

Gauss no pivoting

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Algorithm 1 Newton

```
1: procedure GAUSS NO PIVOTING
2:   for  $k=1,\dots,n-1$  do
3:     PIVOTING: Skip
4:     ELIMINATION
5:     if  $(a_k k \neq 0)$  then
6:       for  $i=k+1,\dots,n$  do
7:          $a_i k < -l_i k = \frac{a_i k}{a_k k}$ 
8:       end for
9:       for  $i=k+1,\dots,n$  do
10:        for  $j=k+1,\dots,n$  do
11:           $a_i j < -a_i j - l_i k a_k j$ 
12:        end for
13:      end for
14:    else
15:      Stop, algorithm fails when  $a_k k = 0$ 
16:    end if
17:  end for
18: end procedure
```
