CS 171

Pre-Quiz: Lab 4

- Be able to differentiate between scales and axes
- Understand the concept of input domains and output ranges
- Know how to create scale functions in D3
- Know how to group and transform SVG elements
- Know how to use scales to create axes in D3

This quiz requires that you have read and programmed along with chapter 7 (p. 113-124) and 8 (p. 125-130) in "D3 - Interactive Data Visualization for the Web" by Scott Murray. (optional reading: p. 130-135)

Question 1

Please select the correct sentences

O   Scales help us to map data values to pixel measurements (input domain to output range)

O   D3 provides built-in methods ONLY for linear scales

O   An axis is a visual representation of a scale

O   Axis and scales are two different terms for the same concept

O   Scales are functions with parameters. You can pass a data value and they return a scaled value

Question 2

We have created a linear scale function with an **input domain (0 - 1000)** and an **output range (0 - 100)**. What is the correct result if we pass the input value **500** to the method?

O   50

O   500

O   1000

O   100

Question 3

Select the answer with the correct value of the variable "result".

```
var products = [
  { name: "PC", price: 1200 },
  { name: "Phone", price: 800 }
];

var result = d3.max(products, function(d) {
  return d.price;
});
```

O   400

O   2000

O   1800

O   1200

Question 4

SVG group elements ("g") have no visual presence but they help us to group elements and to apply transformations to multiple elements in one step. Select all the answers that describe the following line of code correctly:

```
<g class="x-axis axis" transform="translate(0,400)"></g>
```

O   The code specifies an empty SVG group with the classes "axis" and "x-axis"

O   The code specifies an SVG group

O   The transform attribute shifts the g element 400 pixels down

O   The transform attribute defines the drawing space (400 x 400px) in the g element