

โจทย์ข้อที่ 6

### JS Building a Pie Chart

A pie chart is a circular graphical representation of a dataset, where each category frequency is represented by a slice (or circular sector) with an amplitude in degrees given by the single frequency percentage over the total of frequencies. You can obtain the degrees of sectors following these steps: Calculate frequencies ...

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Hard

## introductions

### Building a Pie Chart

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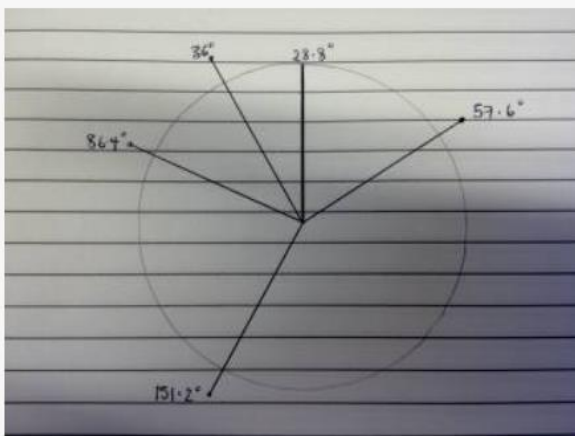
math

objects

A pie chart is a circular graphical representation of a dataset, where each category frequency is represented by a slice (or circular sector) with an amplitude in degrees given by the single frequency percentage over the total of frequencies. You can obtain the degrees of sectors following these steps:

- Calculate frequencies total.
- Calculate percentage of every category frequency dividing it by the frequencies total.
- Transform every percentage in degrees multiplying it for 360.

You are given an object `data` with keys being the data categories (represented by letters) and values being the data frequencies. Implement a function that returns a map to design a pie chart, like to say the same object with values transformed in degrees instead of frequencies. Round final values to the nearest tenth.



## Examples

```
pieChart({ a: 1, b: 2 }) → { a: 120, b: 240 }  
pieChart({ a: 30, b: 15, c: 55 }) → { a: 108, b: 54, c: 198 }  
pieChart({ a: 8, b: 21, c: 12, d: 5, e: 4 }) → { a: 57.6, b: 151.2, c: 86.4, d: 36, e: 28.8 }
```

## Code

```
assign > JS Building_a_Pie_Chart.js > pieChart  
1 function pieChart(data) {  
2   const propOwn = Object.getOwnPropertyNames(data);  
3   let ppie = 0;  
4   for(x=0;x<propOwn.length;x++){  
5     ppie += data[propOwn[x]];  
6   }  
7   let percent = [];  
8   for(x=0;x<propOwn.length;x++){  
9     percent.push(data[propOwn[x]]/ppie);  
10  }  
11  for(x=0;x<propOwn.length;x++){  
12    data[propOwn[x]]=parseFloat((360*percent[x]).toFixed(1));  
13  }  
14  return data;  
15 }  
16 console.log(pieChart({a: 8, b: 21, c: 12, d: 5, e: 4}));// {a: 57.6, b: 151.2, c: 86.4, d: 36, e: 28.8}, "Example #1, Image")  
17 console.log(pieChart({a: 30, b: 15, c: 55}));//, {a: 108, b: 54, c: 198}, "Example #2")  
18 console.log(pieChart({a: 1, b: 2}));//, {a: 120, b: 240});//, "Example #3")  
19 console.log(pieChart({a: 10, b: 33, c: 2, d: 48, e: 9}));//, {a: 35.3, b: 116.5, c: 7.1, d: 169.4, e: 31.8})  
20 console.log(pieChart({a: 10000, b: 10000, c: 10000, d: 10000}));//, {a: 90, b: 90, c: 90, d: 90})  
21 console.log(pieChart({a: 1, b: 10, c: 100, d: 1000, e: 666}));//, {a: 0.2, b: 2, c: 20.3, d: 202.6, e: 134.9})  
22 console.log(pieChart({a: 110, b: 462, c: 0}));//, {a: 69.2, b: 290.8, c: 0})
```

## Run

```
PS C:\Users\Admin\Desktop\JSpilot\JavaScript\assign> node .\Building_a_Pie_Chart.js  
{ a: 57.6, b: 151.2, c: 86.4, d: 36, e: 28.8 }  
{ a: 108, b: 54, c: 198 }  
{ a: 120, b: 240 }  
{ a: 35.3, b: 116.5, c: 7.1, d: 169.4, e: 31.8 }  
{ a: 90, b: 90, c: 90, d: 90 }  
{ a: 0.2, b: 2, c: 20.3, d: 202.6, e: 134.9 }  
{ a: 69.2, b: 290.8, c: 0 }  
PS C:\Users\Admin\Desktop\JSpilot\JavaScript\assign> 
```