



© 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.

---

September 2000

Regulars

## Puzzle page



### Monkey Nut Puzzle

Here's a seemingly simple challenge...

You have a chessboard, which can be as large as you like, and on the bottom left square there is a monkey–nut. All other squares are empty.

At any time, you may remove a monkey–nut, and replace it with two more: one on the square above the removed nut, and one on the square to the right of the removed nut. But only if both these squares are empty to start with.

Can you completely free the six squares in the bottom left hand corner of the playing board from monkey–nut infestation?

If not, can you prove it can't be done?

[APPLET: monkey–nuts on a chessboard]

This is quite a hard problem, so here's a clue: can you see a link between this puzzle and John Webb's article [The Solitaire Advance](#) in Mystery Mix in this issue?

You can send your solution by e–mail to <plus@maths.cam.ac.uk>.

You can find other puzzles for ages 15+ at the [15+ Challenges](#) page at [NRICH](#).

#### *Recent NRICH Puzzles*

More Challenging Problems from [last month](#).

More Challenging Problems from [2 months ago](#).

More Challenging Problems from [3 months ago](#).

---

## Puzzle page



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