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On the other side of this sheet are some questions encoded using binary code.

First group the digits into 5's, then work out what each group of 5 corresponds to in binary code. Using a=1, b=2, c=3 etc convert all these numbers into letters and separate the words to see what the question is asking.

For example:

000100100101110000011001011001

becomes

00010	01001	01110	00001	10010	11001
2	9	14	1	18	25
B	I	N	A	R	Y



Who invented binary code? Decode these questions and use their answers to find out.

01111 01110 00101 00100 01111 11010 00101 01110

01110 10101 01101 00010 00101 10010 01111 00110 10011 00101 01110 10011 00101 10011

10000 01100 00001 01110 00101 10100 10011 01111 10010 00010 01001 10100 01001 01110 00111 01111 10101 10010 10011 10101 01110

00110 01001 10010 10011 10100 10000 10010 01001 01101 00101

00100 00001 11001 10011 01001 01110 00110 01111 10010 10100 01110 01001 00111 01000 10100

01100 01001 10110 00101 10011 01111 00110 00001 00011 00001 10100

01100 00101 10100 10100 00101 10010 10011 01001 01110 10100 01000 00101 00001 01100 10000 01000 00001 00010 00101 10100



Gottfried Wilhelm Leibniz (1646 - 1716)

Gottfried Leibniz laid the modern foundation of the movement from [decimal to binary](#) as far back as 1666 (the same year as the Great Fire of London) with his "On the Art of Combination", laying out a method for reducing all logic to exact statements.

Leibniz believed logic, or 'the laws of thought' could be moved from a verbal state - which was subject to the ambiguities of language, tone and circumstance - into an absolute mathematical condition.

"A sort of universal language or script, but infinitely different from all those projected hitherto, for the symbols and even words in it would direct the reason, and errors, except for those of fact, would be mere mistakes in calculation. It would be very difficult to form or invent this language or characteristic, but very easy to understand it without any dictionaries."

The concept was probably a bit high-flown for his time, and Leibniz' idea was ignored by the scientific community of his day. He let his proposition drop - until about ten years later when the Chinese "Book of Changes", or "I Ching", came his way.

Leibniz found some sort of confirmation for his theories in the I Ching's depiction of the universe as a progression of contradicting dualities, a series of on-off, yes-no possibilities, such as dark-light and male-female, which formed the complex interaction of life and consciousness. He reasoned that, if life itself could be reduced to a series of straight-forward propositions, so could thought, or logic.

Heartened by his new insights, Leibniz set out to refine his rudimentary binary system, studiously transposing numerals into seemingly infinite rows of ones and zeros - even though he couldn't really find a use for them.

Leibniz' stepped-wheel calculator was built for decimal numbers. Although he apparently gave some thought over the years to another machine which would incorporate his beloved binary system, the long strings of binary numbers that replaced single decimal digits must have seemed daunting.

Actually, they must have seemed overwhelming, because Leibniz appeared to lose the plot a little towards the end of his life, endowing his binary system with a kind of quasi-religious mysticism. Binary numbers, he came to believe, represented Creation. The number one portraying God; and zero depicting Void.

Leibniz died without achieving his dream of a universal mathematical/logical language, but leaving the fundamental idea of the binary yes-no/on-off principle for others to play with, including Ploucquet, Lambert and Castillon. [George Boole](#) picked up their combined efforts roughly 125 years later for another buff and polish.