**Question 1: Basic Arithmetic**

**Perform integer division and find the remainder when dividing 45 by 6.**

Hint: Use the integer division operator **//** and the modulus operator **%** for finding the remainder.

**Question 2: Rounding Floats**

**Round the number 7.654321 to 2 decimal places.**

Hint: Use the **round()** function with two arguments: the number and the number of decimal places.

**Question 3: Converting Floats to Integers**

**Convert the float 123.456 to an integer.**

Hint: Use the **int()** function to convert a floating-point number to an integer, truncating its decimal part.

**Question 4: Absolute Value**

**Find the absolute value of -20.**

Hint: Use the **abs()** function to get the absolute value of a number.

**Question 5: Power Function**

**Calculate 2 raised to the power of 5.**

Hint: Use the **\*\*** operator or the **pow()** function for exponentiation.

**Question 6: Comparing Floats**

**Explain why directly comparing two floats for equality might not always work as expected. Provide an example.**

Hint: Floating-point arithmetic can lead to rounding errors. Consider using a tolerance for comparison.

**Question 7: Large Numbers**

**Write a number representing one billion in Python using scientific notation.**

Hint: Scientific notation in Python uses the format **1e9** for one billion.

**Question 8: Incrementing Numbers**

**Increment the variable counter from 0 to 10 using a loop, printing its value at each step.**

Hint: Use a **for** loop and the **range()** function, or increment the variable inside a **while** loop.

**Question 9: Average Calculation**

**Calculate the average of the numbers 23, 95, 40, and 67. Print the result.**

Hint: Sum the numbers and divide by the count. Make sure the division is not performing integer division.

**Question 10: Float Precision**

**Assign the result of 0.1 + 0.2 to a variable and print it. Discuss the observed output.**

Hint: Note that the exact representation of some floating-point numbers can lead to unexpected results due to how numbers are stored in binary.