Problem set: Intro to Programming

Code the following:

Suggestion: *Currently, the data is provided directly for simplicity. To enhance understanding and make the code more flexible, please modify it to accept user inputs instead of using predefined values.*

1. A company produces three types of products: product_A, product_B, and product_C. Each day, they produce 20 units of product_A, 30 units of product_B, and 10 units more than product_B of product C. How many units of each product do they produce in a week (assuming a 5-day work week)?
2. Three friends, Anna, Bob, and Charlie, bought tickets to a concert. Anna paid $50, Bob paid $60, and Charlie paid $70. They decided to combine their money to buy a gift and then share the remaining amount equally among themselves. How much money did they each get back after buying a gift worth $120, regardless of the order they combined their contributions?
3. Steve wants to give a 15% gratuity to the waiter at a restaurant. The bill before tax is $18, and there is a 10% sales tax. Calculate the tip amount and the total bill, including tax and gratuity.
4. A garden store sells packets of flower seeds. Each packet contains 10 seeds. If a customer buys 5 packets of rose seeds, 3 packets of tulip seeds, and 4 packets of sunflower seeds, and each type of seed packet has a different price, calculate the total number of seeds bought and the total cost. The price per packet is $2 for rose seeds, $3 for tulip seeds, and $1.50 for sunflower seeds.
5. An online store sells T-shirts in packs. Each pack contains 3 T-shirts. If a customer buys 4 packs of blue T-shirts and 2 packs of red T-shirts, and each type of T-shirt pack has a different price, calculate the total number of T-shirts bought and the total cost. The price per pack is $15 for blue T-shirts and $12 for red T-shirts.
6. I have 3 times as many marbles as my friend. Together, we have 16 marbles. How many marbles do I have?
7. A farmer has 5 baskets of apples. Each basket initially contains 10 apples. If he sells 2 baskets of apples and then buys 3 more baskets, each containing 12 apples, how many apples does he have now? Also, calculate the total number of apples sold and the total number of apples bought.
8. Alice and Ben are collecting stickers. Alice has 4 more stickers than Ben. Together, they have 32 stickers. How many stickers does each person have?
9. I have at least twice as many marbles as my friend. Together, we have no more than 30 marbles. What is the maximum number of marbles my friend can have?