

INTERESTING NUMBER FACTS

Some selected number facts taken from the book

Numbers, facts, figures and fiction by Richard Phillips (Cambridge) in our Library

I use one of these a day with my extension class.

- 2 Every sheet of paper A1 to A10 has length:width = $1:\sqrt{2}$
 - 6 Perfect $1 + 2 + 3 = 1 \times 2 \times 3$
 - 11 The 4th number to remain the same up-side-down
 - 13 Prime which is also prime with the 2 digits reversed (also 11, 17, 37)
 - 15 Balls in a snooker triangle
 - 27 $3 \times 3 \times 3 = 3^2 + 3^2 + 3^2$
 - 28 Dominoes in a double 6 pack
 - 31 $2^0 + 2^1 + 2^2 + 2^3 + 2^4 = 2^5 - 1$
 - 33 $1! + 2! + 3! + 4!$
 - 36 $1^3 + 2^3 + 3^3 = 1^2 \times 2^2 \times 3^2$
 - 53 $2^2 + 7^2 = 1^2 + 4^2 + 6^2$
 - 63 There are 63 different sums of money using 5c, 10c, 20c, 50c, \$1 & \$2 coins
 - 64 $8^2 = 4^3 = 2^6$
 - 65 $1^2 + 8^2 = 4^2 + 7^2$
 - 78 Total number of presents on the 12th Day of Christmas (364 in the whole song)
 - 99 $99^2 = 9801$ and $98 + 01 = 99$
 - 100 $1^3 + 2^3 + 3^3 + 4^3$
 - 121 $3^0 + 3^1 + 3^2 + 3^3 + 3^4$
 - 126 = 6 x 21 back to front
 - 135 $1^1 + 3^2 + 5^3$
 - 139 A 'happy' number - continually sum the squares of the digits until 1 is reached
 - 144 = 12^2 reversing the digits $21^2 = 441$
 - 145 $1! + 4! + 5!$
 - 153 $1! + 2! + 3! + 4! + 5! = 1^3 + 5^3 + 3^3$
 - 216 $3^3 + 4^3 + 5^3 = 6^3$
 - 365 $10^2 + 11^2 + 12^2 = 13^2 + 14^2$
 - 609 and 619 remain the same up-side-down (also 808, 818, 906, 916)
 - 666 DCLXVI - all the Roman numerals < 1000 all in alphabetical order
 - 777 $3 \times 7 \times 37$ (3 sevens)
 - 1001 $7 \times 11 \times 13$ Think of a 3-digit number and write it again in front then $\div 7 \div 11 \div 13$
- SR