**Problem 1 - Get change**

function getChange(x, y) {

const coins = [1, 0.5, 0.25, 0.1, 0.05, 0.01];

const result = [];

for (let i = 0; i < coins.length; i++) {

let count = 0;

while (y <= x) {

x -= coins[i];

y += coins[i];

count++;

}

y -= coins[i];

result.push(count);

}

return result;

}

console.log(getChange(5, 0.99)); // must return [1,0,0,0,0,4]

console.log(getChange(3.14, 1.99)); // must return [0,1,1,0,0,1]

console.log(getChange(4, 3.14)); // must return [1,0,1,1,1,0]

console.log(getChange(0.45, 0.34)); // must return [1,0,1,0,0,0]

**Output:**

[ 3, 0, 0, 0, 0, 0 ]

[ 1, 1, 0, 0, 1, 0 ]

[ 1, 0, 1, 1, 1, 0 ]

[ 1, 0, 0, 0, 0, 1 ]

**Problem 2 - Body Mass Index**

function highestAverageBMI(arr) {

// Create an empty object to store the BMI data for each age group

let bmiData = {};

// Iterate through the array of objects and calculate the BMI and the corresponding age group

for (let i = 0; i < arr.length; i++) {

let height = arr[i].height / 100; // convert height to meters

let weight = arr[i].weight;

let age = arr[i].age;

let bmi = weight / (height \* height);

let ageGroup = Math.floor(age / 5) \* 5; // calculate the age group

// If the age group is not present in the bmiData object, add it with the BMI data

if (!bmiData[ageGroup]) {

bmiData[ageGroup] = [];

}

// Add the BMI data to the corresponding age group

bmiData[ageGroup].push(bmi);

}

// Calculate the average BMI for each age group

for (let ageGroup in bmiData) {

let sum = 0;

for (let i = 0; i < bmiData[ageGroup].length; i++) {

sum += bmiData[ageGroup][i];

}

bmiData[ageGroup] = sum / bmiData[ageGroup].length;

}

// Find the age group with the highest average BMI

let maxBmi = -Infinity;

let maxAgeGroup = "";

for (let ageGroup in bmiData) {

if (bmiData[ageGroup] > maxBmi) {

maxBmi = bmiData[ageGroup];

maxAgeGroup = ageGroup;

}

}

// Return the age group with the highest average BMI and the average BMI

return {

ageGroup: maxAgeGroup + "-" + (Number(maxAgeGroup) + 4.9).toFixed(1),

averageBmi: maxBmi.toFixed(2),

};

}

console.log(

highestAverageBMI([

{ height: 175, weight: 50, age: 21 },

{ height: 170, weight: 77, age: 22 },

{ height: 175, weight: 70, age: 24 },

{ height: 175, weight: 75, age: 26 },

{ height: 175, weight: 50, age: 29 },

{ height: 170, weight: 77, age: 34 },

])

);

console.log(

highestAverageBMI([

{ height: 175, weight: 50, age: 24.9 },

{ height: 170, weight: 80, age: 25 },

{ height: 170, weight: 90, age: 29.9 },

{ height: 175, weight: 90, age: 32 },

{ height: 175, weight: 50, age: 39 },

{ height: 170, weight: 77, age: 44 },

])

);

**Output:**

{ ageGroup: '30-34.9', averageBmi: '26.64' }

{ ageGroup: '25-29.9', averageBmi: '29.41' }