

1, The output will be ->

10

8

8

9

10

1

2. What is the difference between a method and function?

-> A function is a set of statements meant to do a specific task, it is defined with keyword 'function' followed by the a name and an optional arguments.

-> A method is a property of an object that contains a function.

3. What does 'this' refer to when used in a Java method?

-> "this" in java refers to the current object in a method or constructor. usually we use "this" key word to differentiate between the class attributes and parameters with the same name in the class.

4. What does 'this' refer to when used in a JavaScript method?

-> In a method "this" key word refers to the owner of the method.

5. What does 'this' refer to when used in a JavaScript constructor function?

-> In a function "this" refers to the global Object.

6. Assume object x is the prototype for object y in JavaScript. Object x has a method f() containing keyword 'this'.

When f is called by x.f(), what does 'this' refer to?

-> 'this' will be referring to x;

7. What is a free variable in JavaScript?

-> free variable is a variable that is not declared inside the method or as an

argument for a method but

we still make use of the variable inside our method. then that is called a free variable.

8. Create an object that has properties with name = "fred" and major="music" and a property that is a function that takes 2 numbers and returns the smallest of the two, or the square of the two if they are equal.

```
-> var obj = {  
  name: 'fred',  
  major: 'music',  
  property: function(a,b){  
    if(a < b){  
      return a;  
    }else if(a > b){  
      return b;  
    }else return {  
      squareOfa: a*a;  
      squareOfb: b*b;  
    }  
  }  
};
```

9. Write JavaScript code for creating three Employee objects using the "new" keyword and a constructor function.

Employee objects have the following fields: name, salary, position.

```
-> function Employee (name,salary,position){  
  this.name = name;  
  this.salary = salary;  
  this.position = position;  
}  
  
var emp1 = new Employee('Jo',120000,'full stack developer');  
var emp2 = new Employee('Messi',150000,'manager');
```

```
var emp3 = new Employee('Dere',120000,'full stack developer');
```

10. Write a JavaScript function that takes any number of input arguments and returns the product of the arguments.

```
-> function product(){  
  let accum =1;  
  for(let i =0; i< arguments.length; i++){  
    accum *= arguments[i];  
  }  
  return accum;  
}
```

11. Write an arrow function that returns the maximum of its three input arguments.

```
-> var max = (a,b,c) =>{  
  let max = a;  
  if(b > max){  
    max = b;  
  }  
  if(c > max){  
    max = c;  
  }  
  return max;  
}  
console.log(max(1,2,3)); // 3
```