2)

1. try{
2. let response = await fetch('data/iris.json');
3. let data = await response.json();
4. let possibleColor = ["#5d3fd3", "#a73fd3", "#d33fb5", "#d35d3f", "#d3a73f"];
5. let irisesWithColor = data.map(addColorToIris);
6. console.log(irisesWithColor);
7. console.log(irisesWithColor[0]);
8. function addColorToIris(flower){
9. let randomColor = possibleColor [Math.floor(Math.random()\*possibleColor.length)];
10. return {
11. ...flower,
12. color: randomColor
14. };
16. }
18. } catch(err){
19. console.log(err)
20. }

3)

//3. Use a filter on irisesWithColor

const filteredIrises = irisesWithColor.filter(function(flower){

return flower.sepalWidth <4;

});

console.log("FilteredIris ", filteredIrises)

//results:

4)

        //4. calculate the average petalLenght using reduce

const totalPetalLength = irisesWithColor.reduce(function(sum, flower) {

return sum + flower.petalLength;

}, 0);

const averagePetalLength = totalPetalLength / irisesWithColor.length;

console.log("Average Petal Lenght = ", averagePetalLength);

//results: 3.7580000000000027

5)

//5. Use Find to access an object whose petalWidth is under 1.0

const findIris = irisesWithColor.find(function(flower){

return flower.petalWidth >1.0;

});

console.log("iris with petalWith > 1 = ", findIris);

//results: It finds one

6)

//6. Find an object that has a petal lenght over 10 using some

const petalOver10 = irisesWithColor.some(function(flower){

return flower.petalLength >10;

});

console.log("flower with petalLength over 10", petalOver10);

//results: No, it doesn't exist

7)

//7. Find if there is an Iris with petal Lenght = 4.2

const petalEqual42 = irisesWithColor.some(function(flower){

return flower.petalLength === 4.2;

});

console.log("iris with petal equal to 4.2", petalEqual42);

//results: Yes, it does exist

8)

//8. Does all objects have a petalWidths over 3

const allPetalWidthsUnder3 = irisesWithColor.every(function(flower){

return flower.petalWidth <3;

});

console.log("All iris have width under 3? ", allPetalWidthsUnder3);

//results: Yes, it's true

9)

//9. Find if all Iris have sepal width over 1.2

const allSpetalWidthGreaterThen12 = irisesWithColor.every(function(flower){

return flower.sepalWidth>1.2;

});

console.log("irises have sepal Width over 1.2", allSpetalWidthGreaterThen12);

//results: Yes, it's true

10)

//10. output an array sorted on the petalWidth field

const irisesWithColorsSorted = irisesWithColor.toSorted(function(a, b){

return a.petalWidth - b.petalWidth;

});

console.log("sorted by petalWidth(smallest to largest)",irisesWithColorsSorted);

//results: