1. Write a program that prompts the user to input an integer between 0 and 35. If the number is less than or equal to 9, the program should output the number; otherwise, it should output A for 10, B for 11, C for 12,..., and Z for 35. (Hint: Use the cast operator, static\_cast<char>(), for numbers >= 10.)
2. The cost of renting a room at a hotel is, say $100.00 per night. For special occasions, such as a wedding or conference, the hotel offers a special discount as follows: If the number of rooms booked is at least 10, the discount is 10%; at least 20, the discount is 20%; and at least 30, the discount is 30%. Also if rooms are booked for at least three days, then there is an additional 5% discount. Write a program that prompts the user to enter the cost of renting one room, the number of rooms booked, the number of days the rooms are booked, and the sales tax (as a percent). The program outputs the cost of renting one room, the discount on each room as a percent, the number of rooms booked, the number of days the rooms are booked, the total cost of the rooms, the sales tax, and the total billing amount. Your program must use appropriate named constants to store special values such as various discounts.
3. One way to determine how healthy a person is by measuring the body fat of the person. The formulas to determine the body fat for female and male are as follows:

Body fat formula for women:

Body fat formula for men:

Write a program to calculate the body fat of a person.