



# Java Software Development

## Homework 3

# Problem Description

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- A special number is a positive integer whose prime factors only include 2, 3, 5.
- Write a program to determine whether a given number is a special number, and find the  $n^{th}$  one.
- For example, 1, 2, 3, 4, 5, 6, 8, 9, 10, 12 is the sequence of the first 10 special numbers.
- Given an equation  $X=M$ , you should print whether  $M$  is a special number. Or given another equation  $Y=N$ , you should print the  $N^{th}$  special number. Each answer must be in a line.
- For example:
  - Given  $X=5$ , you should print `true`.
  - Given  $Y=9$ , you should print 10.

# Sample Input and Output

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Keyboard Input	X=8
Output	true

Keyboard Input	X=13579
Output	false

Keyboard Input	Y=10
Output	12

Keyboard Input	Y=999
Output	51018336

# Submission

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- Please archive your source code to `STUDENT_ID.zip` (download the example zip file from Moodle) and upload to Moodle before deadline.
- Your zip file should follow the following format.
  - `STUDENT_ID.zip`
    - | - `src`
    - | - `META-INF`
      - | - `MANIFEST.MF`
  - All the source files (\*.java) are put in the `src` directory.
  - The entry point (i.e. main class) of the program is specified in the `MANIFEST.MF` file.
- No late submission is accepted.