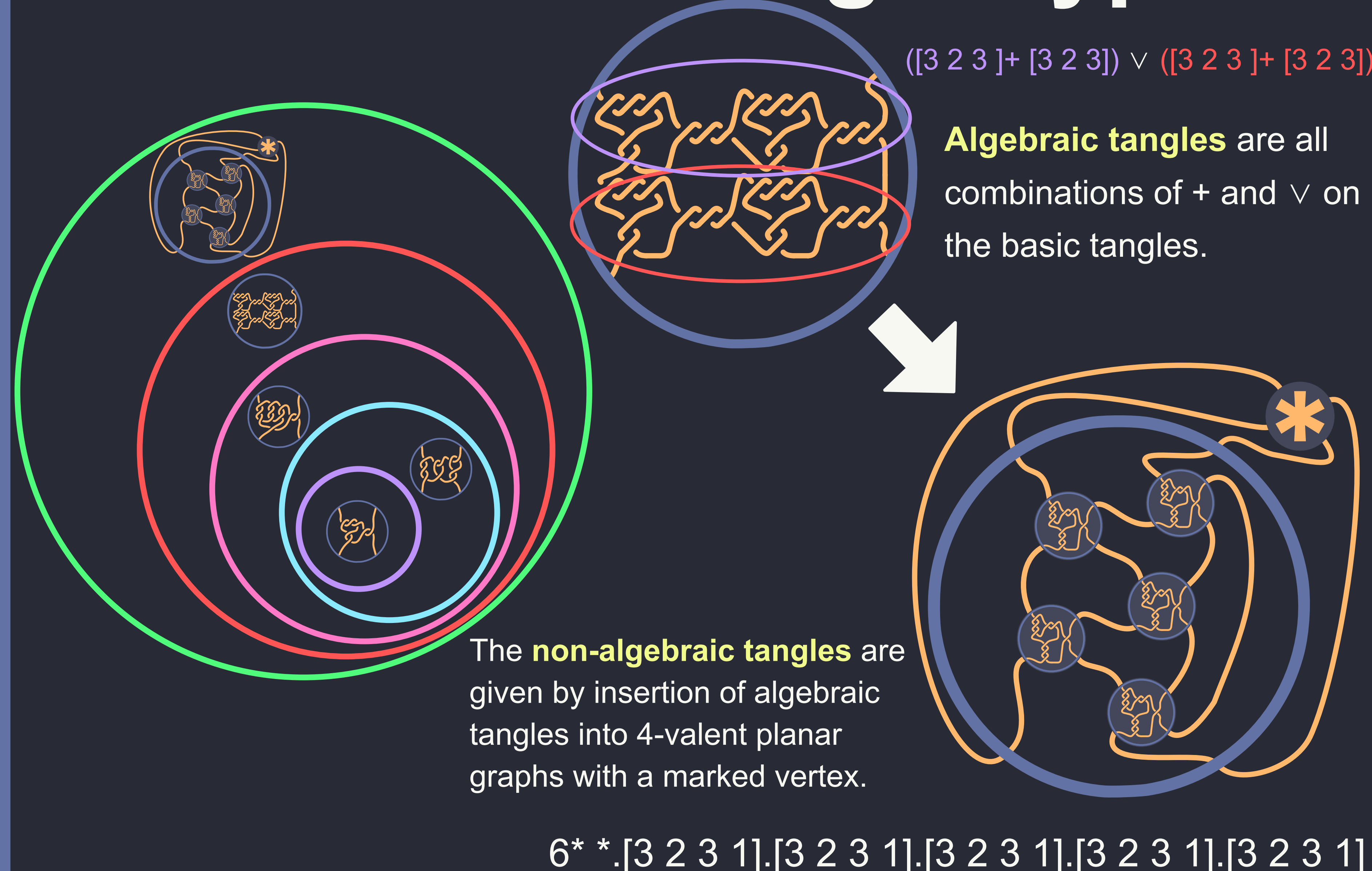
and  $\vee$



## Classified Tangle Types



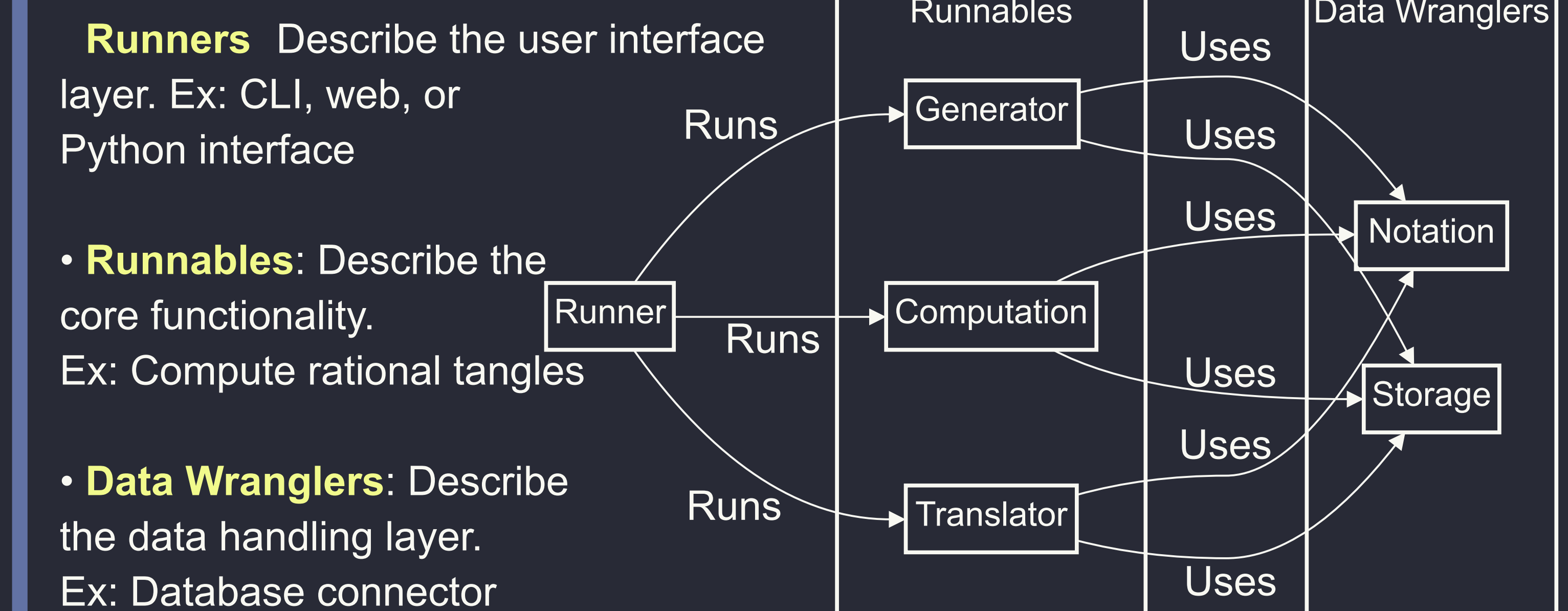
## Unclassified Tangle Types



## Software Design

The design for The Tanglenomicon project prioritizes flexibility and extensibility. We want a feature, maybe "calculate Jones polynomial," to be runnable in a jupyter notebook or on a university cluster. We're aiming for a "write once deploy anywhere" design.

To that end we've decoupled functionality wherever feasible, taking a layered approach for system design.



## Technologies



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