

__Proto__:

- A property of an object/instance.
- __proto__ is an object in every class instance that points to the prototype it was created from.
I.e. __proto__ is an internal property of an object, pointing to its prototype.
- __proto__ is the actual object that is used in the lookup chain to resolve methods.

Prototype:

- A property of a constructor function.
- prototype is the object that is used to build __proto__ when you create an object with new.
- The prototype property is special only for function objects and only when using the new operator to call a function as constructor.

Examples:

1. Consider the code and output below:

```
function Person(firstname, lastname, gender, age){  
  this.firstname = firstname  
  this.lastname = lastname  
  this.gender = gender  
  this.age = age  
}  
  
const Rick = new Person("Rick", "Lan", "Male", "20")  
console.log(Rick)  
console.log(Person.prototype)  
console.log(Rick.__proto__ === Person.prototype)
```

```
▼ Person {firstname: "Rick", lastname: "Lan", gender: "Male", age: "20"} ⓘ  
  age: "20"  
  firstname: "Rick"  
  gender: "Male"  
  lastname: "Lan"  
  ▼ __proto__:  
    ► constructor: f Person(firstname, lastname, gender, age)  
    ► __proto__: Object  
  ▼ {constructor: f} ⓘ  
    ► constructor: f Person(firstname, lastname, gender, age)  
    ► __proto__: Object  
true
```

Notice that the __proto__ value of Rick is the same as the prototype value of Person.

2. Consider the code and output below:

```
function Person(firstname, lastname, gender, age){  
  this.firstname = firstname  
  this.lastname = lastname  
  this.gender = gender  
  this.age = age  
}  
  
Person.prototype.x = 12  
  
const Rick = new Person ("Rick", "Lan", "Male", "20")  
const Person2 = new Person("Rick", "Lan", "Male", "20")  
const Person3 = new Person("Rick", "Lan", "Male", "20")  
  
// All prints 12.  
console.log(Rick.x)  
console.log(Person2.x)  
console.log(Person3.x)
```

12
12
12

Notice that Rick.x, Person2.x and Person3.x all prints 12.