

Pensieve Header: A little on Gauss Diagrams.

```
<< KnotTheory`
GD[K_] := GD @@ (
  PD[K] /. X[i_, j_, k_, l_] => If[PositiveQ[X[i, j, k, l]],
    Ar[l, i, +1], Ar[j, i, -1]
  ]
)
```

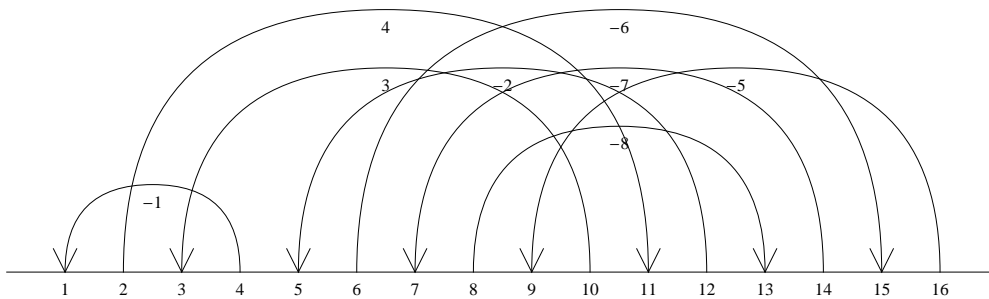
Loading KnotTheory` version of August 22, 2010, 13:36:57.55.
Read more at <http://katlas.org/wiki/KnotTheory>.

```
GD[Knot[8, 11]]
```

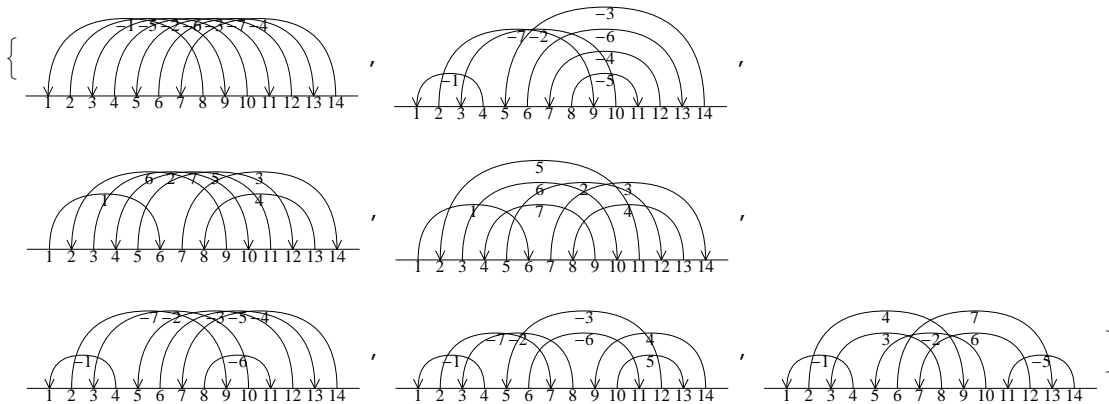
KnotTheory::loading: Loading precomputed data in PD4Knots`.

```
GD[Ar[4, 1, -1], Ar[12, 5, -1], Ar[10, 3, 1], Ar[2, 11, 1],
  Ar[16, 9, -1], Ar[6, 15, -1], Ar[14, 7, -1], Ar[8, 13, -1]]
```

```
Draw[expr_] := expr /. gd_GD => Draw[gd];
Draw[gd_GD] := Module[
  {n = Length[gd], h, k = 0},
  Graphics[
    Line[{{0, 0}, {2 n + 1, 0}}],
    Table[Text[i, {i, -0.3}], {i, 2 n}],
    (List @@ gd) /. {
      Ar[i_, j_, s_] => {
        h = Abs[i - j] / 2;
        BezierCurve[
          {i, 0}, {i, h}, {(i + j) / 2, h}, {j, h}, {j, 0},
          ], SplineDegree -> 2],
      Text[s * (++k), {(i + j) / 2, h - 0.3}],
      Line[{{j - 0.2, 0.4}, {j, 0}, {j + 0.2, 0.4}}]
    }
  ]
];
Draw[GD[Knot[8, 11]]]
```



`Draw[GD[#]] & /@ AllKnots[7]`



`Draw[GD[#]] & /@ AllKnots[8]`

