1. Write a function that returns the sum of two numbers.

Example

For `param1 = 1` and `param2 = 2`, the output should be `add(param1, param2) = 3`.

Input/Output

- **[execution time limit] 4 seconds (py3)**
- **[input] integer param1**

  Guaranteed constraints:
  `-1000 ≤ param1 ≤ 1000`.
- **[input] integer param2**

  Guaranteed constraints:
  `-1000 ≤ param2 ≤ 1000`.
- **[output] integer**

  The sum of the two inputs.

[Python 3] Syntax Tips

```
# Prints help message to the console
# Returns a string
def helloWorld(name):
    print "This prints to the console when you Run Tests"
    return "Hello, " + name
```

2. Given a year, return the century it is in. The first century spans from the year 1 up to and including the year 100, the second - from the year 101 up to and including the year 200, etc.

Example

- For `year = 1905`, the output should be `centuryFromYear(year) = 20`;
- For `year = 1700`, the output should be `centuryFromYear(year) = 17`.

Input/Output

- **[execution time limit] 4 seconds (py3)**

- **[input] integer year**

  A positive integer, designating the year.

  Guaranteed constraints:
  `1 ≤ year ≤ 2005`.

- **[output] integer**

  The number of the century the year is in.

[Python 3] Syntax Tips

```
# Prints help message to the console
# Returns a string
def helloWorld(name):
    print "This prints to the console when you Run Tests"
    return "Hello, " + name
```

3. Given the string, check if it is a palindrome.

Example

- For `inputString = "aabaa"`, the output should be `checkPalindrome(inputString) = true`;
- For `inputString = "abac"`, the output should be `checkPalindrome(inputString) = false`;
- For `inputString = "a"`, the output should be `checkPalindrome(inputString) = true`.

Input/Output

- **[execution time limit] 4 seconds (py3)**

- **[input] string inputString**

  A non-empty string consisting of lowercase characters.

  Guaranteed constraints:
  1 ≤ inputString.length ≤ 10^5.

- **[output] boolean**

  `true` if `inputString` is a palindrome, `false` otherwise.

[Python 3] Syntax Tips

```
# Prints help message to the console
# Returns a string
def helloWorld(name):
    print "This prints to the console when you Run Tests"
    return "Hello, " + name
```

4. Given an array of integers, find the pair of adjacent elements that has the largest product and return that product.

Example

For `inputArray = [3, 6, -2, -5, 7, 3]`, the output should be `adjacentElementsProduct(inputArray) = 21`.
`7` and `3` produce the largest product.

Input/Output

- **[execution time limit] 4 seconds (py3)**
- **[input] array.integer inputArray**

  An array of integers containing at least two elements.

  Guaranteed constraints:
  `2 ≤ inputArray.length ≤ 10`,
  `-1000 ≤ inputArray[i] ≤ 1000`.

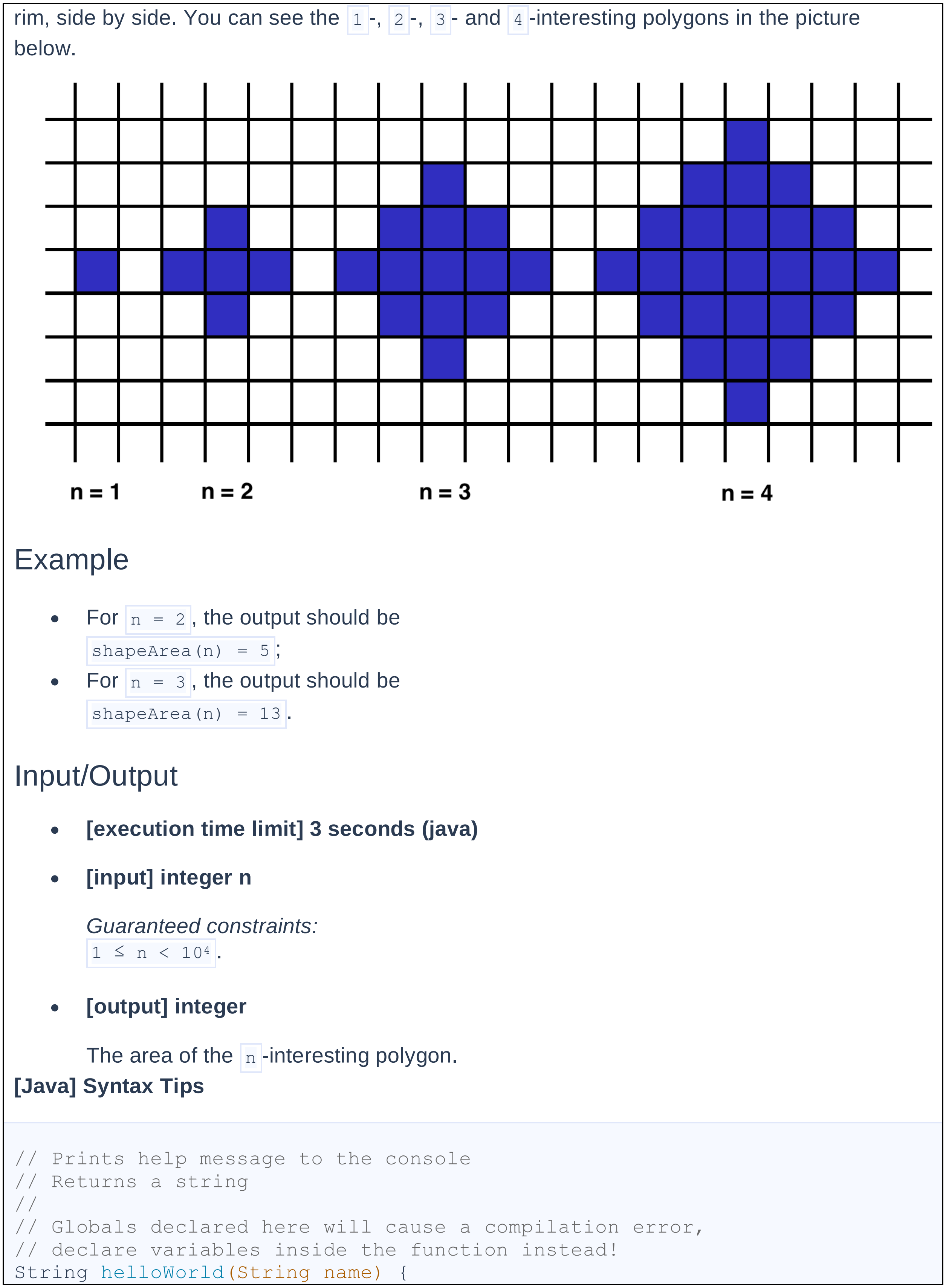
- **[output] integer**

  The largest product of adjacent elements.

[Python 3] Syntax Tips

```
# Prints help message to the console
# Returns a string
def helloWorld(name):
    print "This prints to the console when you Run Tests"
    return "Hello, " + name
```

5 Below we will define an `n`-interesting polygon. Your task is to find the area of a polygon for a given `n`.
A `1`-interesting polygon is just a square with a side of length `1`. An `n`-interesting polygon is obtained by taking the `n - 1`-interesting polygon and appending `1`-interesting polygons to its



rim, side by side. You can see the `1`-, `2`-, `3`- and `4`-interesting polygons in the picture below.

Example

- For `n = 2`, the output should be `shapeArea(n) = 5`;
- For `n = 3`, the output should be `shapeArea(n) = 13`.

Input/Output

- **[execution time limit] 3 seconds (java)**
- **[input] integer n**

  Guaranteed constraints:
  `1 ≤ n < 10⁴`.
- **[output] integer**

  The area of the `n`-interesting polygon.

[Java] Syntax Tips

```
// Prints help message to the console
// Returns a string
//
// Globals declared here will cause a compilation error,
// declare variables inside the function instead!
String helloWorld(String name) {
    System.out.println("This prints to the console when you Run Tests");
    return "Hello, " + name;
}
```