SHADY SIDE ACADEMY

JUNIOR SCHOOL
400 South Braddock Avenue
Pittsburgh, PA 15221
412-473-4400

June, 2020

Dear Parents,

Congratulations to your child for completing a full year of math learning! The purpose of this packet is to help students maintain the math skills acquired during the year and to avoid the "summer slump". We encourage the students to complete the packet at any pace that is comfortable. While the completion of this packet is not required, it is strongly suggested. We suggest that your child space the problems in the packet out over the 12 weeks of summer for optimal review and reinforcement.

Please encourage your child to devise a personal schedule that is appropriate to sustain his or her learning and practice. It is our hope that students continue to embrace and enjoy the process of mathematics even in the summer months. After each section, please review your child's answers and check for accuracy against the key found on The Junior School website. Doing so will determine areas that may need further purposeful practice.

Please have your child bring the packet to school on the first day of school.

Have a fun summer and see you in the fall!

Sincerely,

Marci Anderson
Lisa Budd
Fourth Grade Teachers

Vocabulary

Sum: the answer to an addition problem
Difference: the answer to a subtraction problem
Product: the answer when one number is multiplied by another
Quotient: the answer when one number is divided by another

Place value: the location of the digit within the number. The place value of 5 in 4,598 is the hundreds place
Value: how much the digit represents based on its place value. The value of 5 in 4,598 is 500.

Factor: a number can be divided exactly by its *factor*
Common factor: 2 is a factor of 4 and 6. So, 2 is a *common factor* of 4 and 6
Greatest common factor: 1 and 3 are common factors of 6 and 9. So, 3 is the greatest common factor of 6 and 9.
Multiple: product of a given number and any other whole number except 0
Common multiple: 8 is a multiple of 2 and 4. So, 8 is a common multiple of 2 and 4.
Least common multiple: 4, 8, 12 are common multiples of 2 and 4. So, 4 is the least common multiple of 2 and 4.
Prime number: a number that has exactly two factors, 1 and itself
Composite number: a number that has more than two different factors

Numerator: the number above the fraction bar, that shows the number of equal parts of the whole or set
Denominator: the number below the fraction bar, that shows how many equal parts the whole or set is divided into
Mixed number: the sum of a whole number and a fraction, for example, 2 ⅓
Simplest form: A fraction in simplest form has no common factors in the numerator and denominator.
Improper fraction: a fraction whose numerator is greater than its denominator, for example 12/7

Tenth: one part out of ten

Hundredth: one part out of a hundred
Decimal form: 1 tenth written in *decimal form* is 0.1

Acute angle: an angle with a measure less than 90°
Obtuse angle: an angle with a measure greater than 90°
Turn: a fraction of a full rotation such as $\frac{1}{4}$-, $\frac{1}{2}$-, $\frac{3}{4}$-, or full-turn which correspond to angles of 90°, 180°, 270°, and 360°, respectively

Area: the amount of surface covered by a figure; Area = length x width)
Perimeter: distance around a figure; Perimeter = (length + width) + (length + width)

Bar Model Steps

1. Read the problem.
2. Identify the "who" and the "what."
3. Reread the problem.
4. Draw the unit bar(s) to match the information in the problem.
5. Label the bars.
6. Complete the computation(s).
7. Write the answer in a complete sentence.

Day 1

1. Arrange the numbers from least to greatest.

   1/4, $3\frac{1}{2}$, 1/2, 12/4

   _____

2. Write in standard form:

   sixty-nine thousand, two hundred eleven.

   _____

3. Compare using <, >, or =. $4\frac{1}{2}$ ☐ 4.1

   _____

4. Express 25 minutes as a fraction of 1 hour in lowest terms.

   _____

   _____

5. During the past year, Carlos earned $1,979 each month.
He saved $6,342 and spent the rest.
How much did he spend?

   _____

6. 60 x 50 = ?

   _____

7. Round 45,230 to the nearest hundred.

   _____

8. Which of the following is NOT equivalent to 1/3?

4/12; 30/90; 8/32; 5/15

_____

9. How many fifths are there in $3\ 2/5$?

_____

10. Josh had 1,056 rubber bands. He put them equally into 6 boxes. How many rubber bands were there in each box?

_____

11. 1/4 + 6/8 =

_____

12. 9/10 + 3/5 =

_____

13. Write in word form: 53,900

_____

_____

_____

14. Continue the pattern:

63,800 64,100 64,400 _____ _____

Use bar model to solve.

15. There are 300 kids at camp. Some are playing basketball and some are playing soccer. There are 64 more children playing basketball than playing soccer. How many children are playing basketball?

Day 2

1. Arrange the numbers in increasing order.

   _____

   3/4, 2/3, 5/6

2. Compare using <, >, or =. 9/10 □ 3/4

   _____

3. 300 x 9 = ?

   _____

4. 31,000 – 5,000 = ?

   _____

5. Round 5,192 to the nearest hundred.

   _____

6. 22 tenths = 2 ones and ____ tenths

   _____

7. Mr. Fruit imported 138 boxes of mangoes. There were 24 mangoes in each box. He set aside 72 mangoes for his friends and sold the rest to 3 restaurants. If each restaurant bought an equal number of mangoes, how many mangoes did each restaurant buy?

   _____

Solve. Show your work. Express your answer in its simplest form.

8. 5/12 + 1/4 =

9. 2 – 3/10 =

10. What fraction of a full turn is one right angle?

_____

11. The table shows the 50-cent and 20-cent toys that three friends bought for party favors.

Complete the table.

	(50-cent toys)		(20-cent toys)		Total Cost
Name	**Number**	**Cost**	**Number**	**Cost**	
Ashin	5	$2.50	9	$1.80	
Benjamin	6		7		
Cara	4		8		

Complete. Use the data in the table.

12. Who bought the most toys?

_____

13. Who spent the most on the toys?

_____

14. How much more did they spend on 50-cent toys than on 20 cent toys?

_____

Use a bar model to solve.

15. Amanda pays $750 for a table and five matching chairs. If the table costs $200, how much do the chairs cost? How much does each chair cost individually?

Day 3

1. 3,600 ÷ 4 = ?

   _____

2. Round 563 to the nearest ten.

   _____

3. What is the value of the digit 2 in 32, 876?

   _____

4. Estimate and then multiply 456 x 60.

   Estimate=_____

   Product=_____

5. Write 400 + 50 + 0.07 as a decimal.

   _____

6. In 12.78, which digit is in the tenths place?

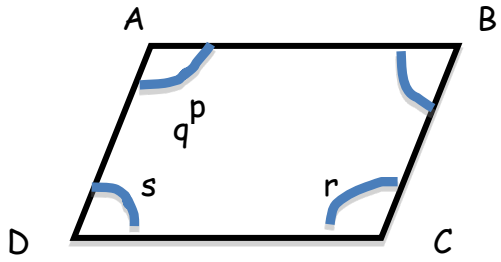
   _____

7. Terry had $35. He spent 2/5 of his money on

a book. Then he spent $8.25 on lunch. How much money did he spend altogether?

_____

Name the marked angles in another way.



8. Angle p: _____ 9. Angle r: _____

10. Angle ABC: _____ 11. Angle ADC: _____

Estimate and decide which of the above angle measures are

12. Acute angles

13. Obtuse angles

_____
_____

_____
_____

14. A turtle hatchery collected 457 turtle eggs in a week. The next week, it collected 656 eggs. About how many eggs did the hatchery collect in the two weeks?

Use a bar model to solve.

15. In fourth grade, 3/7 of the students are boys. If there are 36 girls in fourth grade, how many students are there altogether?

Day 4

1. Arrange in increasing order.

   0.6, 0.55, 0.7, 0.09

   _____

2. Express 2.05 as a fraction in its simplest form.

   _____

3. What is $\frac{1}{4}$ of 32?

   _____

4. 6,578 x 4 = ?

   _____

5. 560 ÷ 8 = ?

   _____

6. Write the first 5 multiples of 7.

   _____

7. What are the factors of 24?

   _____

8. Write 30 + 2 + 5/10 + 3/100 as a decimal.

   _____

9. Write 32/3 as a mixed number.

_____

10. Jennie saved $56.87. Her brother saved $38.98 more than she. How much did they save altogether?

_____

Solve

11. 3,456 x 73	12. 4 x 2,107	13. 6,431 ÷ 7

14. Mrs. Long needed sugar for a recipe. She had 1/4 cup of sugar in an open package. She added another 7/8 cup of sugar from a new package. How much sugar did she use in all?

Use a bar model to solve.

15. Mary baked 73 fruit tarts. Her mother baked 3 times as many fruit tarts as Mary. How many fruit tarts did they bake altogether?

Day 5

1. 6,000 – 700 =

_____

2. What are the first two common multiples of 6 and 8?

_____

3. What are the common factors of 12 and 20?

_____

4. Write 32/6 as a mixed number in simplest form.

_____

5. Sammy has $3,639 in his savings account. Round off this amount to the nearest $100.

_____

6. Arrange the numbers in <u>increasing</u> order.

3/10, 0.65, 2, 0.7

_____

7. Kathy had 32 stickers. She gave away 3/4 of her stickers to friends. How many stickers does she

have left?

_____

8. _____ is 0.1 less than 5.69

_____

9. _____ is 0.01 more than 2.809

_____

<u>Use mental math to solve.</u>

10. 0.7 + 0.02 = _____

11. 0.3 + 2.87 = _____

12. 7,980 – 90 = _____

13. 300 x 12 = _____

14. Suri bought a skirt for $25.90 and a sweatshirt for $19.90. She paid the cashier $50.00. How much change did she receive?

Use a bar model to solve.

15. Charlie has 5 times as many stamps as Ryan. They have 1,608 stamps in all. How many more stamps does Charlie have than Ryan?

Day 6

1. The product of two numbers is 216.
One of the numbers is 8. What is the other number?

_____

2. Round 628 to the nearest ten.

_____

3. Kim cut a piece of yarn into different fractional parts:

1/12, 1/4, 5/12

What fraction of the yarn is left?

_____

4. List the factors of 45.

_____

5. Write the numeral:

five hundred thirty-three thousand, forty two

_____

6. An empty parking lot has 300 spaces. 215 cars and 89 SUVs drive into the parking lot. How many vehicles do not have parking spaces?

_____

7. 1 – 3/10 = ?

_____

8. Round $8.76 to the nearest dollar.

_____

Solve.

9. 5,023 x 6 = _____

10. 567 ÷ 3 = _____

Use a bar model to solve.

11. Sam and Paul have $497 altogether. If Sam has $59 more than Paul, how much money does Paul have?

Find the fraction of each set. Draw a box around your answer.

12. 4/5 of 20 =

13. 2/7 of 42 =

14. 360° is _____ full turn or _____ right angles.

15. 13,901 = 10,000 + _____ + 900 + 1

Day 7

1. Compare using <, >, or =.

_____

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

2. In a class of 30 children, 8 wear glasses. What fraction of the children wear glasses?

_____

3. Mrs. Smith bought 15.5 yards of fabric. She used 8.75 yards to make some curtains. She used the rest to cover 3 chairs. How much fabric did she use for each chair?

_____

4. Write $5\frac{3}{4}$ as an improper fraction.

_____

5. If 5 × _____ × 8 = 320, what is the missing factor?

_____

6. 2/3 + 7/12 = ?

_____

Solve. Show your work. Reduce to simplest form.

7. 3/4 + 6 3/8 =

8. Which is a (are) prime number(s)?

_____

92, 63, 31

9. 326 x 27 =

_____

10. 5,342 ÷ 4 =

_____

<u>Use mental math to solve.</u>

11. 1.5 – 0.6 =

12. 8 – 0.1 =

13. 5.7 + 0.3 =

14. 5,000 x 6 =

Use a bar model to solve.

15. One morning, the shirt shop sold 15 t-shirts. Of the t-shirts sold, 1/5 were gray. The rest were white. How many white t-shirts were sold?

Day 8

1. Which pair of numbers has both a prime and composite number?

_____

a. 4 and 7
b. 3 and 13
c. 14 and 28
d. 6 and 8

2. Order from smallest to largest: 1/6, 1/3, 1/4

_____

3. After giving out 13 stickers to each of her 35 students, Mrs. Johnson had 22 stickers left. How many sticker did she have at first?

_____

4. List the first 6 multiples of 9.

_____

5. The difference between 9,856 and 4,598 is ____.

_____

6. Write as a decimal:

_____

5 + 1/10 + 8/100

7. Ben has $150. He wants to buy 2 CDs that cost $18.95 each and a camera that cost $79.50. Does he also have enough to buy a pair of jeans that cost $20?

Estimate and write yes or no. Show your work.

_____

8. 2/9 of 54 =

_____

Solve. Show your work and box your answers. Give each answer in simplest form.

9. 2/3 + 1/6 =

10. 8/9 – 4/9 – 1/9 =

11. 7/12 – 1/3 =

12. True or False: A straight angle has a measurement of 180°.

_____

13. 105° is between a _____ turn and a _____ turn.

14. Write in decimal form:

2 dollars and 5 cents

_____

15. Jim bought a pen and a calculator. He paid the cashier $50 and received $20.45 change. If the pen cost $4.50, how much did the calculator cost?

_____

Day 9

1. 1/4 + 5/12 = ?

_____

2. Mary walked 4/7 of the way to the library. What fraction of the journey did she have left to walk?

_____

3. List the factors of 50.

_____

4. Write 0.6 as a fraction.

_____

5. Write 4/100 as a decimal.

_____

6. In 5.703, the value of the digit 3 is _____.

_____

7. 2/3 + 7/12 = ?

_____

8. 5,993 is _____ more than the product of

283 and 21.

_____

9. Mrs. Baker made 276 tarts in the morning and 189 tarts in the afternoon. After giving 180 tarts to her friends, she kept the rest equally in 3 containers. How many tarts were there in each container?

_____

Use mental math to solve.

10. 6,500 + 7,000 =

11. 400 + 5,700 =

12. 8,000 – 90 =

13. 800 – 90 =

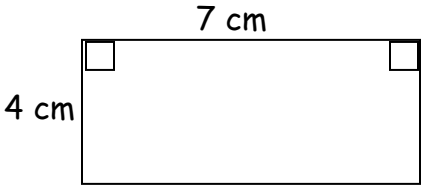
14. 40 x 700 =

Use a bar model to solve.

15. May has 86 beads fewer than Sue. If they have 144 beads altogether, how many beads does May have?

Perimeter of a rectangle: Remember: Perimeter = (length + width) + (length + width)

16.



= _____+ _____+ _____+_____

=_____ cm

The perimeter of this rectangle is _____cm.

Day 10

1. In 2,658 the 2 stands for 2 x ____.

   _____

2. The smallest number that rounds to 60 is _____.

   _____

3. ____ is 2,000 more than 46,576.

   _____

4. 46,576 is 2,000 more than ____.

   _____

5. Round 5.67 to the nearest tenth.

   _____

6. ____ must be added to 2/5 to get to 13/15.

   _____

7. 1/3 – 1/12 =

   _____

8. A group of people visited a museum yesterday.
1/3 of them were boys and 1/9 of them were girls.

What fraction of the visitors were adults?

_____

Express each mixed number as an improper fraction.

9. 3 2/5= 10. 5 ¾ = 11. 4 ½ =

Solve.

12. 3,214 ÷ 7 = 13. 482 x 57 =

Day	T-shirts sold	Jeans sold
Tuesday	22	26
Wednesday	36	21
Thursday	38	27
Friday	33	41
Saturday	45	37

Circle the correct answers.

14. On which day were 15 more T-shirts sold than jeans?

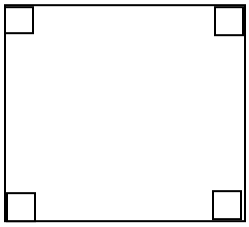
Wednesday Thursday Saturday

15. How many items sold on Tuesday and Wednesday combined?

100 105 125

16. Find the area of the square below. (Remember: Area = length x width)

9cm



Area of the square = _____ x _____

=_____cm^2

The area of the square is _____ square centimeters.