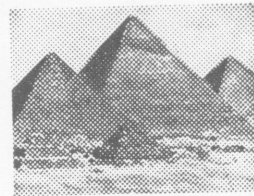




— data —



Edited by HELEN FRIZELL

THE EGYPTIAN METHOD

Method of calculating a basket.

If it is said to thee, a basket with an opening of $4\frac{1}{2}$ in its containing. Oh, let me know its surface!

Calculate thou one-ninth of 9 because the basket is the half of an egg. There results 1.

Calculate thou the remainder as 8. Calculate thou one ninth of 8.

There results one-third, one-sixth, one on 18.

Calculate thou the remainder of these 8, left, after taking away these one-third, one-sixth, one on 18.

There results 7 and one-ninth.

Reckon thou with 7 one-ninth, four and half times.

There results 32. Lo! This is its area.

You have done it correctly.

Which means . . .

Take twice the diameter.

Take $8/9$ of this.

Take $8/9$ of this again and multiply by the diameter.

The answer is two times pi by the radius squared, the modern formula for the curved surface of the hemisphere.

AND BEFORE ARCHIMEDES

ANY secondary school-boy knows that the formula for the area of surface of a sphere is four times pi by the radius squared.

The formula has always been considered a major breakthrough by that bath-lazing Greek, Archimedes.

But now Mr Richard Gillings, lecturer in the history of Egyptian and Babylonian mathematics in the school of the history and philosophy of science in the University of N.S.W., seems to have shown that an unknown Egyptian got the formula more than 1,500 years before Archimedes.

The secret, Mr Gillings says, is contained in the

Moscow Mathematical Papyrus which is lodged in that city's Museum of Fine Arts and which few Western scholars have seen since the Russian Revolution.

Mr Gillings' four-page analysis of the MMP, just published in the Australian Journal of Science, has already been dispatched post-haste to Britain, America, Holland, France, Germany, Switzerland, Egypt and, of course, the Soviet Union.

Expert views

The keeper of Egyptian antiquities in the British Museum has replied at once with the view that 63-

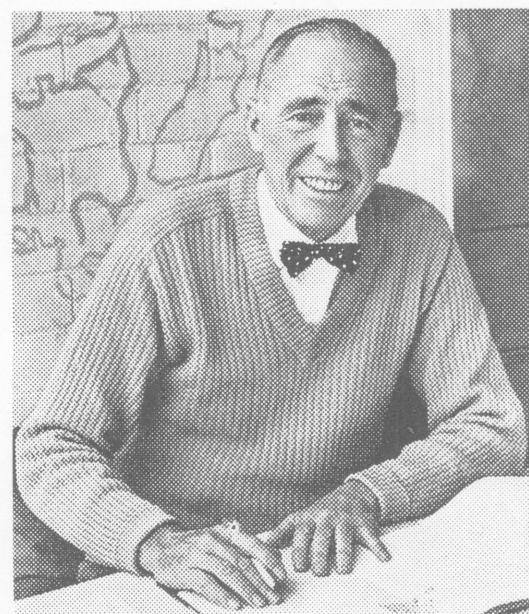
year-old Mr Gillings has "hit the nail on the head."

Other expert views are beginning to flow into Mr Gillings' Neutral Bay home.

If Mr Gillings is right—and all the evidence now points his way—he has made a discovery almost equal in importance to the unlocking of the language key of the Rosetta Stone which enabled us moderns to decipher Egyptian hieroglyphs.

It could change drastically our understanding of the scientific engineering of the ancient Egyptians, including the building of the Pyramids.

And it will settle once and for all the mystery and controversy which have surrounded Problem No. 10 of the 3,800-year-old papyrus.



Mathematician Mr R. Gillings, of Neutral Bay

Problem No. 10, in translation from the ancient Egyptian, is shown above.

"I believe these ancient Egyptians, with no more mathematical tools than the twice-times tables and the ability to find two-thirds of any number, arrived at a formula which could not be proved with certainty until Archimedes 1,500 years later," Mr Gillings told DATA.

The green light

"Whether it was an accident or not, they did it."

"I have never thought that the Pyramids could have been put up fortuitously by pick-and-shovel men."

"The fact that they could work out problems like this

shows that behind the labourers were brilliant designers and mathematicians."

Is the Gillings theory established beyond dispute?

Not, according to Mr Gillings, until authorities such as Professor O. Neugebauer, of Brown University, Rhode Island, U.S.A., give the green light.

"But I am supremely confident," he says.

DATA asked Mr Gillings where he thought the other great British and German scholars had gone wrong in interpreting the papyrus.

"They were brilliant Egyptologists but not so brilliant mathematicians," he said.

"Basically, I think, they doubted that ancient Egyptians could have such advanced mathematical ideas."

—Noel Lindblom.