STUDY GUIDE: Place Value Patterns, Decimal Fractions, & Metric Conversions
Module 1: Mid-Module Review
5.NBT.1, 5.NBT.2, 5.NBT.3, 5.NBT.4, 5.MD.1

Name: _____ #____

Date: _____

Test is Thurs. 8/23

Lesson 6

1. Compare using >, <, or =.

a. 0.6 (>) 0.596

b. 3 thousandths + 2 hundredths (=) 0.023

.003 + .02

.023

c. 6 tens 2 tenths 1 hundredths (>) 6.21

60 + 0.2 + .01

60.21

d. 63 hundredths (<) 6.3

.63

e. $2 \times 10^2 + 2 \times 1000 + 5 \times \frac{1}{10}$ (=) $2 \times 100 + 2 \times 10^3 + 5 \times \frac{1}{10}$

200 + 2000 + 0.5

2200.5

200 + 2000 + 0.5

2200.5

f. $4 \times \frac{1}{10} + 4 \times \frac{1}{100}$ (>) 0.404

0.4 + 0.04

.44

Lessons 1 and 2

2.

a. Model the number 5.55 on the place value chart.

	ones	.	tenths	hundredths
	○○○ ○○	.	○○○ ○○	○○○ ○○

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

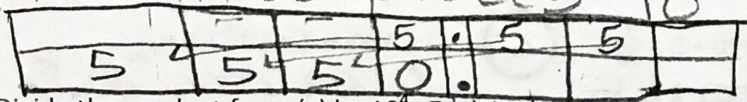
Even though there are 5 disks in each column they are different units so they have different values.

- 5 ones is 10 times as large as 5 tenths.
- 5 hundredths is $\frac{1}{10}$ as large as 5 tenths

c. Multiply 5.55×10^3. Explain the change in the value of each digit and the shift of the digits.

$5.55 \times 10^3 = 5550$

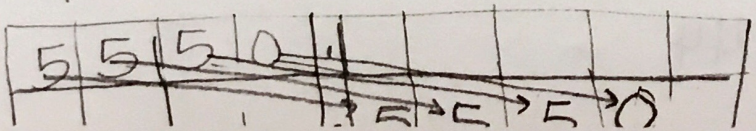
When multiplying by 10^3 each digit shifts three places to the left



d. Divide the product from (c) by 10^4. Explain the change in the value of each digit and the shift of the digits.

$5,550. \div 10^4 = .5550$

When dividing by 10^4 each digit shifts 4 places to the right



3. A set of measurements is rounded to the nearest tenth and the highest rounded value is 5.4 cm.
   a. Which of the following values could be the original value?

   5.362 cm 5.247 cm 5.382 cm 5.415 cm

   b. Convert the rounded measure to meters. Write an equation to show your work.

   5.4cm = ____ m

   5.4 cm ÷ 10^2 = .054m

4. Lesson 4

Write each of the following metric units in the corresponding place value on the chart below. Remember to label each place value on the chart.

g, kg, mg, km, m, cm, mm, L, mL

	1000m Km			1 meter m		1/100 m cm	1/100 m mm
				1 liter L			1/1000 L mL
	1000g kg			1 gram g			1/1000 g mg

Cannot use notebook on test.

5. **Complete each of the following statements with the correct values:**

Each liter is equal to 1,000 milliliter(s).

Each centimeter is equal to 0.01 meter(s).

Each kilometer is equal to 1,000 meter(s).

Each gram is equal to 0.001 kilogram(s).

6. Melanie has a bag of concrete mix that contains 475 grams of mix. She receives another 775 grams of mix from her friend. How many total kilograms of mix does Melanie have altogether?

475g
+775g
1,250g

Lesson 5

1250g ÷ 1000 = ___ kg

1.25 kg

7. 78 tenths + 4 thousandths + 3 hundredths in standard decimal form: 7.834

7.8 + .004 + .03

8. 78 tens + 4 thousands + 3 hundreds in standard decimal form: 5,080

780 + 4,000 + 300 =

9. Expanded form of 52.703: $5\times10 + 2\times1 + 7\times\frac{1}{10} + 3\times\frac{1}{1000}$

1780
4000
300
5080

Lesson 5 100.05

10. Expanded form of one hundred five hundredths using fractions.

$1 \times 100 + 5 \times \frac{1}{100}$

11. Expanded form of 30.208 using decimals.

$3 \times 10 + 2 \times 0.1 + 8 \times 0.001$

Lesson 6

12. Write in order form least to greatest: 1.97 1.947 2.5 2.268

1.947, 1.97, 2.268, 2.5

13. Write in order from greatest to least: 4.45 4.308 3.914 3.409

4.45, 4.308, 3.914, 3.409

14. Compare the values of each digit using phrases like "ten times" and "one-tenth"

55,500

a. **5** 100 times 5

b. 5 $\frac{1}{10}$ of **5**

c. 5 $\frac{1}{10}$ of 5

d. 5 $\frac{1}{100}$ of **5**

e. 5 10 times 5

f. **5** 10 times 5

Lesson 3

15. Complete the patterns.

a. 0.02 0.2 2 20 200 2000

b. 3,400,000 34,000 340 3.4 .034

c. 85700 8,570 857 85.7 8.57 .857

d. 444 4440 44,400 444,000 4,440,000 44,400,000

e. .095 9.5 950 95,000 95,000 950,000,000

Lesson 3

16. True or False:

F $10^2 \times 5.2 = 5{,}200$

T $10^3 = 1{,}000$

F $3{,}520 \div 10^3 = 0.352$

T $5{,}290 \div 10^2 = 52.9$

F $10^4 = 400$

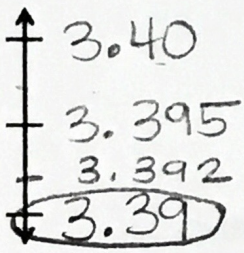
T 23 thousandths times 10 to the 5th power = 2,300

$.023 \times 10^5 = 2{,}300$

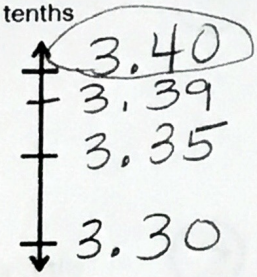
17. Round to the given place values.

3.392

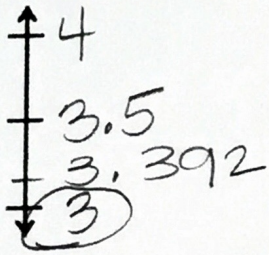
hundredths



tenths



whole number



Lesson 4

18. Complete each of the following with correct values:

2.87 meters is equal to 287 centimeters.

70 centimeters is equal to .7 meters.

6.3 meters is equal to 630 centimeters.

4 centimeters is equal to .04 meters.