#### **Exercise 1:** Create a class with a method which can calculate the sum of first n natural numbers which are divisible by 3 or 5.

|  |  |
| --- | --- |
| Method Name | calculateSum |
| Method Description | Calculate Sum |
| Argument | int n |
| Return Type | int-sum |
| Logic | Calculate the sum of first n natural numbers which are divisible by 3 or 5. |

**Exercise 2:** Create a class with a method to find the difference between the sum of the squares and the square of the sum of the first n natural numbers.

|  |  |
| --- | --- |
| Method Name | calculateDifference |
| Method Description | Calculate the difference |
| Argument | int n |
| Return Type | int - Sum |
| Logic | Find the difference between the sum of the squares of the first n natural numbers and the square of their sum.  For Example if n is 10,you have to find  (1^2+2^2+3^2+….9^2+10^2)- (1+2+3+4+5…+9+10)^2 |

**Exercise 3:** Create a method to check if a number is an increasing number

|  |  |
| --- | --- |
| Method Name | checkNumber |
| Method Description | Check if a number is an increasing number |
| Argument | int number |
| Return Type | boolean |
| Logic | A number is said to be an increasing number if no digit is exceeded by the digit to its left. For Example : 134468 is an increasing  number |

#### **Exercise 4:** Create a method to check if a number is a power of two or not

|  |  |
| --- | --- |
| Method Name | checkNumber |
| Method Description | Checks if the entered number is a power of two or not |
| Argument | int n |
| Return Type | boolean |
| Logic | Check if the input is a power of two. Ex: 8 is a power of 2 |

**Exercise 5:**Take Employee Info like empid, empname, empsal, empAdd, empGender, empEmail and display .

**Exercise 6:**  Write a Java program to print the sum (addition), multiply, subtract, divide and remainder of two numbers. 

Test Data:  
Input first number: 125  
Input second number: 24  
Expected Output :  
125 + 24 = 149  
125 - 24 = 101  
125 x 24 = 3000  
125 / 24 = 5  
125 mod 24 = 5

**Exercise 7:** Write a Java method to find the smallest number among three numbers.

Test Data:  
Input the first number: 25  
Input the Second number: 37  
Input the third number: 29  
Expected Output:

The smallest value is 25.0

**Exercise 8:** Write a Java method to compute the average of three numbers.

Test Data:  
Input the first number: 25  
Input the second number: 45  
Input the third number: 65  
Expected Output:

The average value is 45.0