

Answers to extra puzzles and riddles for 23 June

A *An aeroplane travels on its outward journey at 600 mph (relative to the ground). Its return journey, over the same distance is completed at 400 mph.*

What is the average speed of the aeroplane over the entire round trip?

480 mph, not 500 mph, as might seem a tempting quick answer.

Suppose the distance is 600 miles. Then the outward journey takes 1 hour and the return journey 1½ hours, a total time of 2½ hours to cover 1200 miles. So the average speed is 1200 miles / 2.5 hours = 480 mph.

B *I am grateful to Keith Banks for the following puzzle questions:*

1. *Billy was born on December 28th, yet his birthday is always in the summer. How is this possible?* He was born in the southern hemisphere

2. *How much soil is there in a hole that measures two feet by three feet by four feet?* There is no soil in a hole

3. *What was the US President's Name in 1975?* His name was still Trump in 1975.

4. *If you were running in a race and you passed the person in 2nd place, what place would you then be in?* You would be in second place.

5. *Which is correct to say, "The yolk of the egg are white" or "The yolk of the egg is white"?* Neither, the yolk of an egg is yellow.

6. *If a farmer has 5 haystacks in one field and 4 haystacks in the other field, how many haystacks would he have if he combined them all in a third field?*

He would have one (large) haystack/

C *Two brothers live at houses with double-digit numbers. When the elder brother's number has the digits reversed it is the same number as the younger brother's. When the smaller of the two numbers is subtracted from the larger the answer ends in 2. What are the two numbers?*

91 and 19.

You could do this by trial and error, but I have produced this analytical answer.

Let the larger number be represented by the digits TU and the smaller one UT.

Those numbers are therefore $10 \times T + U$ and $10 \times U + T$, and their difference is $10T + U - (10U + T) = 10T + U - 10U - T = 9T - 9U = 9 \times (T - U)$.

The difference $T - U$ must be less than 10, and the only multiple of 9 satisfying that which ends in 2 is 72, or 9×8 .

Therefore $T - U = 8$.

There are only 2 possibilities: 8 - 0 and 9 - 1. The first of those is not valid as 80 - 8 does not give us two double-digit numbers, as required, therefore it is 9 - 1, and so $T = 9$ and $U = 1$ and the numbers TU and UT are 91 and 19.

D Can you solve these 6 Rebus puzzles?

VISIONI	BIT BIT PC PC	LEADTEN
S S R I A T S T A I R S	THECOUTOLD	Groucho Harpo

Double vision

Upstairs Downstairs

Bits and pieces

Left out in the cold

Half-hearted

Top Marks

E The string of letters below is from a well-known saying from which all the vowels have been removed. Can you decipher the saying?

NTMLKTHPRSNT

No time like the present.

F The 'XXX' below represents the same three letter word in each case. From the definitions find the complete words.

A G X X X D A

S L X X X E R

B L X X X E D

C A X X X A R

List of items for discussion

Slim

Mixed together

A list of dates

AGENDA

SLENDER

BLENDED

CALENDAR