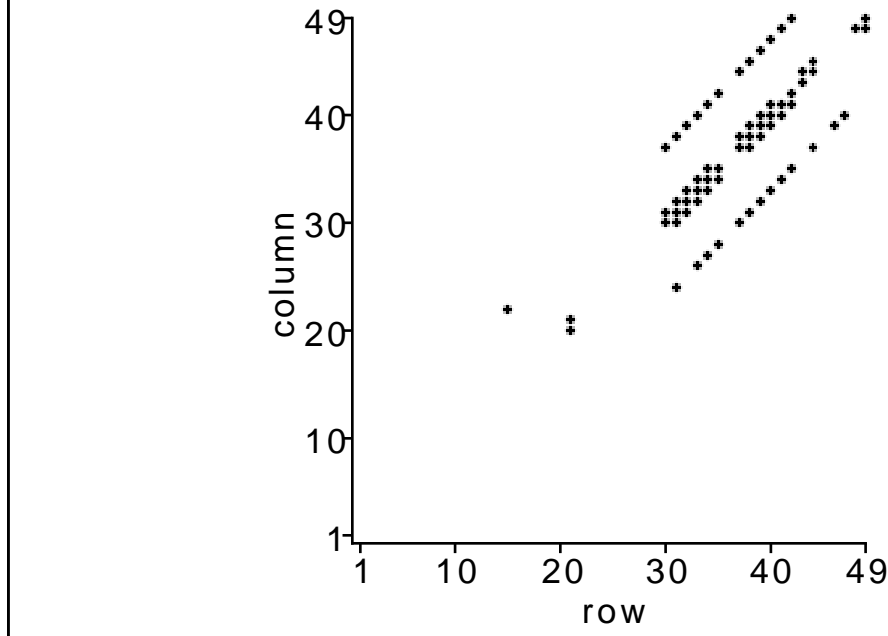


```
> sparsematrixplot(K);
```



The above plot is schematic; there is a box at position i, j if K_{ij} is nonzero.

F:=load(T,f) assembles the load vector for the BVP

$$\begin{aligned} -\operatorname{div}(a(x, y) \operatorname{grad} u) &= f(x, y) \text{ in } \Omega, \\ u &= 0 \text{ on } \Gamma_1, \\ \frac{\partial}{\partial n} u &= 0 \text{ on } \Gamma_2, \end{aligned}$$

The domain Ω and the boundary conditions are defined by the mesh T , while the input f must be a function of two variables representing the right hand side $f(x, y)$ in the PDE.

Here is an example:

```
[> f:=(x,y)->1:  
[> F:=load(T,f):
```

Now that I have compute K and F for the problem

$$\begin{aligned} -\operatorname{div}((1+x^2) \operatorname{grad} u) &= 1 \text{ in } \Omega, \\ u &= 0 \text{ on bndy } \Omega, \end{aligned}$$

I can solve for the nodal values of the approximate solution:

```
[> u:=LinearSolve(K,F):
```