Quiz 21: HashMaps SOLUTION
CSCI 110 Section 1
Friday, October 21, 2016

1) Write the type for a HashMap where the keys are floating-point numbers and the values are ArrayLists of booleans. [20 points]

```
HashMap<Float, ArrayList<Boolean>>
```

2) Write a code snippet to create a HashMap where the keys are the numbers 1 through 10 and the values are whether the number is even. [30 points]

What should the key type be? Ints are a good choice since it looks like we're dealing with whole numbers
What should the value type be? Boolean since we want to store **whether** the number is even

```
HashMap<Integer, Boolean> isEven = new HashMap<Integer, Boolean>();
for (int i = 1; i <= 10; i++) {
    boolean even = i % 2 == 0;
    isEven.put(i, even);
}
```

3) Say we have a HashMap<String, Double> that contains sentences and their quality ratings. Write a function that takes this HashMap and prints the sentences that have at least a quality of 10.0. [50 points]

What should the return type be? void - we're not computing a result, but printing stuff
What should the parameters be? The HashMap<String, Double> we're printing from

```
void printQuality(HashMap<String, Double> sentenceToQuality) {
    for (String sentence : sentenceToQuality.keySet()) {
        double quality = sentenceToQuality.get(sentence);
        if (quality >= 10.0) {
            System.out.println(sentence);
        }
    }
}
```