DWITE '08 R1 #2 - Simple Checksum

Time limit: 2.0s **Memory limit:** 64M

DWITE Online Computer Programming Contest, October 2008, Problem 2

A checksum is a type of simple error detection scheme, meant to catch incorrectly entered data, such as typos. Credit cards, for example, use the **Luhn algorithm** to generate account numbers. Alternatively, a checksum number could be a digit appended to the end of data that is being validated.

A super-simple scheme used to validate **6 digit** student numbers is as follows:

- Break the number up into 6 digits
- Add up all the digits together to get a new number
- Repeat the process until the result is only a single digit
- Match the resulting digit to the capital letter of the alphabet, in that position

Example

```
123456
1+2+3+4+5+6 = 21
2+1 = 3
3 = C
```

The input will contain 5 lines, 6-digit positive integers, followed by a space and a capital letter. Numbers will not have leading zeros, and thus digits will never add up to 0.

The output will contain 5 lines, stating `match` or `error`, depending if the number generates the same checksum letter as supplied, or not.

Sample Input

```
123456 C
123456 A
100000 A
111111 F
111114 I
```

Sample Output

```
match
error
match
match
match
```

Problem Resource: DWITE