Please use your Python system (IDLE or something else) to compute the following. Be prepared to show your work!

1. If $x = 3$ and $y = 18$, what is $x^3 + \frac{y}{2} + \left\lfloor \frac{x+y}{6} \right\rfloor$?

   Answer: The Python expression is: `x**3 + y/2 + (x+y)//6`. This evaluates to
   
   \[3**3 + 18/2 + (3 + 18) / 6 = 27 + 9.0 + 21 \div 6 = 27 + 9 + 3 = 39.\]

   Note the second division is integer division, which is the floor function.

2. What is the remainder of $2,347,500,001$ when it is divided by $6,345$?

   Answer: You never put commas in numbers in Python. So the Python expression to evaluate is
   
   ```python
   2347500001 % 6345
   ```
   
   which gives 2281.

3. True or false: The value of $2 + 3 \mod 2$ is 1, because $2 + 3$ is 5, and $5 \mod 2$ is 1.

   Answer: False. The modulo or remainder operator (%) has higher precedence than the addition (+) operator, so you do the % first. This gives $2 + 3 \mod 2 = 2 + 1$.