

Circle One: Cadet Faculty Student (non USMA) Faculty (non USMA) Other

Last Name (Please Print):

Problem 3

This week is a 'puzzle' week. We will test our problems solving skills and wit as well as our math skills. There are two puzzles. Just solve one and turn your answer in for full credit. Try the other one for fun, or maybe you need to prove to yourself that you are as smart as the other guy or girl. If you have seen and solved one of them before, then try to solve the other one.

Puzzle 1: You are on the first floor of the house. There are three electrical switches on the wall. Only one of them turns on and off the table lamp on the second floor. The three switches are at the 'off' position now, and you can not see the second floor lamp light from the first floor. You are allowed to go to the second floor to check the table lamp and come back to the first floor once, and you are allowed to flip any of the three switches (turn on or off). You can only flip three times in total. Can you figure out which switch controls the table lamp on the second floor?

Puzzle 2: Three rival crime syndicate bosses and their only sons are being chased by the FBI. They have to cross the Hudson River to shake off the FBI agents. When they reached the pier, they found a lone motor boat that carries up to two people including the driver. What is the minimum number of crossings they must make to transport all of them safely to the other side of the Hudson? Or is it impossible to do that? It is impossible to remotely control the boat, and only a father can drive the boat. A son can take care of himself around the other son(s), but if he is without his father, one of the other father(s) will kill him. A son or sons can not harm anyone.

Submission Instructions

Submit to : [MAJ Jong H. Chung](#)

How : As an attachment to an
email(please make sure your
name is in the attachment!)

With the subject line : WP POTW

Failure to follow these directions may result in your submission not
making into the pile in the right order!