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Part1 b)

In our system, **32768** is the maximum theoretical value of PID\_MAX.  
Only PID\_MAX processes can run concurrently. We got this number by  
command: **cat /proc/sys/kernal/pid\_max**

BTW, the practical number of processes is much more limited by available  
resources. For our system, we used the command **RLIMIT\_NPROC** to  
find the practical limit of child processes which can run concurrently  
which gives value **6591**.

Let dimension of matrix A is  $r1 \times c1$  and dimension of matrix B is  $r2 \times c2$ .  
Then the dimension of the resultant C matrix is  $r1 \times c2$ .

Total number of child processes our program is creating =  $r1 \times c2$

Total number of processes supported by our system = 6591

So, for complete concurrency

$$r1 * c2 \leq 6591$$