1. What is the last digit of 7^{150}?

2. If x is congruent to 13 modulo 17, then $6x - 3$ is congruent to which number modulo 17?

3. Mr. Walker gave an exam in computer science for five students. He entered the poins in random order into an Excel spreadsheet, which recalculated the *average* after each point amount was entered. Mr. Walker noticed that every time after the point amount was entered, the average was always an integer. The scores (listed in ascending order) were 71, 76, 80, 82 and 91. What was the last score Mr. Walker entered?

4. What is the remainder when

$$1! + 2! + 3! + 4! + 5! + 6! + \cdots + 999!$$

is divided by 9?

5. Air China flies from Stockholm to Peking in about eight and half hours. The airplane begins its journey on Sunday at 18:10 hours from Stockholm Arlanda. If the time at Peking is seven hours ahead to that of Stockholm's time, then find the time at Peking, when the flight lands at Peking Airport.

6. Prove that $2^n + 6 \cdot 9^n$ is always divisible by 7 for any positive integer n.