Times Listener No. 4425, November 18, 2016
Clue-by-four by gwizardry

Word:

NAME

ADDRESS

TOWN

POSTCODE

PHONE NUMBER

Senders of the first three correct entries drawn will each receive a copy of *The Chambers Dictionary* and Susie Dent's *Modern Tribes*. Write your name and contact details in the space provided and send to: Listener Crossword No 4425, 63 Green Lane, St Albans, Hertfordshire AL3 6HE, to arrive by December 1.

Lagrange's Four-Square Theorem states that any positive integer can be expressed as the sum of up to four square numbers (eg, $15 = 3 \times 3 + 2 \times 2 + 1 \times 1 + 1 \times 1$ and $10 = 3 \times 3 + 1 \times 1$). Each clue gives four numbers whose squares add up to the answer, in descending order (eg, 15 would be 3 2 1 1 and 10 would be 3 1 0 0). Some numbers can be expressed in more than one way. In this puzzle, clues are expressions with the fewest non-zero components (eg, 18 would be 3 3 0 0 rather than 4 1 1 0), then with the largest initial base (eg, 33 would be 5 2 2 0 rather than 4 4 1 0). The clues use the complete alphabet to represent the numbers 0 to 25 in an order to be determined.

Solvers must construct the grid, showing the bars but not necessarily entry numbers, which displays 180-degree symmetry. Every cell contains a digit, all entries are two or more digits long, no entry has consecutive unchecked cells, and all unchecked cells are on the perimeter. There are no leading zeros and all entries are different. Solvers must write below the grid a thematic common word that would be the clue to a four-digit number appearing clockwise in the central cells.

Across
1   G G D D
3   N N D D
5   Z X D D
8   R T T D
9   C G X D
11   P X X D
12   J J X D
14   M P T D
15   N X D D
17   Y A D D
18   O J D D
20   B B T D
21   H X X D
22   E N D D
23   V G T D
24   Q A G D
27   W W D D
29   B B D D
31   P X T D

32 M T T T
33 R G X D
35 L B D D
36 Q J X D
37 G G G D

Down
2   G X D D
3   J J D D
4   C P D D
5   Z J T T
6   C J X D
7   K P X D
8   G T D D
10 Q U J D
13 E C D D
14 S B D D
16 Q G D D
17 E G D D
18 S S D D
19 V I G D
20 I G X D
25 Y B B D
26 F F D D
28 L T T D
30 K G D D
31 P X T T
33 G D D D
34 G X X D

More information about Chambers books can be found at www.chambers.co.uk

A dedicated site for Listener puzzle fans can be found at www.listenercrossword.com