18.095 LECTURE 7:
KNOTS AND HOW TO DETECT KNOTTING.

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(1) Describe how the Gauss Code and Gauss Diagram change under the Reidermiester moves.
(2) Describe how the signed graph of a knot changes under the Reidermiester moves.
(3) Find Seifert surfaces for the knots $5_1, 5_2,$. You can find 5_1 and 5_2 at

`http://katlas.math.toronto.edu/wiki/5_1`

and

`http://katlas.math.toronto.edu/wiki/5_2,`

respectively.
(4) Find the corresponding Alexander polynomials. Do they determine the genus correctly?
(5) Check that circle coloring is invariant under Reidermiester moves