Question 1 [5 points]: A color-blind man walks into a store to buy a shirt. After he finds one that he likes, he notices that two shirts of the same style have very different prices. He asks the salesman why that is, and the salesman tells him that the lighter shade doesn’t sell as well as the darker shade. To the color-blind man they look identical, and he can barely believe that anyone can tell the difference. How can the salesman prove that the shirts are different?

Question 2 [10 points] Where’s Wally is a collection of children’s picture books where, on each page of the book, the reader has to find Wally in a chaotic scene. (Search “where’s wally” in google images if you’re not sure what I mean.) While looking at a particularly hard Where’s Wally photo together, I find Wally first. How can I prove to you that I’ve found him, without leaking any information about where he is?

(Note that you should be convinced now, not later when you eventually find him, and my proof should not help you to find him in any way. So, simply describing what is in the area surrounding him would violate both of these constraints.)

(Hint: you can use common materials found in most house holds.)