

Name: _____

M317: INTRODUCTION TO PROOFS ACTIVITY (1)

1. The March Hare, Mad Hatter, and the Dormouse all live together and were found to have stolen the Queen's jam. Below is an account of the King's questioning of the three. Can you answer the final question?

was promptly suppressed. (Those who have read *Alice's Adventures in Wonderland* will recall the meaning of the word *suppress*: The officers of the court put the guinea pig into a canvas bag, which tied up at the mouth with strings, and sat upon it.)

"Now then," said the King, after the commotion of suppressing the guinea pig had died down, "I want to get to the bottom of this!"

"You've already said that," remarked a second guinea pig. (This guinea pig was also promptly suppressed.)

"Did *you* by any chance steal the jam?" the King asked the March Hare.

"I never stole the jam!" pleaded the March Hare. (At this point all the remaining guinea pigs cheered, and were all promptly suppressed.)

"What about *you*?" the King roared to the Hatter, who was trembling like a leaf. "Are you by any chance the culprit?"

The Hatter was unable to utter a word; he just stood there gasping and sipping his tea.

"If he has nothing to say, that only proves his guilt," said the Queen, "so off with his head immediately!"

"No, no!" pleaded the Hatter. "One of us stole it, but it wasn't me!"

"Make a note of that!" said the King to the jury. "This evidence might turn out to be quite important!"

"And what about *you*?" continued the King to the Dormouse. "What do you have to say about all this? Did the March Hare and the Hatter both tell the truth?"

"At least one of them did," replied the Dormouse, who then fell asleep for the rest of the trial.

As subsequent investigation revealed, the March Hare and the Dormouse were not both speaking the truth.

Who stole the jam? (Solution on page 140.)

2. The five Dukes of Earl are scheduled to arrive at the royal palace on each of the first five days of May. Duke One is scheduled to arrive on the first day of May, Duke Two on the second, etc. Each Duke, upon arrival, can either kill the king or support the king. If he kills the king, he takes the king's place, becomes the new king, and awaits the next Duke's arrival. If he supports the king, all subsequent Dukes cancel their visits. A Duke's first priority is to remain alive, and his second priority is to become king. Who is king on May 6?