1. Write a program that output the sum and product of all integers from 1 up to user input.

Example: If a user enters 4, output would be:

The sum is: 10
The product is: 24

2. Write a program that: (Use compound operators || && to combine two condition checks in one if statement)

- Ask the user to enter an integer that is greater than 0 and less than 20
- If the entered number is not within the range the program keeps on asking for a valid number
- Otherwise the program prints a table converting miles to kilometers from 1 to the user entered number

Ex:

Enter an integer that is greater than 0 and less than 20: 22
Enter an integer that is greater than 0 and less than 20: 10
Miles Kilometers
1 1.609
2 3.218
...
10 16.090

(Note: You can use tab \t to line up nicely)

3. Write a program to test whether a number is a prime number.

(Hint: a prime number is not divisible by any number except 1 and itself, so you can use a counter starting from 2 and up to input number – 1, and test each counter number against the input number)

4. Write a program that: (Use compound operators || && to combine two condition checks in one if statement)

- Get an integer from the user
- Checks if the number is divisible by 3 or 5, or both
- Use compound operators || && to combine two condition checks in one if statement:
  - If the number is divisible by 3, but not 5, output "A factor of 3"
  - If the number is divisible by 5, but not 3, output "A factor of 5"
  - If the number is divisible by 3 and 5, output "A factor of 3 and 5"