

Methods factorial and printBinary**Question 1: factorial**

1. In mathematics, the *factorial* of n is defined as the multiplication of all *natural numbers* (integers greater than zero) up to and including the value n . Additionally, the *factorial* of zero is defined as 1. Write a recursive method that takes in an integer parameter and returns the factorial of that parameter. For example, `factorial(4)` should return 24, and `factorial(10)` should return 3628800. Assume the precondition $n \geq 0$ is true.

```
public static int factorial(int n)
```

Question 2: printBinary

2. Write a recursive method that takes in an integer parameter and prints to the console the binary equivalent. For example, `printBinary(10)` should display 1010, and `printBinary(100)` should display 1100100. Assume the precondition $n \geq 0$ is true. Hint: you will need both division (/) and modulus (%).

```
public static void printBinary(int n)
```