Name: _____

Math 7/ Science Checklist: Q2 W 9-10 January 3rd – January 12th

Big Ideas:

Math
• Cycle 1 and Cycle 2 review
• Midterm Assessment

Upcoming Dates:

☐ **1/11:** Advisory
☐ **1/11:** 8th math Corrections due (Ratios and Proportions, Assessment)
☐ **1/12:** Cycle 2: Connections: Culminating activity (Afternoon)
☐ **1/12:** Math Midterm assessment (topics from cycle 1 and cycle 2)
☐ **1/12:** Last day to turn in works (all work due)
☐ **Next checklist** MAP Reading Assessment 1/16 and MAP Math Assessment 1/18

Shelfwork:

Wednesday 1/3:
    ❑ Math Assessment data Analysis (__✓, M, 0)
    ❑ Mastery Checklist (__✓, M, 0)
    ❑ DETER Test taking strategies/word problems (__✓, M, 0)
    ❑ Multi Step Word Problem Breakdown (__✓, M, 0)
    ❑ Check powerschool for missing work and update work plan (__✓, M, 0)

Thursday 1/4:
    ❑ Work plan (__✓, M, 0)
    ❑ Operations with Integers lessons (__✓, M, 0)
    ❑ Operations with Integers Cards (G) (__✓, M, 0)
    ❑ Operations with Integers versatile (__✓, M, 0)

Friday 1/5:
    ❑ Work plan (__✓, M, 0)
    ❑ PEMDAS, Order of Operations and Combining like terms lessons (__✓, M, 0)
    ❑ PEMDAS, Order of Operations and Combining like terms lessons Cards (G) (__✓, M, 0)
    ❑ PEMDAS, Order of Operations and Combining like terms lessons versatile (__✓, M, 0)

Monday 1/8:
    ❑ Work plan (__✓, M, 0)
    ❑ Operations with Decimals lesson (__✓, M, 0)
    ❑ Operations with Decimals Cards (G)(__✓, M, 0)
    ❑ Operations with Decimals versatile(__✓, M, 0)

Tuesday 1/9:
    ❑ Work plan (__✓, M, 0)
    ❑ Operations with Fractions lessons (__✓, M, 0)
    ❑ Operations with Fractions Cards (G) (__✓, M, 0)
    ❑ Operations with Fractions versatile(__✓, M, 0)

Wednesday 1/10:
    ❑ Work plan (__✓, M, 0)
    ❑ Ratios, Proportions, Unit Rate & Discount, Tax and Tip (percents) lessons (__✓, M, 0)
    ❑ Ratios, Proportions, Unit Rate & Discount, Tax and Tip (percents) cards (G) (__✓, M, 0)
    ❑ Ratios, Proportions, Unit Rate & Discount, Tax and Tip (percents) versatile (__✓, M, 0)

Thursday 1/11:
    ❑ Work plan (__✓, M, 0)
    ❑ Percent Error, Percent of Change, & Simple Interest lessons (__✓, M, 0)
    ❑ Percent Error, Percent of Change, & Simple Interest cards (G) (__✓, M, 0)
    ❑ Percent Error, Percent of Change, & Simple Interest versatiles (__✓, M, 0)

Work Plan:

Week 9	Week 10
Monday: No School	Monday: I am working on...
Tuesday: No School	Tuesday: Check HW control I am working on...
Wednesday: Math assessment data analysis I am working on...	Wednesday: Check HW control I am working on...
Thursday: Check HW control I am working on...	Thursday: Check HW control I am working on...
Friday: Check HW control I am working on...	Friday: Math Midterm Assessment I am working on...

Homework: (All assignments are due the next day you have Math/Science and MUST be checked with the control if not a video/lesson):

☐ Wednesday 1/3: *7th Grade Number System Part I and Part II* (even OR odd #'s no calculator, show all work)
☐ Thursday 1/4: *7th Grade Math Operations with Rational Numbers* (#'s 1-19, no calculator, show all work)
☐ Friday 1/5: Organize binder, and complete missing work as needed (look at work plan)
☐ Monday 1/8: *7th Grade Math Operations with Rational Numbers* (#'s 20-26, no calculator, show all work)
☐ Tuesday 1/9: **7th Grade Math Proportional Reasoning** (even OR odd, no calculator, show all work)
☐ Wednesday 1/10: *7th Grade Math Percents* (even OR odd, no calculator, show all work)
☐ Thursday 1/11: Midterm assessment tomorrow (get some rest, eat breakfast, and stay hydrated)
☐ Friday 1/12: Organize binder

7th Grade Math *Percents*

Work on separate paper if you need more space. Show ALL work.

Finding Percents

1. Olivia saved 25% of the money she earned. If Olivia earned $375, how much did she save?

2. The Chambers family spent 28% of its monthly income for housing. If the family's monthly income is $3,200, how much did they spend for housing?

3. Quinn took a test with a total of 50 questions. His teacher told him that he must answer 90% of the questions correctly to earn an A. How many questions must he answer correctly to earn the A?

4. The student population at Sedgefield Middle is 52% female. The total student population is 780 students.

    a. How many girls go to SMMS?

    b. How many boys go to SMMS?

Percent Change

5. Mariah has decided to examine her checking account statements. Last month's account balance was $20,000. This month, it is $10,000. What is the percent of decrease in Ariel's account balance?

6. A $500 iPad goes on sale for $375. What is the percent of decrease in the iPad's price?

7. A $90 autographed and framed poster of Cam Newton goes up in price to $110. What is the percent of increase in the price?

Discount, Mark Up, Tax, Commission, Tip Problems

8. A dress is regularly priced at $120, and it is marked 20% off the regular price.

    a. What is the amount of savings, or the amount that the dress was marked down?

    b. What was the new price for the dress?

9. Andrew spent $18.95 on his lunch. About, how much money he should leave for a 20% tip?

10. Braden bought a model space station for $246 that was originally priced at $270. What is the discount percentage?

11. A gymnastics mat was originally priced at $50, but Maria waited to buy it until the gymnastics mat was on sale for 50% off. If she paid 8% sales tax on the sale price, how much did she pay in total?

Simple Interest

12. Jaden deposited $5,500 for 6 years on 2.40% interest rate in his saving account. How much simple interest will he earn?

13. Savanna has $40 in a savings account. The interest rate is 5%. *How much* will she have in 5 years?

14. Briana takes a loan of $10,000 on 3% interest rate. She plans to pay the loan off after 2 years. Calculate the simple interest?

Percent Error

15. Dennis wants to buy a card for his wife. Dennis calculates the amount of the card as $4.50. The actual price of card is $4. What is Dennis's percent error?

16. A student measures the length of a football field and says it is 291 feet long. A football field is actually 300 feet long. What is the student's percent error?

17. Lilly expected to get $60 for her birthday, but she only got $40. What was the percent error?

Name:_____

Community:_____

7th Math Number Systems Part I (Integers)

Absolute Value and Modeling Integers

1. What does "absolute value" mean? Give an example.

_____

_____

2. The following are temperatures recorded in different cities on a day in January. Put them in order from least to greatest.

City	Temperature (in F)
Detroit	-2
Anchorage	-15
Miami	79
Charleston	53
Bangor	-3
Minneapolis	-4

ANS: _____

3. Which number is NOT equivalent to the others?

A. |35|

B. -35

C. |-35|

D. 35

Explain why:_____

_____

Adding Integers

4. Add
   $-8 + 10 =$ ____

5. Add
   $15 + -20 =$ ____

6. Add
   $-10 + (-5) =$ ____

7. Add
   $-8 + -4 =$ ____

Subtracting Integers

8. Subtract
   $-5 - 10 =$ ____

9. Subtract
   $8 - -20 =$ ____

10. Subtract
    $-10 - (-5) =$ ____

11. Subtract
    $-8 - 4 =$ ____

Multiplying Integers

12. Find the product
$-15 \bullet (-2) =$ _____

13. Find the product
$35 \times 7 =$ _____

14. Find the product
$-15 \bullet 2 =$ _____

15. Find the product
$-15 \times (-3) =$ _____

Dividing Integers

16. Find the quotient
$-16 \div (-4) =$ _____

17. Find the quotient
$28 \div -7 =$ _____

18. Find the quotient
$-20 \div 5 =$ _____

19. Find the quotient
$-15 \div (-3) =$ _____

Word Problems and Integers *Even only*
Show all your work and be sure to include UNITS!!! Circle your final answer.

20. A roller coaster at Carowinds climbs to a height of 150 feet before it goes into an underground tunnel that is 25 feet below ground. What is the height difference between the highest point and the lowest?

21. In the Sahara Desert one day it was 128°F. In the Gobi Desert a temperature of -40°F was recorded. What is the difference between these two temperatures?
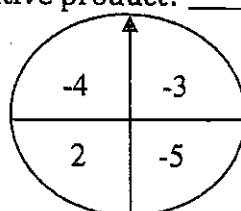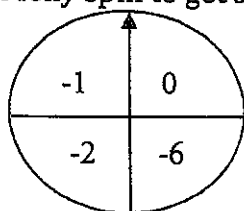

22. The temperature outside is -14. Then the temperature rises 20 degrees. What is the current outdoor temperature?

23. A football team loses a total of 15 yards in 3 plays. On average, how many yards did the team move the ball per play?

24. The lowest elevation Long Beach, California is 7 feet below sea level. The elevation of Death Valley is about 40 times lower than the elevation of Long Beach. What is the approximate elevation of Death Valley?

25. Molly is playing a game. She spins each spinner and then multiplies the numbers to find the product.

What two numbers could Molly spin to get a positive product? _____

7th Grade Math Number Systems Part II
(Order of Operations, Distributive Property and Combining Like Terms)

Order of Operations
Show your steps and all your work.

1. $5 + (4 \times 2^2 + 7)$

2. $6 \times (9-14) + 2$

3. $-2(2-2) \div -2$

4. Create an order of operations problem that uses at least four numbers (you MUST have at least one positive and one negative number) that would simplify to the value of 6. Simplify the expression, showing all steps to show that it will equal 6.

Expression:_____

Simplified:_____

Distributive Property
Use the Distributive Property to rewrite the expression.

5. $-2(4x + 8)$

6. $-8(6 - 4y)$

7. $(2 - 7k) \cdot -4$

Combining Like Terms
Please remember to show all work, which includes placing symbols around like terms.

8. $3(t^2 + 3) - 12tz^2 - 10$

9. $9k + (-2) - 4k + 3^2$

10. $-14a + 3 - 10a$

Fraction/Decimal Conversions

Write the fraction as a decimal.

1) $\frac{3}{5}$

2) $\frac{7}{9}$

3) $-4\frac{1}{4}$

Write the decimals as fractions in SIMPLEST form.

4) 0.3

5) 9.4

6) 5.48

Comparing/Ordering Rational Numbers

Compare the fractions. Write < or >.

7) $-\frac{3}{4}$ ___ $\frac{1}{4}$

8) $-\frac{5}{6}$ ___ $-\frac{8}{9}$

Order the numbers from least to greatest.

9) 2, $2\frac{2}{10}$, 2.02

10) Our school just completed a fundraiser. We need to decide which homeroom had the highest sales because they will win a pizza party. The five seventh grade homeroom teachers reported their sales as a fraction or decimal of total school sales. Order these from greatest to least to decide the winner. (The winner is the homeroom with the greatest sales.)

Mr. Doug 3/8   Mr. Brian 0.12   Ms. Patti T. 1/9   Ms. Patti F. 0.15   Ms. Mindy 1/4

Final Order: _____

Adding and Subtracting Decimals

Show all your work. Circle your answer.

11) -3.29 + (-12.6)

12) -123 – 2.55

13) 4.16 – 9.07

Multiplying and Dividing Decimals
Show all your work and circle your answer.

4) -3(2.7)

15) -1.08(-0.4)

16) 5 · 0.07

17) 7.2 ÷ 12

18) 33.6 ÷ (-7)

19) -1.12 ÷ 0.08

Adding and Subtracting Fractions
Show all your work. Solution must be in SIMPLEST form. Circle your answer.

20) $-\frac{1}{5} + \frac{2}{3}$

21) $-4\frac{3}{5} - 2\frac{7}{10}$

22) $3\frac{1}{3} - 2\frac{5}{8}$

Multiplying and Dividing Fractions
Show all your work. Solution must be in SIMPLEST form. Circle your answer.

23) $-5 \cdot \frac{1}{8}$

24) $-1\frac{1}{2} \cdot -1\frac{5}{9}$

25. $\frac{2}{3} \div \frac{8}{9}$

Decimal Word Problems
Show all your work. Circle your answer. Be sure to include UNITS.

26) Jaden ran three laps during his physical education class. If his times were 1.23 minutes, 1.04 minutes, and 1.18 minutes, what was his average lap time?

27) Members of a reading group order books for $89.10 and bookmarks for $10.62. If there are 18 people in the reading group, how much does each person owe on average?

28) Ties at Belk's Department Store cost $14.99 each. Alex purchased three ties. He gave the cashier $50. How much change did the cashier give back to Alex?

Fraction Word Problems

Show all your work and be sure to include UNITS!!! Circle your final answer. Fractions must be written in simplest form.

29) Savanna's mother is $1\frac{2}{3}$ ft taller than Savanna is. If Savanna is $3\frac{1}{2}$ ft tall, how tall is her mother?

30) Montessori High School is holding a fundraiser and plans to use $\frac{5}{8}$ of the money collected to build a new library. Of the money directed towards building the new library, $\frac{2}{3}$ will go towards purchasing computers. What fraction of the money raised will go towards purchasing computers for the library?

31) Braden's bus ride to school is $\frac{5}{8}$ of a mile and Eli's bus ride is $\frac{1}{4}$ of a mile. How much longer is Braden's bus ride than Eli's?

7th Grade Math Proportional Reasoning

Ratios, Rates and Unit Rates

Write these ratios in simplest form.

1) 6 to 18

2) 10:25

3) A parking lot contains 18 American cars and 63 foreign cars. Write the ratio of American cars to foreign cars in simplest form.

Find the Unit Rate or Unit Price.

4) 24 miles in 3 hours

5) 5 pounds of apples for $2.50

Solve the following problems using what you know about unit rates and equivalent ratios.
6) Soap: Which is the best buy?
      Regular (12 fluid ounces): $ 1.34
      Family (28 fluid ounces): $ 3.25
      Economy (40 fluid ounces): $ 4.08

7) It costs Owen $123 to buy one tire. How much did it cost him to buy 18 tires for his truck?

8) Which relationship has a unit rate of 60 miles per hour?
    a. 300 miles in 6 hours

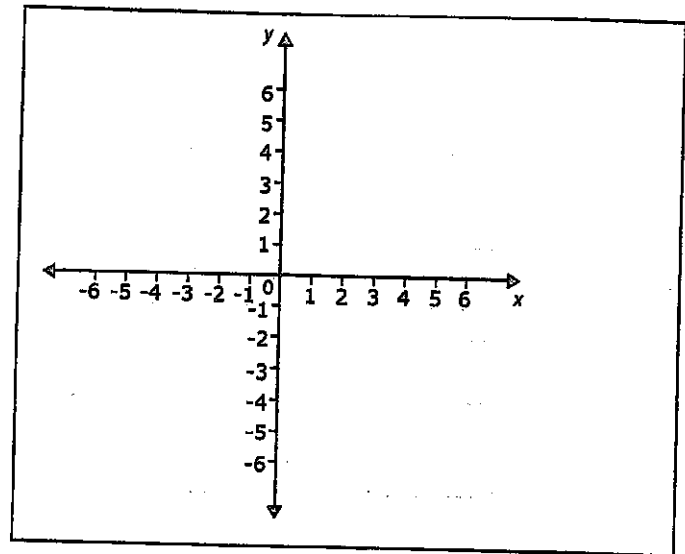   b. 300 miles in 5 hours

    c. 240 miles in 6 hours

    d. 240 miles in 5 hours

9) A worker at a tire shop can install 4 new tires in 1.3 hours. At this rate how long would it take the worker to install new tires for 75 cars if each car will receive 4 tires?

A student is making trail mix. Create a graph to determine if the quantities of nuts and fruit are proportional for each serving size listed in the table. If the quantities are proportional, what is the constant of proportionality or unit rate that defines the relationship? Explain how you determined the constant of proportionality and how it relates to both the table and graph.

Serving Size	1	2	3	4
Cups of Nuts (x)	1	2	3	4
Cups of Fruit (y)	2	4	6	8

10)

11) Constant of Proportionality: _____

12) Write an equation that shows how many cups of fruit (y) are needed based on any given number of cups of fruit (x).

_____

Proportions

13) Terry paid $8.75 for 5 pounds of pears. At this rate how many pounds of pears could she buy with $61.25?

Determine whether the following ratios are proportional:

14) $\dfrac{14}{19}$ and $\dfrac{126}{131}$

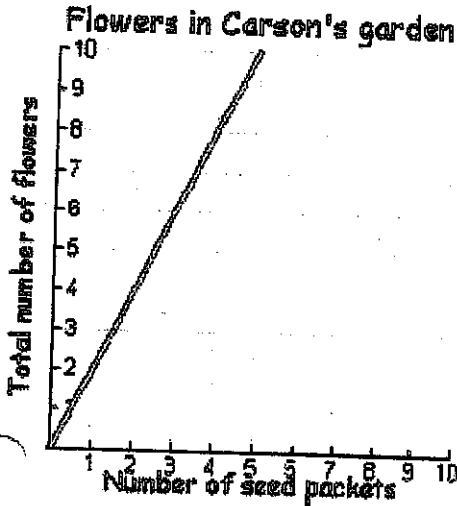15) $\underline{9}$ and $\underline{6}$

16) Seven bananas contain 3.5 milligrams of Vitamin B6. How many bananas contain 9.31 milligrams of Vitamin B6? Round to the nearest tenth.

17) Fill in the following table and identify the constant of proportionality.

Constant of Proportionality: _____

Minutes	Words Typed
12	96
6	
3	
1	

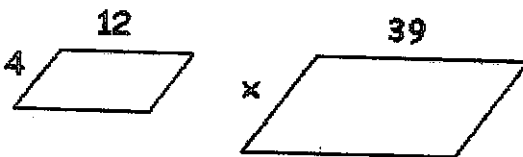18) What is the constant of proportionality? What does it represent?

Flowers in Carson's garden

A. The constant of proportionality is 1/2. This means one seed packet will produce two flowers.

B. The constant of proportionality is 1/2. This means three seed packets will produce six flowers.

C. The constant of proportionality is 2. This means two seed packets will produce four flowers.

D. The constant of proportionality is 2. This means one seed packet will produce two flowers.

Similar Figures – Indirect Measurement and Scale

19) A girl that is 4 feet tall is standing next to the Empire State Building in New York City. The girl's shadow is 3.2 feet long. If the Empire State Building is 1454 feet tall, how long would its shadow be? Draw a picture and solve.

20) Two parallelograms are similar. The dimensions of the smaller parallelogram are 4 inches by 12 inches. If the larger parallelogram has a longer side length of 39 inches, use proportions to find the shorter side.

12
4
39
x

21) The scale of a map is 1.25 in. = 80 mi. If two cities are 4.75 inches apart on the map, how many miles apart are the ?s?

Percent Proportion

The percent proportion is often used to solve per cent problems. Some useful vocabulary can be found below.

Percent Proportion: $\dfrac{percent}{100} = \dfrac{part}{total}$

Word	Mathematical Symbol
of	Any multiplication symbol: x or ( ) or ∘
is	=
what	Any letter; for example n
find	n =

Translate into a proportion:

What percent of 5000 is 3.8?

rate   total   part

$$\dfrac{n}{100} = \dfrac{3.8}{5000}$$

What is   5%   of   19?

part   rate   total

$$\dfrac{5}{100} = \dfrac{n}{19}$$

90% of what is 342?

rate   total   part

$$\dfrac{90}{100} = \dfrac{342}{n}$$

Solve the following problems using the percent proportion.

1.   24% of 300 is what?

2.   Find 320% of 60.

3.   45 is 60% of what?

4.   3000 is 0.5% of what?

5.   What percent of 140 is 3.5?

6.   What percent of $4000 is $64?

7. How much tax will Colleen pay on a surround-sound system that costs $1885.00 if the tax is 5%?

8. Renata now earns $9.50 per hour. This is 125% of what she earned last year. What did she earn per hour last year?

9. The Incredible Chocolate Chip Company has discovered that 36 out of 400 chocolate chip cookies do not contain enough chocolate chips. What percent of the chocolate chip cookies do not have enough chips?

10. In a survey taken by the Department of Agriculture of 450 people, 74% admitted that they hated brussels sprouts. How many people in this survey did not care for this vegetable?

11. Peter and Judy together earn $5060 per month. Their mortgage payment is $1265 pr month. What percentage of their household income goes toward paying the mortgage?

12. Shannon paid $8400 in federal and state income taxes as a lab technician, which amounted to 28% of her annual income. What was her income last year?