## The Listener Crossword No 4464 The Properties of Numbers II by Piccadilly

Senders of the first three correct entries drawn will each receive a copy of *The Chambers Dictionary*. Write your name and contact details in the space provided and send to: Listener Crossword No 4464, 63 Green Lane, St Albans, Hertfordshire AL3 6HE, to arrive by August 31.

1	2	3		4	5	6	7	8	9
10			11			12			
13	14	•	15		16				
17		18	19				20		
21					22				
23			24		25	26			27
28	29			30	31		32		
33									
				34		35	36		
37				34 38		35	36 39	40	

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The following statements about the numbers 1 to 42 are also true about their associated entries. No entry starts with a zero and all entries are distinct.

## **Statements**

- Only 1, 4, 9, 16, 25 and 36 are perfect squares
- Only 1, 8 and 27 are perfect cubes
- Only 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37 and 41 are prime numbers
- Only 11, 22 and 33 are palindromes
- The digit sum of 2 is even, and 2 is a factor of 14, 22 and 30
- 5 < 7 < 13 < 19, and 5 is a factor of 15
- $6 = 3 \times 2$
- 7 is a factor of 28
- 9 is a factor of 18
- $\bullet$  12 = 4 + 3 + 3 + 2
- 13 is a factor of 26 and 39
- 14 reversed is a prime number greater than 3
- The digit sum of 17 > the digit sum of 15
- $\bullet$  20 = 10 + 10

- 20 + 21 < 42
- The digit sum of 21 + the digit sum of 31 = the digit sum of 12 + the digit sum of 40
- The digit sum of 23 + the digit sum of 30 = the digit sum of 17
- 23 reversed > 23
- $\bullet$  24 = 12 + 12
- The digit sum of 29 = the digit sum of 38
- The digit sum of 31 = the digit sum of 13
- The digit sum of 32 = the digit sum of 14
- The digit sum of 33 = twice the digit sum of 30
- $\bullet$  34 = 37 3
- The digit sum of 34 = the digit sum of 16 > the digit sum of 10
- The digit sum of 35 = the digit sum of 26
- $\bullet$  38 = 19 + 19
- The digit sum of 41 > the digit sum of 40
- $\bullet$  42 = 24 + 15 + 3