Python - Problem Pack I

Solve each of the following problems using python.
You may use the interactive, or shell interface.
Submit a copy of your code, used to solve the problem and showing your final answer.
Comment your code appropriately! Definitely enter your name as a comment!!

1. Calculate and print the average of the numbers: 583, 42, 192. Round your answer to 3 decimal digits.
2. You need to purchase a new pair of sneakers. They cost $128 before tax. What is the total cost if the local sales tax is 8.675%?
3. It takes 27338 minutes to clean the king's mansion. How many days, hours, and minutes does it take to complete this task.
4. In Toronto, it was 18° C this morning. What is the temperature in Fahrenheit (nearest tenth of a degree).
5. Create a list of apple names- use the variable 'apples'. Start with the typoes: 'rome', 'delicious', 'empire', and 'fuji'.
   a. Add 'gala' and 'macintosh' to the List
   b. Insert 'honeycrisp' in the 2nd position
   c. Add the integers 43, 54, 18 to the list
   d. Create a new list - nums with the values 35.4, 99, and 'golden'
   e. COmbine the apples and nums list → into a single list named - fnnl - (for final list)
6. Prompt a customer for 5 integers. Once they are entered, print the 5 numbers (on a single line).
   a. On the following line, print the sum and average (2 decimal places). Use an appropriate message in addition to the numeric answer.
7. You invest $342 into a savings account, which returns 4.3%, compounded annually. What is the balance (rounded to the nearest cent) after 7 years?
   a. ** What would the balance be if interest was compounded quarterly??
8. Find the average velocity of the Voyager I spacecraft, as of this class session. (Go online, Nasa site - Voyager page - get its distance from Earth, and elapsed mission time.) (please use kilometers per hour - rounded to the nearest hundredth).
9. You have a circular pool; its surface area is 720 square feet. If you wish to install a fence around the pool, how much fence do you need to buy? to the nearest foot). (You have to be sure you enclose the pool area! Round up to the nearest foot.)
10. In President Lincoln's Gettysburg Address, how many times is the letter 'e' used? How many vowels in total are used? (Challenge: how many a, e, i, o, and u's were used?)