Justin Hsu
EEC 170 Lab 2
5/8/25

K = 4

```
k: .word 4
A: .word -52, 47, 36, 36 # A [1x4] vector
B: .word -68 -83 -72 40, 31 20 -2 45, -14 -79 55 23, -83 21 54 22 # B[4x4] matrix stored in row major
C: .word 97, -94, 52, 45 # C[1 x 4] initialized to some random values.
```

```
--------------------------------------------------------------------------------
Starting program C:\Users\Justin\Documents\School\2024-2025\Spring Quarter\EEC 170\EEC-170-Labs\lab2_skel.S

C = 1501  3168  7574  1655
Exited with error code 0
Stop program execution!
--------------------------------------------------------------------------------
```

From sample.txt:

```
k: .word  4
A: .word -52, 47, 36, 36     # A [1x4] vector
B: .word -68 -83 -72 40, 31 20 -2 45, -14 -79 55 23, -83 21 54 22     # B[4x4]
matrix stored in row major
C: .word 97, -94, 52, 45    # C[1 x 4] initialized to some random values.

Results:
C = 1501 3168 7574 1655
```

K = 5

```
k: .word 5
A: .word -52, 47, 36, 36 # A [1x4] vector
B: .word -68 -83 -72 40, 31 20 -2 45, -14 -79 55 23, -83 21 54 22 # B[4x4] matrix stored in row major
C: .word 97, -94, 52, 45 # C[1 x 4] initialized to some random values.
```

```
--------------------------------------------------------------------------------
Starting program C:\Users\Justin\Documents\School\2024-2025\Spring Quarter\EEC 170\EEC-170-Labs\lab2.S

^b1875085956  -1359540662  -1698821385  -1028029698  1645633155
Exited with error code 0
Stop program execution!
--------------------------------------------------------------------------------
```

K = 7

```
k: .word 7
A: .word -52, 47, 36, 36 # A [1x4] vector
B: .word -68 -83 -72 40, 31 20 -2 45, -14 -79 55 23, -83 21 54 22 # B[4x4] matrix stored in row major
C: .word 97, -94, 52, 45 # C[1 x 4] initialized to some random values.
```

```
--------------------------------------------------------------------------------
Starting program C:\Users\Justin\Documents\School\2024-2025\Spring Quarter\EEC 170\EEC-170-Labs\lab2.S

ù3^ßWR_75799979R_4810R_-1566168021R_173665R_-547474439R_6246999R_1765757767R_GS?iExited with error code 0
Stop program execution!
--------------------------------------------------------------------------------
```

When K > 4, the answers become a jumbled mess because my code has only allocated sufficient memory for K = 4, meaning that it will only store 4 values in the result register. When K > 4, I am reading and writing beyond the bounds of memory that I have allocated, so as a result this leads to undefined behavior, such as filling with junk, leading to that jumbled mess.