

Counting Antibodies

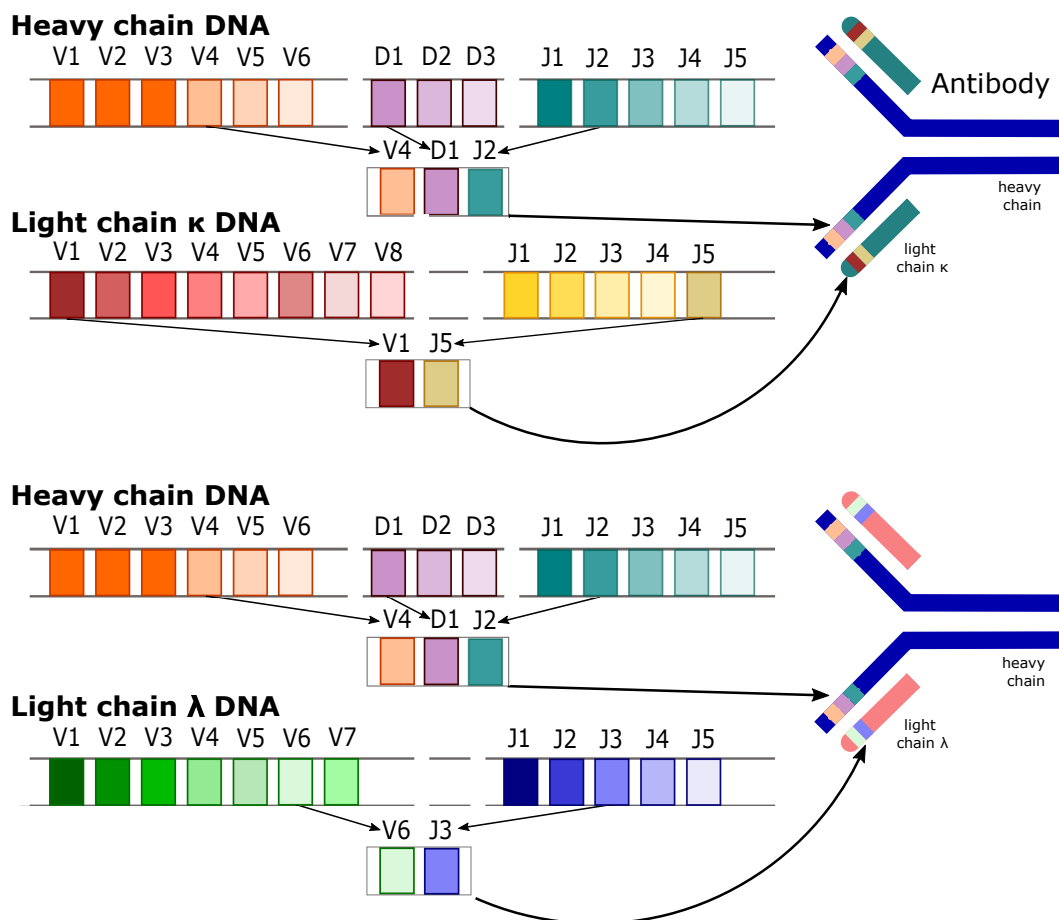
Input file: standard input
Output file: standard output
Time limit: 1 second
Memory limit: 512 megabytes

Immunoglobulins also known as antibodies are protein molecules. Antibodies play one of the key roles in the immune reaction — they detect harmful foreign agents — bacteria or viruses — and help to eliminate them. Every foreign molecule binds with unique type of antibody. There are plenty of potential harmful agents, so, there should be a tremendous number of immunoglobulin types to neutralize all threats. Huge required amount of immunoglobulin types make it impossible to encode each type in DNA. Luckily, there is a solution.

Immunoglobulins are produced by immune cells: B-lymphocytes based on DNA information — genes. Immunoglobulin genes are combined from DNA fragments like constructor. Each fragment exists in several variants and is responsible for variable region of immunoglobulin molecule. This process is called somatic recombination.

Immunoglobulin molecule consists of two identical heavy chains and two identical light chains. There are two types of light chains with similar structure — κ and λ . Both of two light chain types have two variable regions — V and J . To form a variable region one gene fragment is selected from multiple variants: V_κ and J_κ variants for V and J regions respectively in κ -light chain, or V_λ and J_λ variants for V and J regions respectively in λ -light chain.

There is only one heavy chain type with three variable regions — V , D and J . To form each of them one gene fragment from V_h , D_h and J_h variants respectively is selected.



You need to count how many possible immunoglobulin molecules can be produced for given values of V_κ , J_κ , V_λ , J_λ , V_h , D_h and J_h .

Input

The first line contains two integers V_κ, J_κ ($1 \leq V_\kappa, J_\kappa \leq 1500$) — number of gene fragment variants for κ -light chain V and J variable regions, respectively.

The second line contains two integers V_λ, J_λ ($1 \leq V_\lambda, J_\lambda \leq 1500$) — number of gene fragment variants for λ -light chain V and J variable regions, respectively.

The third line contains three integers V_h, D_h and J_h ($1 \leq V_h, D_h, J_h \leq 1000$) — number of gene fragment variants for heavy chain V, D and J variable regions, respectively.

Output

Output one integer — number of immunoglobulin variants that can be produced.

Example

standard input	standard output
40 5 41 6 50 30 6	4014000

Note

In conclusion, we note that somatic recombination is powerful protective mechanism for various bacteria and viruses, but not only one. Other ways to prevent foreign invasion are beyond the focus of this problem.