

INTRODUCTION

Raymond Keene's column on IQ and puzzles is published each week and features numerous brain teasers, frequently submitted by readers. Over the past few years, many fascinating puzzles have been published in the column and a substantial forum has developed with people writing in to claim that answers given are controversial or to point out possible alternative solutions. The email address associated with the column regularly receives around substantial emails per week as well as numerous communications by post.

Of all the puzzles that have been published over the years, the one which has been responsible for the largest reader reaction is the following:

You are in a quiz show with a chance to win a million dollars by selecting the correct box from three. The host – and this is *very* important – knows which box contains the million. You make your choice and then the host opens one of the other boxes to reveal it as empty. He then offers you the chance to change your mind and select the remaining box. Should you do this?

You may wish to consider the problem yourself before looking up the solution. This problem can be found as number 97 in Test Two and the solution is given on page 221.

This question generated an extraordinary response with many readers – including professional mathematicians – claiming that the answer given was nonsense. However, this is not the first time that this question has elicited such a response. In his book *Taking Chances* (Oxford University Press), John Haigh recounts how Marilyn vos Savant, said to have the highest IQ in the world, gave a correct explanation of this puzzle to the readers of her 'Ask Marilyn' column in *Parade* Magazine. The reaction was more or less the same. As Haigh writes: 'Her postbag bulged

with excited letters, some from professors in university statistics departments, asserting that she was wrong.'

This puzzle also bamboozled the Hungarian Paul Erdos, who was one of the most brilliant and successful mathematicians of the 20th century. In his biography of Erdos, *The Man Who Loved only Numbers* (4th Estate), Paul Hoffman relates how Erdos was posed the problem by his colleague Andrew Vazsonyi and got the answer wrong. When he was told the correct answer and given the explanation, he simply refused to believe it. He walked away and eventually began to get quite agitated about it. Hoffman wrote: 'Vazsonyi had seen this reaction before, in his students, but he hardly expected it from the most prolific mathematician of the 20th century.'

This goes to show the incredible fascination that brainteasers and puzzles in logic can generate. We hope you enjoy this collection of the best of the problems published in *The Times*.

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