Financial Difference

A purse is represented as a String and contains pennies ('p'), nickles ('n'), dimes('d'), and quarters ('q'), as well as an assortment of other random objects (represented by any other characters).

Your task is to take 2 purses and examine their contents. You'll create 2 functions to make this process easier. 1 function is designed to calculate the total amount of money in a purse, and another is designed to show which purse has more money in it.

Function #1: purseTotal

purseTotal **takes in a single String purse** and calculates the total amount of $ inside of it.

p = .01
n = .05
d = .10
q = .25

return the total as a double.

Function #2: showDifference

showDifference **takes 2 String purses** and prints whether the 1st purse has more or less and by how much. **This function must use the purseTotal function** to calculate the totals of each of the purses passed in **AND should use the makePretty function** to make the numbers look nice (see the example of how it's used in the main method).

Example: given that purse1 has .15 and purse2 has .50
prints "Purse 1 has .35 less than purse 2."
Example: given that purse1 has .50 and purse2 has .15
prints "Purse 1 has .35 more than purse 2."
Example: given that purse1 has .50 and purse2 has .50
prints "Purse 1 and Purse 2 have the same amount of money in them."

Nothing is returned.

Starter Code:

The following code is provided to help you get started.

- Main method - feel free to commend function call lines that you're not ready to test yet.
- makePretty - a function that is here purely to make printing doubles nicer to look at.
    - .1+.1+.1 should be .3, but it's not in many programming languages due to something called "floating point precision error". This function helps make the # something more expected.
    - $2.3 looks funny because we're used to $ being displayed with 2 decimal values. This function forces 2 decimal points so $2.3 becomes $2.30

```
public class FinancialDifference
{
	public static void main(String[] args)
	{
		String purse1 = "ppnpqpddpqnpqd";
		String purse2 = "qqpnpqnokjnawvo";
		double purse1Tot = purseTotal(purse1);
		double purse2Tot = purseTotal(purse2);
		System.out.println("Purse 1: $"+makePretty(purse1Tot));
		System.out.println("Purse 2: $"+makePretty(purse2Tot));
		showDifference(purse1, purse2);
	}
	/**
	 * makePretty takes a floating point # and attempts to format it to
	 * always have 2 values after the decimal point. This helps to combat
	 * the floating point error that comes when adding floating point
	 * numbers (like 0.1+0.1+0.1).
	 * @param num
	 * @return
	 */
	public static String makePretty(double num)
	{
		return String.format("%.2f", num);
	}

}
```