EE 465: Cryptocurrency and Blockchain Technologies (Autumn 2018)

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Assignment 3: 20 points

1. [10 points] Read the selfish mining paper available at https://arxiv.org/pdf/1311.0243.pdf and answer the following questions.

- (a) What does the parameter α represent?
- (b) What does the parameter γ represent?
- (c) What is the difference between the states 0 and 0' in Figure 1?
- (d) Explain the meaning of the three possible transitions from state 0' to 0.
- (e) Explain the meaning of the state transition from 2 to 0.
- 2. [10 points] Install the Metamask browser extension (https://metamask.io/) and perform the following tasks. There is no written submission required for this exercise.
 - (a) Login to Metamask and choose the Ropsten Test Net from the dropdown menu.
 - (b) Request 1 ETH to the address in your Metamask account by visiting either https://faucet.metamask.io/ or https://faucet.ropsten.be/
 - (c) Send 0.5 ETH to the address 0xcd8569d1089286038578d68ee6fdcaa539c0aa7c using Metamask. Specify your roll number in the transaction data field using hexadecimal digits. Hint: Look at Section 6.2 of the yellow paper if you get errors https://ethereum.github.io/yellowpaper/paper.pdf.