

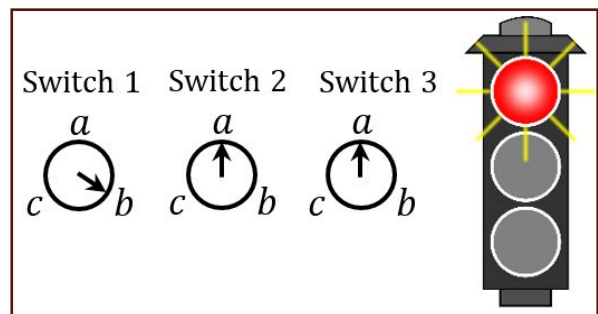
Puzzler of the Month

December 2017

From the Monroe Community College Mathematics Department

Solve this puzzle and you could win a prize!*

As shown in the figure to the right, there are three switches used to control a traffic light. Each switch has three possible settings of a , b , or c , and the specific color (green, yellow, or red) of the traffic light is completely determined by the combined settings of the switches. Your job is to determine all of the settings of the switches that result in a green light based on the following information.



- Only one light is on for each of the settings.
- When all three switches are in the a -position (setting aaa), the light is yellow.
- When switch 1 is in the b -position and switches 2 and 3 are in the a -position (setting baa), the light is red.
- From any given setting, if you change the positions of all three switches, the light will change color.

Solutions must be submitted by December 15

To submit a solution:

1. Neatly write up your solution, clearly identifying the answer and clearly showing all work when requested.
2. Include your name and email (so we can contact you if you win the prize).
3. On the Brighton Campus, solutions may be submitted in the Puzzler of the Month drop box in the Math Learning Center (11-204). Solutions at the Downtown Campus can be submitted to Michael Eames (Mathematics), office 574-M.

You may also submit solutions by emailing Steve Kilner at skilner@monroecc.edu (please indicate "puzzler solution" as the subject). Faculty and staff may use inter-departmental mail.

For official rules and more details go to the Math Learning Center 11-204 or visit our website: www.monroecc.edu/go/mathpuzzler.

