

Java Foundations

**Exercises for: Methods
in Java Defining and
Using Methods.
Overloads**



Problem: Sign of Integer Number

- Create a method that prints the **sign** of an integer number **n**:

2 → The number 2 is positive.

-5 → The number -5 is negative.

0 → The number 0 is zero.

- Write a method that receives a grade between 2.00 and 6.00 and prints the corresponding grade in words
 - 2.00 - 2.99 - "Fail"
 - 3.00 - 3.49 - "Poor"
 - 3.50 - 4.49 - "Good"
 - 4.50 - 5.49 - "Very good"
 - 5.50 - 6.00 - "Excellent"

3.33



Poor

4.50



Very good

2.99



Fail

Problem: Printing Triangle

- Create a method for printing triangles as shown below:

3



```
1
1 2
1 2 3
1 2
1
```

4



```
1
1 2
1 2 3
1 2 3 4
1 2 3
1 2
1
```

Problem: Calculate Rectangle Area

- Create a method which returns **rectangle area** with given **width** and **height**

3
4



12

6
8



48

5
10



50

7
8



56

Problem: Repeat String

- Write a method that receives a string and a repeat count n
- The method should return a new string

abc
3



abcabcabc

String
2



StringString

Problem: Math Power

- Create a method that calculates and returns the value of a **number raised to a given power**

$$2^8 \rightarrow 256$$

$$5.5^3 \rightarrow 166.375$$

```
public static double mathPower(double number, int power) {  
    double result = 1;  
    for (int i = 0; i < power; i++)  
        result *= number;  
    return result;  
}
```

Problem: Greater of Two Values

- Create a method **getMax()** that **returns the greater** of two values (the values can be of type **int**, **char** or **String**)

int
2
16



16

char
a
z



z

String
aaa
bbb



bbb

Problem: Multiply Evens by Odds

- Create a program that **multiplies the sum of all even digits** of a number **by the sum of all odd digits** of the same number:
 - Create a method called **getMultipleOfEvensAndOdds()**
 - Create a method **getSumOfEvenDigits()**
 - Create **getSumOfOddDigits()**
 - You may need to use **Math.abs()** for negative numbers



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