



© 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.

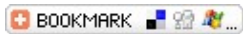
---

May 2002

Regulars



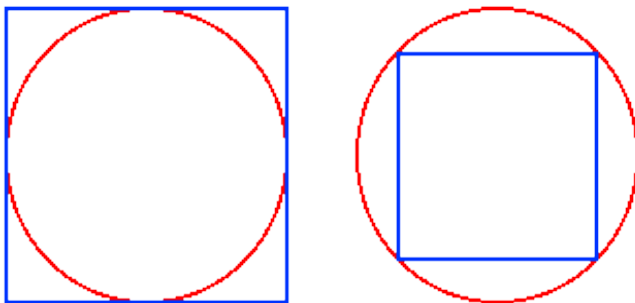
## Puzzle page



## Mathematical Misfits

### Two-dimensional

Which fits best – a square peg in a round hole, or a round peg in a square hole? To be more precise, if you take a circle and fit inside it the largest possible square, and then take a square and fit inside it the largest possible circle, which leaves *proportionally* least space?

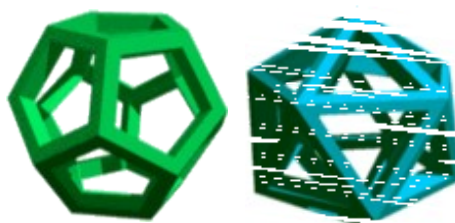


Which fits best?

### Three-dimensional

Which fits best in a sphere – a dodecahedron or an icosahedron? That is, if you fit the largest possible dodecahedron and icosahedron inside a given sphere, which leaves least space?

## Puzzle page



Dodecahedron

Icosahedron

You can see rotating versions of these [here](#) (70k download each).

(Both images copyright by [Rüdiger Appel](#))

---

You can send your solution by e-mail to [plus@maths.cam.ac.uk](mailto:plus@maths.cam.ac.uk).

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.