Maggie’s Matters Summer Edition 2017 — puzzle solutions
By Chris Maslanka

Crossword

H E L E M U I A N S C T Y H E
A N M U L A
E D E N E A R F L A P S
T P A A
G O U R M E T A B A T E
V S R P I T
N E V E R B I S C U I T
R R U R A
S L O V A K I A T Y P O
O I A N I E
B R A C E S H O O T E R
D E E A N R

Number Conundrums
1. 48 X 159 = 6732.
2. [Let square brackets indicate that the enclosed horses crossed the line neck and neck. The possible forms of finish are ABC (all finish at different times), [ABC] all 3 horses finish at the same time, A[BC] (the second two horses finish together) and [AB]C (the first two finish together). There are 6 ways of getting ABC, 1 way of getting [ABC], 3 ways of obtaining A[BC] and 3 ways of obtaining [AB]C. This makes 13 ways in all.]
3. $26.25 [5 + 21 + 0.25 = 5 X 21 X 0.25 = 26.25.]
4. The chances the 1st die shows a 4 are 1/6. The chances the other three dice DON’T show a 4 are (5/6) X (5/6) X (5/6). But it could be any one of the four dice that shows the 4, so the chances are: 4 X (1/6) X (5/6)(5/6)(5/6), which is almost 39%; the chances no 4 shows on any die are (5/6) X (5/6) X (5/6) X (5/6), which is about 48%.
5. 1/6 + 1/30 = 1/5.
6. The last 3 digits are the same as the first 3 (though in the reverse order); so the number of 6-digit palindromes is the same as the number of 3-digit numbers. None starts with 0, so there are 9 X 10 X 10 = 900.
7. 7 X 9 ends in 3, so we have at once *9*9*9 X 7 = *9*9*93. There is a carry of 6, so 7 X the * in the 10s place in the upper number must end in 3. So this particular * must represent 9. So we now have: *9*999 X 7 = *9*9*93. Proceeding in this stepwise way we soon arrive at the solution: 999999 X 7 = 6999993.

Ask me Another
1. Hereford.
2. Reykjavik.
3. Leopon (male); leoponess (female).
4. Portugal.
5. Big toe.
6. The left.
8. Antananarivo.
10. Daedalus.
12. Mainly hydrogen (about 70%) and helium (28%).

Wordplay
1. COASTLINE.
2. POOREST, PROTECT, PROTEST or PROJECT are examples.
3. TOURMALINE.
4. GALILEE, GALILEO.
5. Sherlock Ohms.
6. HERCULE POIROT; DAVID SUCHET.

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