2nd Quarter Assessment Study Guide Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***6.3 – Integers***

1. What is an integer?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Order the following integers from least to greatest: 4, -5, 0, -7, -2, 1, -12\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Compare the following using <,>, or =
	1. -4\_\_\_-3 b. -43\_\_\_-34 c. -567\_\_\_\_\_-576
4. What is absolute value?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Identify the absolute value of the following integers:
	1. 5 = b. -12 = c. -17 = d. 112 =
6. Identify the opposite of the following integers:
	1. 6 \_\_\_\_\_ b. -13\_\_\_\_\_\_ c. -21\_\_\_\_\_\_ d. 49\_\_\_\_\_\_

***7.3 – Operations with Integers (Extended Only)No Calculators***

1. When adding integers and the signs are the same\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. When adding integers and the signs are different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Add the following integers
	1. -6 + -7 = b. -5 + 8 = c. 13 + -15 =
3. When subtracting integers, remember to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Subtract the following integers
	1. 6 – (-4) = b. -14 – 6 = c. -8 – (-10) =
5. When multiplying or dividing integers, when the signs are the same the answer is\_\_\_\_\_\_\_\_\_\_, and when the signs are different the answer is\_\_\_\_\_\_\_\_\_\_\_\_.
6. Draw the short cut Tic-Tac-Toe board.
7. Multiply or Divide the following
	1. -8(-4) = b. 14/-7= c. -77/11= d. -5 x -10 =

***6.11 – Coordinate Graphing***

1. Identify the quadrants on the given coordinate plane.
2. A coordinate is always in the format (\_\_\_\_, \_\_\_\_).
3. Identify which quadrant each point will lie in:
	1. (4, -2) \_\_\_\_ b. (6, 4) \_\_\_\_\_ c. (-12, -3)\_\_\_\_ d. (-7, 8)\_\_\_\_\_

***6.20/7.15 – Inequalities***

1. An inequality is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. x > 5 should be read as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. The circle should be closed when using\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_symbols.
4. The circle will be open when using\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. If an inequality is written 6 < x you should \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. Graph the following inequalities. You must label the number line first.
	1. c ≥ -3 b. 3 < s

***6.1 – Ratios (Use calculators)***

1. What is a ratio?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Using the following shapes, write the given ratio as a fraction in simplest form

⭘⭘⭘🞏🞏🞏🞏⧫⧫⧫⧫⧫⧫

1. Circles to squares \_\_\_\_\_\_\_\_\_ b. diamonds to circles\_\_\_\_\_\_\_
2. diamonds and circles to squares \_\_\_\_\_\_\_\_\_\_
3. There are 32 students in math class and 16 of them are girls. What is the ratio of boys to girls? Write as a fraction in simplest form.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***6.2/7.1 – Fractions, Decimals, and Percentages (No calculators)***

1. Fractions, decimals and percents are 3 ways of saying\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Percent means\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. To compare or order FDP all numbers need to be in the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. To change a fraction into a decimal you \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. To change a percent into a decimal you \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Fill in the following chart

|  |  |  |
| --- | --- | --- |
| Fraction | Decimal | Percent |
| 7/10 |  |  |
|  | 0.6 |  |
|  |  | 8% |

***6.6 – Operations with Fractions (No calculators)***

1. When adding or subtracting fractions you must find a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. If you try to take away a large number from a small number you must\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Answers must always be written as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Find the sum or difference of the following
	1. 2 ¾ + 4 5/6 b. 10 1/8 – 5 2/3 c. 9 – 4 7/9
4. When multiplying mixed numbers you must turn them into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Then you multiply the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and multiply the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. Multiply the following
	1. 4/5 x ¼ b. 1 2/5 x 4 1/3 c. 9 x 3 1/3
6. When dividing fractions all mixed numbers should also be turned into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. Divide the following fractions.
	1. 4/5 ÷ 2/3 b. 5 ÷ 7/8 c. 5 2/5 ÷ 1 3/10

***6.4 – Representations of Multiplying and Dividing Fractions (No calculators)***

1. Model the following multiplication problems.
	1. $\frac{1}{2}$ x 1/3 b. 1/5 x 2/3
2. Model the following division problems.
	1. 2 ÷ 1/3 b. 3 ÷ $\frac{1}{2}$

***6.7 – Operations with Decimals (Use calculators)***

1) Sue worked 22 hours this week and 32 hours last week. If she earns $7 per hour, how much money did Sue earn?

1. Tony bought 2 shirts at $22.50 each, 1 pair of jeans that cost $55 and 3 pairs of socks at $3.75 each at the mall. If Tony gave the store clerk a $100 bill, how much change should he receive?

3) Sue is saving her money to buy a new IPhone that costs $250.00. She gets paid $9.00 per hour at her job. How many hours must Sue work in order to save enough money to buy the new phone?

***Estimating Fractions and Decimals (No calculators)***

 Estimate by rounding. Show your thinking.

1. 9 $\frac{2}{7}$ + 8 $\frac{4}{5}$ e. 5$\frac{3}{8}$ x 5 $\frac{9}{\begin{array}{c}10\\\end{array}}$
2. 12 $\frac{3}{6}$ - 10 $\frac{1}{3}$ g. 13 $\frac{7}{9}$ ÷ 2 $\frac{2}{11}$

***6.8 – Order of Operations (No calculators)***

1. What is the order of operations?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. When looking at multiplication and division you always work from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. When looking at addition and subtraction you always work from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Solve the following problems using the order of operations
	1. 3 + (5-2)2 ÷ 3 b. 3(5) + 2(2)3 ÷ 4

***6.5 Positive Exponents and Perfect Squares (use calculators)***

1. List the first ten perfect square numbers: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the square root of 144? \_\_\_\_\_\_\_
3. $\sqrt{81}$ = \_\_\_\_\_\_\_
4. What is 6 squared? \_\_\_\_\_\_\_
5. Fill in the blanks: $10^{0}$ = \_\_\_\_\_ $10^{2}$ = \_\_\_\_\_\_ $10^{3}$ = \_\_\_\_\_\_\_\_\_

 $10^{4}$ = \_\_\_\_\_\_\_\_\_ $10^{5}$ = \_\_\_\_\_\_\_\_\_\_\_ $10^{6}$ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Simplify**

1. $3^{4}$ 7. $2^{5}$ 8. $4^{3}$

**7.1 Negative Exponents & Scientific Notation (Extended only) No calculators!**

Write the following as a decimal:

1. $10^{-4}$ 2) $10^{-2}$ 3) $10^{0}$

Write as a fraction:

4) $5^{-3}$ 5) $2^{-6}$ 6) $9^{-2}$