Name _____ Date _____

1. Compare using >, <, or =.

a. 0.6 ◯ 0.584

b. 0.072 ◯ seventy-five thousandths

c. 3 tens + 4 tenths + 1 thousandth ◯ 30.31

d. 54 tenths ◯ 5.4

e. $8 \times \frac{1}{10} + 9 \times \frac{1}{1000}$ ◯ 0.840

2. a. Draw a place value chart below. Model the number 5.55 on that place value chart.

b. Use words, numbers, and your model to explain why each of the digits has a different value. Be sure to use "ten times as large" and "one tenth as large" in your explanation.

3. a. Multiply 4.44×10^5.

b. Explain the shift of the digits or the movement of the decimal. How does the value of each digit change?

c. Divide the product from the previous part (b) by 10^3.

d. Explain the shift of the digits and the change in the value of each digit.

4. Rainfall collected in a rain gauge was found to be 4.3 cm when rounded to the nearest tenth of a centimeter.

   a. Circle all the measurements below that could be the actual measurement of the rainfall.

   4.251 cm 4.349 cm 4.352 cm 4.295 cm

   b. Convert the 4.3 centimeters to meters. Write an equation to show your work.

5. Average annual rainfall total for cities in Florida are listed below.

Miami	1.572 meters
Jacksonville	1.33 meters
Tallahassee	1.5 meters
Key West	1.013 meters

   a. Put the rainfall measurements in order from least to greatest.

   b. Write the smallest total rainfall in word form and expanded form.

   c. Round each of the rainfall totals to the nearest tenth.

c. Imagine Miami City's rainfall is the same every year. How much rain would fall in 100 years?

d. The expression below could be used to determine the total amount of rainfall for Miami if it stayed the same for 100 years.

$$1.572 \times 100$$

Rewrite the expression above using exponential form.