Puzzles

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1) A D B G E

С

Each of seven digits from 0, 1, 2, 3, 4, 5, 6, 7, 8 & 9 is :

F

- i) Represented by a different letter in the figure above.
- ii) Positioned in the figure above so that A x B x C, B x G x E, and D x E x F are equal. Which digit does G represent?
- 2) My house has a Number
 - i) If my house is a multiple of 3, it is a number from 50 through 59,
 - ii) If it is not a multiple of 4, then it is a number from 60 through 69,
 - iii) If it is not a multiple of 6, then it is a number from 70 through 79.

What is my house number?

- 3) In a pile of 10 books, there are 3 of History, 3 of Hindi, 2 of Mathematics and 2 of English. Taking from above, there is an English book between a History & Mathematics book, a History between Maths & English, a Hindi between an English & Maths, a Maths between 2 Hindi books & 2 Hindi books, between a Maths & History book. Book of which subject is at the 6th position from the top!
- 4) Why are 2000 American dollar notes worth more than 1999 American dollar notes ?
- 5) Rearrange the letters in the words "new door" to make one word.
- 6) Some informations are given below :
 - i) Ashland is north of East Liverpool and

west of Coshocton.

- ii) Bowling Green is north of Ashland and west of Fredericktown.
- iii) Dover is south and east of Ashland.
- iv) East Liverpool is north of Fredericktown and east of Dover.
- v) Fredericktown is north of Dover and west of Ashland.
- vi) Coshocton is south of Fredericktown and west of Dover.

Now answer the following questions :

- a) Which of the towns mentioned earlier is furthest to the north-west?
- b) Which town(s) is/are both north and east of Fredericktown?
- c) Which town (s) must be situated both south and west of one other town?

SOLUTIONS

Clearly, no letter can be 0, 5 or 7. ∴ The product for each row, then, is a multiple of 1, 2, 3, 4, 6, 8, & 9. ∴ LCM = 72. ∴ The product should be a multiple of 72. But the product can't be 72 x 2, 72 x 3, etc.∵ it is not possible, ∴ product is 72.

Then,

 $72 = 1 \times 8 \times 9$

$$= 2 \times 36 = 2 \times 4 \times 9$$

$$=$$
 3 x 24 = 2 x 4 x 6

:: 4 & 9 are used twice B or E is 4 :: G = 2

2) Suppose my house number is a multiple of 3.∴ It can be either 51, 54 or 57

But it can't be any of these nos, \because none is a multiple of 4. \therefore My house no is not a multiple of 3. Also it is not a multiple of 6.

:. My house number can be 70, 71, 73, 74, 76, 77 or 79.

 \therefore It is not a multiple of 3. But it is a multiple of 4, \therefore the number is 76.

- 3) The arrangement of books :
 - M, E, M, H, Hi, M, Hi, Hi, H.
 - :. Hindi book is at 6th position from top.
- 4) 2000 dollar notes are worth \$ 2000, while 1999 dollar notes are worth only \$ 1999.
- 5) ONE WORD !
- 6) a) Bowling Green.
 - b) Ashland and East Liverpool.
 - c) Dover, Coshocton and Fredericktown.

Logic is simply the architecture of human reason

— Evelyn Waugh