Springboard

Car OO Challenge

Part One

Create a class for vehicle. Each vehicle instance should have the following properties:

- make

- model

- year

Each vehicle instance should have access to a method called **_honk_**, which returns the string "Beep."

```
let myFirstVehicle = new Vehicle("Honda", "Monster Truck", 1999); myFirstVehicle.honk();
// "Beep."
```

Each vehicle instance should have a method called toString, which returns the string containing the make, model and year.

```
let myFirstVehicle = new Vehicle("Honda", "Monster Truck", 1999); myFirstVehicle.toStrin
g(); // "The vehicle is a Honda Monster Truck from 1999."
```

Part Two

Create a class for a car. The **Car** class should inherit from **Vehicle** and each car instance should have a property called **numWheels** which has a value of 4.

```
let myFirstCar = new Car("Toyota", "Corolla", 2005); myFirstCar.toString(); // "The vehi
cle is a Toyota Corolla from 2005." myFirstCar.honk(); // "Beep." myFirstCar.numWheels;
// 4
```

Part Three

Create a class for a Motorcycle. This class should inherit from **Vehicle** and each motorcycle instance should have a property called **numWheels** which has a value of 2. It should also have a **revEngine** method which returns "VROOM!!!"

```
let myFirstMotorcycle = new Motorcycle("Honda", "Nighthawk", 2000); myFirstMotorcycle.to
String(); // "The vehicle is a Honda Nighthawk from 2000." myFirstMotorcycle.honk(); //
"Beep." myFirstMotorcycle.revEngine(); // "VROOM!!!" myFirstMotorcycle.numWheels; // 2
```

Part Four

Create a class for a Garage. It should have a property called *vehicles* which will store an array of vehicles, and a property called *capacity* which is a number indicating how many vehicles will fit in the garage. When you create a garage, *vehicles* will always be empty; you only need to provide the *capacity*.

A garage should also have an *add* method, which attempts to add a vehicle to the array of vehicles. However, if you try to add something which is *not* a vehicle, the garage should return the message "Only vehicles are allowed in here!". Also, if the garage is at capacity, it should say "Sorry, we're full."

```
let garage = new Garage(2); garage.vehicles; // [] garage.add(new Car("Hyundai", "Elantra", 2015)); // "Vehicle added!" garage.vehicles; // [Car] garage.add("Taco"); // "Only vehicles are allowed in here!" garage.add(new Motorcycle("Honda", "Nighthawk", 2000)); // "Vehicle added!" garage.vehicles; // [Car, Motorcycle] garage.add(new Motorcycle("Honda", "Nighthawk", 2001)); // "Sorry, we're full."
```

📄 Solution