Comparing Double Values

Formula for body mass index (BMI):

$$BMI = \frac{weight}{height^2} \times 703$$

BMI	Weight class
below 18.5	underweight
18.5 - 24.9	normal
25.0 - 29.9	overweight
30.0 and up	obese

Write a program exactly producing this output:

```
This program reads data for two people and
computes their body mass index (BMI).

Enter next person's information:
height (in inches)? 70.0
weight (in pounds)? 194.25

Enter next person's information:
height (in inches)? 70.001
weight (in pounds)? 194.25

Person 1 BMI = 27.868928571428572
overweight
Person 2 BMI = 27.86813233338881
overweight
The BMI values are the same.
```

Instead of reporting the numeric difference, report if they are "reasonably" the same (within 1000th of each other) or which has the higher BMI.

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Examples to run (output must EXACTLY match expected output for each) …expected output found on class website.

Run 1:

```
Height 1: 70.0      Height 2: 70.001
Weight 1: 194.25    Weight 2: 194.25
```

- Report: `The BMI values are the same.`

Run 2:

```
Height 1: 70.0      Height 2: 70.1
Weight 1: 194.25    Weight 2: 194.25
```

- Report: `Person 1 BMI value is higher.`

Run 3:

```
Height 1: 70.0      Height 2: 69.9
Weight 1: 194.25    Weight 2: 194.25
```

- Report: `Person 2 BMI value is higher.`