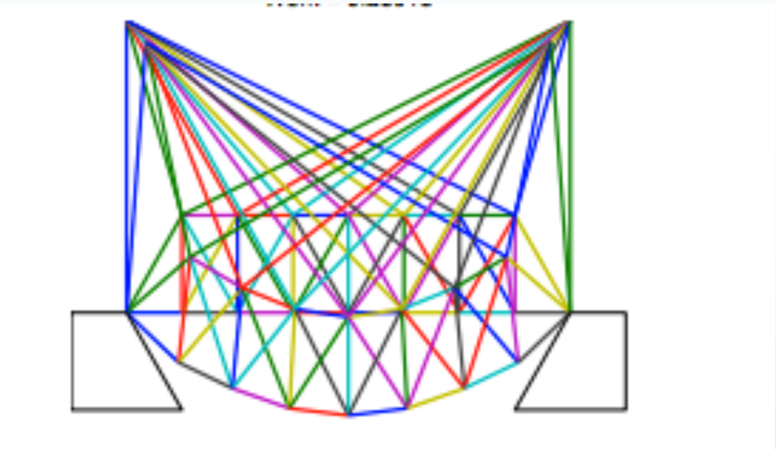
Bridge II

Docta Kush

Purpose

- To essentially recreate the “\” method used in last week’s method.
- We will also be recreating a different bridge that has two vertical fibers of length 3



Functions

- Bridge2(Ea, W, nos) – creates plot and bridge
  - Ea = 1, W = 0.05, nos=8
- X = gauss(S,f) – puts matrix in upper triangular form
  - Replaces X = S/f
  - Calls trisolve(S,f)
- X = trisolve(S,f) – solves for that matrix

Matrices

- Triangular matrix > diagonal matrix
  - It can handle 0's unlike the diagonal matrix
  - We create the triangular matrix by "swapping" and "row mixing"

Demo of Gauss

Here is S augmented with f:

2	4	2	2
1	2	4	3
4	2	1	1

rows 1 and 3 are swapped:

4	2	1	1
1	2	4	3
2	4	2	2

our first **pivot** is 4 and elimination occurs in column 1:

4	2	1	1
0	3/2	15/4	11/4
0	3	3/2	3/2

rows 2 and 3 are swapped:

4	2	1	1
0	3	3/2	3/2
0	3/2	15/4	11/4

our second **pivot** is 3 and elimination occurs in column 2:

4	2	1	1
0	3	3/2	3/2
0	0	3	2

Demo of Trisolve

```
x(3) = 2/3
3*x(2) + (3/2)*(2/3) = 3/2            so x(2) = 1/6
4*x(1) + 2*(1/6) + 1*(2/3) = 1        so x(1) = 0
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