

PUZZLES

In Which The Aspirin Is Used

LATELY "The Puzzleman," as he was titled on a letter received the other day, has been tempted to use the aspirin from Sumner. For it's been hot in Wellington. The climate, they are saying here, is getting worse and worse — more like Auckland's every day — but Auckland will take that comment for what it is worth. It's been one or two degrees too hot for doing puzzles comfortably. Possibly that explains why Wellington people don't answer many of the hard ones. However, the Rest makes up for any slackness in the Capital. We really are proud of readers who consistently solve the biggest and worst of anything sent in for publication. None of the overseas magazines printing puzzles has ever had such an intelligent response.

Climate cold or climate hot, like it well or like it not, the mail pours in, and work must be done.

This week we start with a reference back to the issue dated January 26:

Answers

After Mr. Reid's figure trickery, Miss Collins's word sum must have been easy. Remember that D equalled 5 in the sum:

DONALD
+GERALD

ROBERT

We can't give all the method by which she found the answer to be 723970, but here are the first of her observations:

"Since on the right $D+D$ is $5+5$, then $T=0$, and there is a carrying figure of 1 from the 10. Since $L+L$ must be even, $R(L+L+1)$ must be odd. On the extreme

DRILL

Two soldiers are marching in front of a soldier and two soldiers are marching behind a soldier. What is their formation?

left of the sum, $R=5+G$ + any carrying figure, so R must be greater than 5, and should be either 7 or 9. Therefore L is 3 or 4, on 8 or 9, if there is to be a carrying figure of 1 from $L+L+1$."

And so on until you find that the letters in this order — GOBADRLET — correspond with the figures: 1234567890.

Other answers from Miss Collins show that the mast of the ship travelling in the widest curve of the earth's surface curvature, would travel the greatest distance from port to port. We had thought, ourselves, of the blades of the screw, and all sorts of other moving parts, but only because of the flange of the wheel solution to the train problem from W. J. Fisher, of Morrinsville.

The space between the string round the Equator and the string round the tennis ball would be exactly the same following the rule

that circumference equals diameter $\times 3 \frac{1}{7}$ th, or that radius equals circumference divided by 2π .

Next, we come to the pyramid, and invert it by shifting the top to the bottom and the end dots of the bottom row to stand parallel with the two dots of the second row.

R.J.G. points out with his bookshelf and worms problem that the catch lies in the way the books are placed on the shelf. The front cover of Vol. 1 would be next to the back cover of Vol. 2, etc. Hence the worm would travel through 4 covers and 1 volume of pages: $1\frac{1}{2}$ inches. (We expect some protests over that one, R.J.G.).

The other one from R.J.G. about the business man on holiday who posts the key of the mail box to his secretary, should have been picked up, but, strange to say, no one noticed it. The key, of course, was put with

FILE IT

We suggest that readers who do not file the whole magazine, as they would if they were wise, should at least clip the puzzle page in each issue for back reference when the answers are discussed, usually two weeks after publication of the problem

the mail in the locked mail box, and the secretary was still without it.

J. B. Hogg, of Raetihi, still maintains that a dog cannot catch a hare, although he travels faster and the hare has a start. The dog diminishes the hare's lead, he says, but even the most famous of "your mathematician readers cannot enable the dog to overtake this ever diminishing fraction of a lead maintained by the hare, unless they stop the hare, or satisfactorily definite infinity." Perhaps some readers may like to put that proposition into figures. They will have to be careful not to infringe any copyright Professor Einstein might hold for the theory of relativity.

Class Marks

There are all sorts of acknowledgments to be made. We hope none is missed, for the correspondence file is getting complicated.

L.C.T. (Ettrick), sends an excellent answer to the bachelors-widows-spinners problems. He says 11616 women were offering.

Ruth Collins (Sumner's Super Sum Solver) disposed of the extracts from Mr. Laird's book satisfactorily, and, by a later mail, confirmed L.C.T.'s answer to the matrimonial problem.

E.M.S. (Wellington's only representative at this stage), knew all about the Equator and the string.

D. H. MacKay (Waipu) claimed that the salaries problem was wrongly given; that the £10 should have been £20. Miss Collins defends herself (and we agree), by saying that the principle works the same for either figure. D.H.M. also sends a very complete working of the problem about the women buying cloth, with their daughters. Like many others, he makes us wish we had two or three pages available for the Puzzle Department.

G. Tisbury (Invercargill) sent one which will have to be held until we can get our artist to work on it.

THE LOCALS

There are six men in a country town. They are called Simpson, Bates, Rogers, Jackson, Fry, and Williams. Their professions (but not respectively) are lawyer, banker, architect, surgeon, accountant, and dentist. The banker went to school with the surgeon. The lawyer says trade is good, but Simpson disagrees, though he thinks that if everyone followed his example and used only British goods it would improve matters. Bates, who lost both arms in the last war (1914-18), agrees that trade is bad. Jackson has been engaged to the lawyer's daughter until recently, when Williams came to town and cut him out. Fry and the architect are both 25 years old. The surgeon and the dentist have practised in the town for 20 years, and are often seen together driving in the surgeon's Alfa-Romeo. Fit names to the professions.

"Captain Cook" correctly answered the buying cloth problem.

G.M.H. (Putaruru): That one doesn't seem to be any easier here than in Putaruru. We shall print it next week, and hope.

W. R. Hamer (Foxton): Donald, correct; pyramid, correct; equator is same shape as circumference of tennis ball; bookworm, correct; and full marks for a tough come-back. Next week.

F.W.K. (Nelson): You were the early bird. Horses later. Thanks, and our prize bun if you can beat your fellow readers.

Twice Times

The figure trickery started by Miss Collins and J. A. Reid (Glenorchy), has set "Captain Cook" off on some observations about multiplication. He points out that "it is really quite unnecessary to learn all the tables of multiplication as long as one has mastered 'twice times.' For instance, take 19×37 . All we have to do here is to divide the left hand number by 2, disregarding anything over, and then multiply the right hand number by 2. This process is repeated until the figure 1 is reached. The two columns are then inspected and a line drawn through those pairs in which an even number appears in the left hand column. The remaining figures are then added (right hand column only), and the correct answer is reached."

"Captain Cook" sets out examples thus:

19×37	23×94
9 74	11 188
(out) 4 148	5 376
(out) 2 296	(out) 2 752
1 592	1 1504
703	2162

For which our thanks.

TO CORRESPONDENTS

L.C.T. (Ettrick): We have a failing for puns, as you shall see.

P. J. Quayle (Motueka): We like Motueka, but would you mind this week marking your own homework, as space is cramped? You have high marks. Must let the cyclist cycle for a little while longer. Sometime we'll be over to munch a mellow Motueka apple.

R.W.C.: One of these days we'll see in the paper: "A marriage has been arranged . . . x, daughter of y, to a, son of b," and we'll know that fate has at last overtaken you. Thanks be you have not yet decided to use trigonometry or the diff. cal. All readers grateful for your remembering the definition of the curve taken by the flange of a moving wheel: "curtate cycloid." We're having a date with the Arabs next week.

All Readers: It was, as they say in such awkward moments, "inadvertently stated," in a recent issue, that the problem of the ten contrary sheep could be solved by planning each move to keep the sheep head to tail. This should have read: "to keep the sheep heads to heads and tails to tails."

L. P. Lee (Auckland): One hundred per cent.