THE KEY TO BARCODES

Example Barcode (EAN-13 format)

```
50   13863   03102   4
U.K.  COMPANY  PRODUCT   CHECK
         I.D.    CODE    DIGIT



PRODUCT IDENTITY CARD
```

COUNTRY OF SOURCE OF BARCODE (50 = U.K.)
MANUFACTURER I.D. NUMBER (13863)
PRODUCT CODE NUMBER (03102)
"CHECK DIGIT" (4)

How the Check Digit is calculated:

Starting at the end of the code (before the "check digit"), go back from right to left and add up every other numeral.

$$2 + 1 + 0 + 6 + 3 + 0 = 12$$

Multiply your answer by 3: $3 \times 12 = 36$

Now go back and add up the numbers which you missed first time:

$$0 + 3 + 3 + 8 + 1 + 5 = 20$$

Add your result to the answer from the first calculation:

$$20 + 36 = 56$$

Find the next whole multiple of 10 up from this answer (= 60).

The difference between your final answer and the multiple is the check digit: 60 - 56 = **4.**

Try it for yourself on any thirteen-digit barcode (ignoring the last (check) digit when you commence your calculation).