

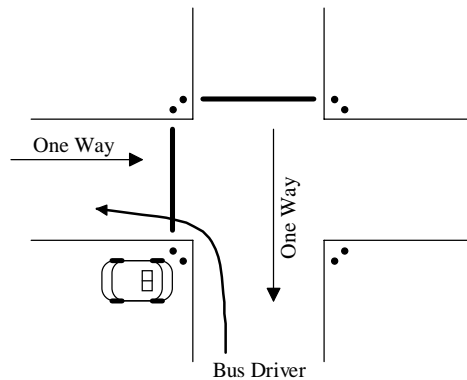


Neurological Nasties XLII

www.mathxtc.com



1. In the diagram below we have two one way streets intersecting at a set of traffic lights all showing red. A police car is parked on one corner as shown. A bus driver travels (as shown) in a direction against the one way arrows. The policeman in the police car lets him go without challenging him. Why ?



2. Rebecca has seven identical looking pills and she knows that one of them is poisonous and the other six aren't. Rebecca also knows that the poisonous pill is slightly lighter than any of the other pills which all have equal weights. What is the minimum number of measurements that Rebecca would need to take with a set of scales to determine the poisonous pill ?



3. Two 75 m vertical flag poles have 100 m of rope attached to either end. How far apart do the flag poles need to be if the rope is to hang 25 m off the ground ?

