

```

|\~/|      Maple 2021 (X86 64 LINUX)
._|\|\  |/\|. Copyright (c) Maplesoft, a division of Waterloo Maple Inc. 2021
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 <-----> Waterloo Maple Inc.
      |      Type ? for help.
> n := 5;

```

```

n := 5

```

```

> A := Matrix(n,n,rand(10^4));

```

```

      [7926   8057     5   3002   2347]
      [
      [9765   3354   5860   6906   5281]
      [
A := [5393   1203   311   9386   9810]
      [
      [5144   7995   3121   9390   2055]
      [
      [6505   5293   2987   2440   8012]

```

```

> det := LinearAlgebra[Determinant](A);

```

```

det := 23791466233143137296

```

```

> mu := 1:

```

```

> for k to n-1 do

```

```

>   mu := mu*A[k,k]^(n-k-1);

```

```

>   for i from k+1 to n do

```

```

>     for j from k+1 to n do

```

```

>       A[i,j] := A[k,k]*A[i,j]-A[i,k]*A[k,j];

```

```

>     od;

```

```

>     A[i,k] := 0;

```

```

>   od;

```

```

>   print(A[k+1..n,k+1..n]);

```

```

>   printf("max length = %d digits\n",length(max(seq(seq(abs(A[i,j]),j=k+1..n),i=k+1..n)))));

```

```

> od:

```

```

      [-52092801   46397535   25422426   18938751]
      [
      [-33916423    2438021   58203650   65096689]
      [
      [ 21923162    24711326   58982852    4214962]
      [
      [-10458467    23642437   -188570    48235877]

```

```

max length = 8 digits

```

```

      [ 1446635080430484   -2169753403021452   -2748734175828216]
      [
      [-2304462863969796   -3629921935279464   -634766482939224]
      [
      [ -746353677117192     275702742865512   -2314671639266760]

```

```

max length = 16 digits

```

```

      [-10251288552034411837957632844368 , -7252631293222107209343437468352]
      [
      [-1220562171182446349965216934976 , -5400013052587912787382804201312]

```

```

max length = 32 digits

```

```

      [46504804588789939837283646317990315771751006790507796595531264]

```

```

max length = 62 digits

```

```

> det = A[n,n]/mu;

```

```

23791466233143137296 = 23791466233143137296

```