Here are the algorithms for each question:

1. Print Numbers from 1 to 10

1. Initialize a variable i to 1.

2. Start a for loop that runs from i = 1 to i = 10.

3. Inside the loop, print the value of i.

4. Increment i by 1.

5. Repeat steps 2-4 until the loop ends.

2. Sum of First 5 Even Numbers

1. Initialize a variable sum to 0.

2. Initialize a variable i to 2 (first even number).

3. Start a for loop that runs from i = 2 to i = 10 (5th even number).

4. Inside the loop, add i to sum.

5. Increment i by 2 (to get the next even number).

6. Repeat steps 3-5 until the loop ends.

7. Print the final value of sum.

3. Print Multiplication Table of 5

1. Initialize a variable i to 1.

2. Start a for loop that runs from i = 1 to i = 10.

3. Inside the loop, print the multiplication of 5 and i (e.g., "5 x 1 = 5").

4. Increment i by 1.

5. Repeat steps 2-4 until the loop ends.

4. Find the Average of 5 Numbers

1. Initialize an array numbers with 5 elements.

2. Initialize a variable sum to 0.

3. Start a for loop that runs from i = 0 to i = 4.

4. Inside the loop, add the i-th element of numbers to sum.

5. Increment i by 1.

6. Repeat steps 3-5 until the loop ends.

7. Calculate the average by dividing sum by 5.

8. Print the final value of the average.

5. Print Numbers from 10 to 1

1. Initialize a variable i to 10.

2. Start a for loop that runs from i = 10 to i = 1.

3. Inside the loop, print the value of i.

4. Decrement i by 1.

5. Repeat steps 2-4 until the loop ends.

6. Check if a Number is Prime

1. Initialize a variable num to the input number.

2. Initialize a variable isPrime to true.

3. Start a for loop that runs from i = 2 to i = sqrt(num).

4. Inside the loop, check if num is divisible by i.

5. If num is divisible by i, set isPrime to false and break the loop.

6. Increment i by 1.

7. Repeat steps 3-6 until the loop ends.

8. Print whether num is prime or not.

7. Print the First 10 Fibonacci Numbers

1. Initialize variables a and b to 0 and 1, respectively.

2. Print a and b.

3. Start a for loop that runs from i = 2 to i = 10.

4. Inside the loop, calculate the next Fibonacci number as c = a + b.

5. Print c.

6. Update a and b to b and c, respectively.

7. Increment i by 1.

8. Repeat steps 3-7 until the loop ends.

8. Find the Maximum of 5 Numbers

1. Initialize an array numbers with 5 elements.

2. Initialize a variable max to the first element of numbers.

3. Start a for loop that runs from i = 1 to i = 4.

4. Inside the loop, check if the i-th element of numbers is greater than max.

5. If the i-th element is greater than max, update max to the i-th element.

6. Increment i by 1.

7. Repeat steps 3-6 until the loop ends.

8. Print the final value of max.

9. Algorithm for Printing the Factors of a Number

1. Initialize a variable num to the input number.

2. Start a for loop that runs from i = 1 to i = num.

3. Inside the loop, check if num is divisible by i using the modulo operator (%).

4. If num is divisible by i (num % i == 0), print i as a factor.

5. Increment i by 1.

6. Repeat steps 2-5 until the loop ends.

10. Algorithm for Calculating the Sum of Squares of First 5 Numbers

1. Initialize a variable sum to 0.

2. Start a for loop that runs from i = 1 to i = 5.

3. Inside the loop, calculate the square of i (i \* i).

4. Add the square to sum (sum = sum + i \* i).

5. Increment i by 1.

6. Repeat steps 2-5 until the loop ends.

7. Print the final value of sum.