Problem A2

# Mastering Matrix Multiplication

**Time limit: 2.5s**
**Memory limit: 512 MB**

Everything is identical as A1 - Mastering Matrix Multiplication (Weaker).

## Constraints

While A1 has $1 \leq n, x, y, m \leq 77$, A2 has $1 \leq n, x, y, m \leq 500$.

Moreover, the total size of input file is not more than 90 Megabytes (that's it, at most 22.5 Million 32-bit signed integers to be read by your fast I/O routine).

The probability of acceptance for various programming language users:

- C++ "high", with a wider range of acceptable algorithm parameters.
- Java "low", with a smaller range of acceptable algorithm parameters, but this is possible.
- Python "near zero" (at least Steven cannot make the intended correct Python solution runs below this maximum time limit of 2.5s yet (there is a non-intended heavily-optimized C++ solution that is hovering around 4.2s on this setup)) — In fact, any student who can get AC on Python for A2 will get bonus 1% CA marks (still capped at max 40%) as promised in the early part of the semester (declare this in your PA2 reflection report).

Remarks: If you have tried more than $14$ times for this task, please hold your horses and wait until tutorial on Mon/Tue of Week 07 for a bit more details about this topic. Just enjoy the rest of your recess week.