



Chapel Hill Math Circle

Beginners' Group

Working Backwards

November 5, 2016

1. It rained twice as much in October as in September. September had 2 fewer inches of rainfall than March. March had 6 inches of rain. How many inches of rain were there in October?
2. Jake wanted to know when he needed to get up in the morning to have 15 minutes to play with his friends at school before class. It takes him 40 minutes to get ready for school and 20 minutes for his mom to drive him to school. If school starts at 7:50, at what time should he get up?
3. Clarissa held a bake sale to raise funds for her soccer team. She sold 3 dozen cookies before a soccer game. During the game, her dad sold another 4 dozen cookies. When it was time to leave, they had 24 cookies left. How many cookies did Clarissa have at the start of the bake sale?
4. Two players take turns at removing 1 to 3 coins from an original pile of 13 coins. The player who removes the last coin wins. Is there a winning strategy for either player? What if we start with 20 coins?