

Simple sum solves bank card errors

Mistyping a single digit of your bank card number or swapping two adjacent digits will account for almost 90% of errors at the Christmas checkout – but a simple 1960's algorithm catches them

WHAT DO CARD DIGITS MEAN?



- 1 Major Industry Identifier (one digit)**
1, 2 Air travel, financial services
2, 5 Mastercard
3 AMEX, Diners Club
4 Visa
6 Discover
7 Petrol
8 Healthcare, telecoms
9 Government
- 2 Issuer Identifier Six**
Financial institution, credit or debit card, country of origin
- 3 Account number**
- 4 Check Digit One**
Used to validate entire number using *Luhn algorithm*

LUHN ALGORITHM

Validates card number by checking for accidental errors in sequence

5681 5210 3654 7891

Starting from Check Digit on right

- 1 Double the value of every other digit**

10 16 10 2 6 10 14 18

- 2 Add values of each doubled digit, each undoubled digit and Check Digit**

1+0+6+1+6+1+1+0+2+2+0+6+6+1+0+4+1+4+8+1+8+1

- 3 If resulting number ends in zero, card number is validated**

60

With all other numbers being pre-determined, Check Digit ensures validation