

The Problem Corner

José A. Vallejo

Email: jvallejo@fc.uaslp.mx

1. Modern cities are a mess. Every morning I have to decide what to do for going to work: To take the car or the subway. Of course, the car is worse (I am late one of every two times), but the subway is always crowded and uncomfortable (although I am late only one of every four times). I have not found a rule for predicting when I will be late due to the way of transportation, and for lack of a better algorithm what I do is to repeat the choice next day, when I am on time, and switch the transportation method next day when I am late. But I am not quite sure whether or not this is a good idea. For instance: What will be the probability of being late the day number 123?.
2. In any divorce, there is a delicate matter: Who keeps the dog?. Olga and Oleg did not reach an agreement, so they take together the dog for a walk every evening. But they do not talk to each other. Each one put a different leash on the dog, one meter long, and they always keep a distance of one meter between them when walking. What is the surface in which the dog can move freely?.