Functions Practice Problems

Problem 1:

Create a list of integers and use built-in functions to

a) Find the sum of all the numbers in a list
b) Find max number from the list

Problem 2:

Create a function named string_test() to calculate the number of upper / lower case letters in a string. You have to pass the string to the function as an argument/parameter .

Expected Output:

Original String : The quick Brow Fox

No. of Upper case characters : 3

No. of Lower case Characters : 13

Problem 3:

Problem: The Magical Creature Habitat

You are a guardian of a magical habitat filled with various creatures. Each creature has specific needs based on their type, and you must care for them by giving them the correct amount of food and attention. Here's the challenge:

Task:

- Create a dictionary of magical creatures, containing its **type**, **name**, and **food_required**.
- Write a function called feed_creatures() that takes this list of creatures as input and checks how much food is required to feed each creature.
- Depending on the creature's type, you need to decide if they need **extra care**:
    - If the creature is a **dragon**, it requires 20% more food.
    - If it's a **unicorn**, it only requires half the food.
    - If it's a **phoenix**, it needs twice the food.
- Using a loop, process each creature and print how much food each one needs.

- If a creature requires more than 50 units of food, alert the guardian by printing "**Special attention needed for [creature name]!**".

Hints:

- Use a **conditional statement** (if-elif-else) to adjust food requirements.
- Use **loops** to iterate through the list of creatures.
- Use **functions** to organize your code for feeding creatures.

Example input list of creatures:

```
creatures = [
  {"type": "dragon", "name": "Flame", "food_required": 40},
  {"type": "unicorn", "name": "Sparkle", "food_required": 30},
  {"type": "phoenix", "name": "Blaze", "food_required": 25},
  {"type": "griffin", "name": "Griff", "food_required": 45}
]
```

Expected Output:

Flame the dragon needs 48 units of food.

Sparkle the unicorn needs 15 units of food.

Blaze the phoenix needs 50 units of food.

Griff the griffin needs 45 units of food.

Special attention needed for Flame!