Exercises
Function Application and Function Composition

Exercise 1 Using $

Write **bigCubes** that takes a list and returns a list of cubes that are > 500

```
bigCubes :: [Int] -> [Int]
```

Exercise 2 Using $ and .

Write **lottaBiggest** that takes a list and replicates the largest element 4 times.

```
lottaBiggest :: [Int] -> [Int]
e.g.
lottaBiggest [2,5,3,1] = [5,5,5,5]
```

Hint: You can use the *maximum* function that returns the maximum value in a numeric list.

Exercise 3 Using $

Write **powers** that takes a number and creates a list of that number squared, cubed, and quadrupled.

```
e.g. powers 2 = [4,8,16]
```

Exercise 4 Using $

Assume people are dining. We have a list of tip percents (assume people tip at different rates):

```
e.g. pcts = [0.15, 0.2, 0.21]
```

We have a list of bills (what people owe, minus tip)

```
e.g. amts = [20.5, 30, 25]
```

Write **calcBill** that takes amts and pcts and calculates what each person will pay, based on their amt and pct. Then apply a 4% tax rate.

```
calcBillamtspcts :: [Float] -> [Float] -> Float
calcBillamtspcts [20.5, 30, 25] [0.15, 0.2, 0.21] = [24.518,37.44,31.46]
```