

- 1) Write a loop that makes seven calls to console.log to output the following triangle:

```
#
##
###
####
#####
#####
#####
```

Print Every line in random color every time (choose from colors red, green, yellow, blue). There should not be two lines of the same color next to each other.

- 2) Write a program that uses console.log to print all the numbers from 1 to 100, with two exceptions. For numbers divisible by 3, print "Fizz" instead of the number, and for numbers divisible by 5 (and not 3), print "Buzz". For numbers that are divisible by both 3 and 5 print "FizzBuzz".
- 3) Create two versions of a function called range which takes two numbers x and y and returns an array filled with all numbers from x (inclusive) to y (exclusive)
- a) Do not use any ES6 methods
  - b) Use a suitable ES6 method
- 4) Create two versions of a function called sum which takes a list of numbers and returns a sum of them.
- a) Do not use any ES6 methods
  - b) Use a suitable ES6 method
- 5) Given a list of the following major Houses of Westeros and their respective mottos:

```
var houses = [
  {name: "Targaryen", motto: "Fire and Blood"},
  {name: "Stark",    motto: "Winter is Coming"},
  {name: "Bolton",   motto: "Our Blades Are Sharp"},
  {name: "Greyjoy",  motto: "We Do Not Sow"},
  {name: "Tully",    motto: "Family, Duty, Honor"},
  {name: "Arryn",    motto: "As High as Honor"},
  {name: "Lannister", motto: "Hear Me Roar!"},
  {name: "Tyrell",   motto: "Growing Strong"},
  {name: "Baratheon", motto: "Ours is the Fury"},
  {name: "Martell",  motto: "Unbowed, Unbent, Unbroken"}
];
```

Write two versions of a function that, when passed the name of a House, returns its motto.

- a) Do not use any ES6 methods
- b) Use a suitable ES6 method

Example:

```
motto("Tyrell") // returns "Growing strong"
```

- 6) Create a function which takes an array and returns an array with all duplicates removed.
- 7) Create a function wordSearch(w) that searches to see whether a word w is present in the given text variable. Please note it has to be a full word and case insensitive.
- 8) Write a function which takes a number x and returns a function, which takes another number y and returns the sum of numbers x and y.
- 9) Write a function sevenAte9 that removes each 9 that is in between 7s.

*sevenAte9('79712312') // returns '7712312'*

*sevenAte9('79797') // returns '777'*

10) Create a simple function wrapper that will log every call to the wrapped function.

*Example:*

*var spied = spy(myFunction);*

*spied(1);*

*var report = spied.report(); // returns { totalCalls: 1 }*

11) Given an array with nested arrays of numbers (ex.: [10, 6, [4, 8], 3, [6, 5, [9]]]) create a function that would sum all numbers from provided array.

12) Create two versions of a calculator module:

a) Do not use any ES6 functionality

b) Use a ES6 class

Calculator should have four methods: add, subtract, multiply and divide. All of calculator methods should be chainable.

*Example:*

*var calc = new Calculator(0);*

*amount = calc.add(5).multiply(2).add(20).divide(3); //should return 10*

13) Write the definition of the function "say" in such way that calling this:

*say("Hello,")("it's me"); //Would return "Hello, it's me";*