

Please complete the following questions. Mess around with formatting as much as possible, use the 3 methods of formatting that we learned. Old % formatting, str.format(), and formatted string literals ( `print(f'')` ). Refer to your notes or the python docs to get examples on how to do each.

<https://docs.python.org/3/tutorial/inputoutput.html>

1. Write a program that displays the following information:

- Your name
- Your address, with city, state, and ZIP
- Your telephone number
- Your MOS

2. A company has determined that its annual profit is typically 23 percent of total sales. Write a program that asks the user to enter the projected amount of total sales, and then displays the profit that will be made from that amount.

3. One acre of land is equivalent to 43,560 square feet. Write a program that asks the user to enter the total square feet in a tract of land and calculates the number of acres in the tract.

4. A customer in a store is purchasing five items. Write a program that asks for the price of each item, and then displays the subtotal of the sale, the amount of sales tax, and the total. Assume the sales tax is 6 percent.

5. Assuming there are no accidents or delays, the distance that a car travels down the interstate can be calculated with the following formula:

$$\text{Distance} = \text{Speed} * \text{Time}$$

A car is traveling at 60 miles per hour. Write a program that displays the following:

- The distance the car will travel in 5 hours
- The distance the car will travel in 8 hours
- The distance the car will travel in 12 hours

6. Write a program that will ask the user to enter the amount of a purchase. The program should then compute the state and county sales tax. Assume the state sales tax is 4 percent and the county sales tax is 2 percent. The program should display the amount of the purchase, the state sales tax, the county sales tax, the total sales tax, and the total of the sale (which is the sum of the amount of purchase plus the total sales tax).

7. A car's miles-per-gallon (MPG) can be calculated with the following formula:

$$\text{MPG} = \text{Miles driven} / \text{Gallons of gas used}$$

Write a program that asks the user for the number of miles driven and the gallons of gas used. It should calculate the car's MPG and display the result.

8. Write a program that calculates the total amount of a meal purchased at a restaurant. The program should ask the user to enter the charge for the food, and then calculate the amount of a 15 percent tip and 7 percent sales tax. Display each of these amounts and the total.

9. Write a program that converts Celsius temperatures to Fahrenheit temperatures. The formula is as follows:

$$F = (9/5)C + 32$$

The program should ask the user to enter a temperature in Celsius, and then display the temperature converted to Fahrenheit.

10. Last month Joe purchased some stock in Acme Software, Inc. Here are the details of the purchase:

- The number of shares that Joe purchased was 1,000.
- When Joe purchased the stock, he paid \$32.87 per share.
- Joe paid his stockbroker a commission that amounted to 2 percent of the amount he paid for the stock.

Two weeks later Joe sold the stock. Here are the details of the sale:

- The number of shares that Joe sold was 1,000.
- He sold the stock for \$33.92 per share.
- He paid his stockbroker another commission that amounted to 2 percent of the amount he received for the stock.

Write a program that displays the following information:

- The amount of money Joe paid for the stock.
- The amount of commission Joe paid his broker when he bought the stock.
- The amount that Joe sold the stock for.
- The amount of commission Joe paid his broker when he sold the stock.
- Display the amount of money that Joe had left when he sold the stock and paid his broker (both times). If this amount is positive, then Joe made a profit. If the amount is negative, then Joe lost money