

Homework 30, due November 15

- (1) Alice draws a red card from a pack of playing cards. Explain how Alice can use the remaining cards in the deck to convince Bob she has a red card, without Bob finding anything else out about the card.
- (2) Think about the interactive zero-knowledge protocol for graph 3-coloring. Come up with a way to make the protocol non-interactive, and decide whether or not Alice can cheat.
- (3) Watch [this](#) YouTube video about Bitcoin. Write three things you learned, and one question you still have after watching the video.