CreateGraph@*n* gives a graph with minimal irreducible knot diagrams with *n* crossings as vertices and edges connecting each pair of knot diagrams that are equivalent under one 2–pass, flype, or third Reidemeister move.

CreateGraph[] gives a graph with minimal irreducible knot diagrams with up to 10 crossings as vertices and edges connecting each pair of knot diagrams that are equivalent under one 2–pass, flype, or third Reidemeister move.

```
CreateGraph@n___Integer := CreateGraph@n =
  If[n === Null, Join @@ Array[CreateGraph, 11, 0],
   If[n === 0, {{MDT[], MDT[], "N/A"}},
    Block[
     {r, y = Join[Reverse@KnotSort@#[[;; 2]], {#[[3]]}] &
         /@ (Join[#, {"Flype"}] &
           /@ Union @@
             (Flype@KnotAssociation[n]@# & /@
               CandidateKnots@n) ⋃
            Flatten[Table[{{k, #,
                  "Reidemeister 3"} & /@
                ReidemeisterThree@k,
               {k, #, "2-Pass"} & /@ TwoPass@k},
              {k, ValidKnots@n}], 2]) ⋃ {}},
     r = Join @@ Select[ConnectedComponents@
         Graph[#[[1]] ↔ #[[2]] & /@ y],
        Or @@ PassReducible /@ # &];
     Sort[
      Select[y, ¬ MemberQ[r, #[[1]]] &], GraphSort]]];
```