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Regulars



## Puzzle page



## Which switch?



You've just moved into a new house, and know that one of the three switches on the panel by the front door turns on the light in the loft, but which switch? You don't want to keep climbing the four flights of stairs to the loft, so how can you work out which switch turns on that light while only making one visit to the loft?

(You need to use something about the nature of light bulbs to help you.)

## The solution

For this puzzle you need to remember something about light bulbs: they get warm after being turned on for a while. So turn on two of the switches, say the first two. If one of these two turns on the loft light, the light is on and getting warm. If the light is controlled by the third switch it will still be off and cold.

After leaving enough time for the bulb to heat up, turn off one of the switches – the second one, say – and run up the stairs to the loft. If the light is on, it must be controlled by the first switch; if it is off but the bulb is still warm, it must be controlled by the second switch; and if it is off and cold, it must be controlled by the third switch.

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