(5) An infinity paradox. Balls numbered 1, 2, ... (or for a mathematician the numbers themselves) are put into a box as follows. At 1 minute to noon the numbers 1 to 10 are put in, and the number 1 is taken out. At $\frac{1}{2}$ minute to noon numbers 11 to 20 are put in and the number 2 is taken out. At $\frac{1}{3}$ minute 21 to 30 in and 3 out; and so on. How many are in the box at noon? The answer is none: any selected number, e.g. 100, is absent, having been taken out at the 100th operation.

A Mathematician's Miscellany

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