



© 1997–2004, Millennium Mathematics Project, University of Cambridge.

Permission is granted to print and copy this page on paper for non-commercial use. For other uses, including electronic redistribution, please contact us.

---

November 2002

Regulars



## Puzzle page



## Deranged Santa



It is Christmas Eve, and Santa is getting ready to deliver presents to children all round the world. He has a little glass of the season's spirits, and one thing leads to another, and before he knows it he is thoroughly "confused"... and he has completely mixed up all the labels with the children's names on, and put them randomly on the presents!

Supposing he has one parcel each for  $N$  children, what is the probability that every child gets presents intended for someone else?

---

If you are stumped by last issue's puzzle, here is the solution.

For some challenging mathematical puzzles, see the NRICH puzzles from this month or last month.

---



*Plus* is part of the family of activities in the Millennium Mathematics Project, which also includes the NRICH and MOTIVATE sites.