

PUZZLES

The FOURTEENTH
 Brandon McPhail
 Sean Kelly
 Jim Fix
 Kevin Connolly

Slither Lines

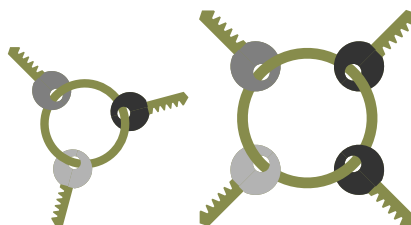
	0			1
	3		1	
2				1
	3		3	
3			3	

Draw along the gridlines to form a single connected loop. The numbers indicate how many lines must be drawn around that cell. Lines may not cross or branch. To the left is an example and its solution.

	3			2	3	
3		2				3
3		3		1	3	
	0	3		1		2
1				3		1
	1	3			0	

Even Pythagoras could do this.

Puzzling Keys



You have a keyring with some number of keys on it. Since all of the keys look alike, you'd appreciate some way to label the keys to determine which is which.

Key covers provide a nice solution to the problem, since each key gets its own color. For example, each key in the image above is uniquely determined by its color.

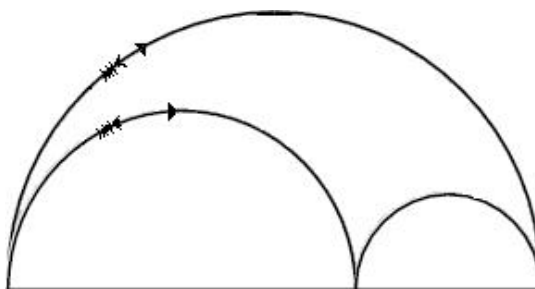
However, not every key needs its own color to be determined. For example, if you let the four keys slide around the keyring pictured on the right, you could still figure out which of the two like-colored keys is which by looking at their neighbors.

If every key gets a key cover, what is the fewest colors needed to uniquely label every key? Try it first for five keys and then for six. Can you find a method that works for any number of keys?

Even Aristotle could do this.

When You're Not Looking

Two ODB bugs hold a race along one of the arches of Sallyport (umm... trust us, there's an arch that looks like this). The first bug takes the top route, traversing one semicircle, while the second bug take the bottom route, traversing two smaller semicircles. Assuming the bugs travel at the same speed, and that the diameters of all of the circles lie on the same line, who wins the race?



Thanks to Kevin Connolly.

Even Freud could do this.

So what if Freud can do it??

Even Freud could do this.

Even Pythagoras could do this.

Even Aristotle could do this.

Even Kant could do this.

Even Ray Mayer could do this.

Easy

Not easy

More challenging

This is a hard problem.

Go ask him for help.

Think you know the answer?

For more info on these puzzles, go to <http://www.reed.edu/~mcphailb/quest/>

American Airlines
 saved \$40,000 in 1987
 by eliminating one
 olive from each salad
 served in first class.

Questions? Blitz: puzzles@reed.edu