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ODD NUMBERS

OR

Arithmetic Revisited

By Herbert M^cKay

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CINDERELLA IN GLASS SLIPPERS

Arithmetic is usually regarded as the Cinderella of Mathematics, the drudge whose duty it is to do everything that is dull. That is more the fault of arithmeticians than of arithmetic. It is true that a great body of arithmetic has been created that is practically meaningless. We have the dull manipulation of numbers, leading nowhere; the actual results of the manipulation are of no interest to anyone.

But Cinderella has her glass slippers. There are all kinds of interesting things that cry out for arithmetical treatment. A few of them find their way occasionally into the newspapers; but few people seem to have any knowledge of what one may call educated arithmetic, the arithmetic that leads to results that are interesting in themselves.

I have tried to make it clear that the surprising results we are sometimes shown—the apt illustrations given by astronomers and others—are not the result of mathematical magic, but of the ordinary processes of arithmetic. I have used nothing but the straightforward arithmetical processes, the simplest of the trigonometrical ratios, and a little elementary algebra—just those parts of mathematics that are remembered by those who have not specialised in mathematics.

I have to thank several friends who were good enough to help me with the proofs, and especially Mr R. F. Cyster, B.A. and Mr H. A. C. McKay, B.A., who read the whole of them and made a number of helpful and generous criticisms.

H. MCK.

January 1940