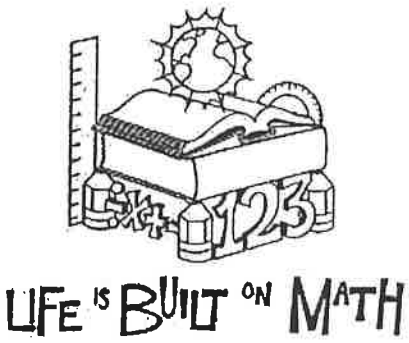
St. Luke's Middle School Summer Math 2018



To: Students entering sixth grade and their parents

From: Mrs. Finan and Mrs. Noury

1.Over the summer, it is common for students entering the sixth grade to forget some of the mathematics they learned. So, we want to help you review over the summer; this will make the beginning of sixth grade mathematics much easier. We suggest that this work be spread out during the summer.

You should not use calculators in doing this work. You must show steps on any problem that cannot reasonably be done mentally. Try all of the problems but if you struggle with a concept, then just do your best. Teachers will be able to look at your work in the fall to identify what topics you may still need help with and what review topics to focus on.

This packet will be collected at the start of school, and be counted as two homework assignments. This material will be reviewed during the first week of school and students will take a short quiz on this material to begin the second week of school; the quiz will consist of exact problems from this packet.

2. There are many options for summer math skills review workbooks that can be purchased by families. Here is an excellent one. This workbook is intended to be used only 3 days per week for ten weeks.

http://www.summerskills.com/summerskillsbooks/math_books

3. In addition to the math packet, below are some ideas of activities you can do every day with your child. Also included in this letter is a list of games and websites that you can use with your child to assist in the development of good math skills, such as spatial recognition, sequencing, patterns, logical deduction, visual memory and number facts. These games can help strengthen a mathematical foundation that is further developed within the math classroom. Most of the items on the list are commercial games. They

are motivational and, with parent involvement, these games are an excellent way to get your child to communicate concepts while sharpening thinking skills. They also provide an opportunity for discussion and questions, encouraging your child to evaluate answers, draw conclusions and strengthen reasoning skills. Games are a low stress way to engage your child in math while developing necessary skills. We hope you will find time to use some of these suggestions and that you enjoy playing them.Thank you for your support. We are looking forward to an exciting and enriching year with your child.

SHARING MATH IN EVERYDAY LIFE

+ Budget Share the budget (household, food, clothing, phone, vacation etc.) with your child.

+ Banking Explain and share interest rates with your child.

+ Grocery Shopping
Have your child estimate the total bill.
Share any money saving techniques with your child (coupons, percent discounts, etc).
Have your child compare unit prices to find the better deal.

+ Purchasing Gasoline
Have your child predict the cost of gasoline and how far you can travel on one full tank based on your car's mileage.

+ Going on Vacation!
Car: Before the vacation, ask your child to predict how long the drive will take based on an average speed of 60 miles per hour (no more "are we there yet!").
Airplane, Bus, Train: Have your student practice elapsed time (time of arrival versus time of departure).

+ Going out to Eat Have your child help figure out the tip.

+ Baking Have your child follow a recipe (dividing a recipe in half practices fraction operations).

+ Construction Project
Have your child help you plan and measure prior to construction.

+ Sports Share sport statistics with your child (shooting percentages, golf scores, baseball averages, etc)

GAMES

The following list of games, excerpted from *Games and Their Uses in Mathematics Learning (Sharma, 2008)*, will help your child sharpen thinking skills, makes inferences, draw conclusions, evaluate answers and strengthen reasoning. Beside each title are the skills and concepts which are reinforced.

- **Simon** or **Mini Wizard** (sequencing, following multi-step directions, visual and auditory memory)
- **Battleship** (spatial orientation, visualization, visual memory)
- **Cribbage** (number relationships, patterns, visual clusters)
- **Concentration** (visualization, pattern recognition, visual memory)
- **Chinese Checkers** (patterns, spatial orientation/space organization)
- **Pachisi** (sequencing, patterns, number relationships)
- **Checkers** (sequencing, patterns, spatial orientation/space organization)
- **Othello** (pattern recognition, spatial orientation, visual clustering, focus on more than one aspect, variable or concept of time)
- **Score Four** or **Connect Four** (pattern recognition, spatial orientation, visual clustering, geometric patterns)
- **Qubic** (pattern recognition, spatial orientation, visualization, geometrical patterns)

More Games:

- **Kalah** or **Mankalah** (sequencing, counting, estimation, visual clustering)
- **Master Mind** (sequencing, logical deduction, pattern recognition)
- **Four Sight** (spatial orientation, pattern recognition, logical deduction)
- **Card Games** (visual clustering, pattern recognition, number facts)
- **Dominos** (visual clustering, pattern recognition, number facts)
- **Stratego** (spatial recognition, logical deduction, graphing)
- **Number War Games** (visual clustering, arithmetic facts, mathematics concepts)

WEBSITES FOR MATH GAMES & HELP

http://www.khanacademy.org/

http://www.ixl.com/math/grade-8

http://calculationnation.nctm.org/

http://mathforum.org/dr.math/

Week 1

Determine whether the number is prime or composite. If composite list the factors.

1. 5
2. 57

Compare using > , < , or =

3. 3,567 ☐ 3,657

4. 23.14 ☐ 23.23

5. .007 ☐ .07

Order the numbers from least to greatest

6. 367 ; 578 ; 297

7. 7,467 ; 7,466 ; 7,476

Round each number to the nearest hundred

8. 1,642
9. 12,852
10. 1,237

Add or subtract, give answer in simplest form.

11. $\frac{2}{5} + \frac{1}{5}$

12. $\frac{3}{8} + \frac{4}{8}$

13. $\frac{5}{7} - \frac{1}{7}$

Multiply. Use the traditional multiplication algorithm

14. 132×27

15. 1452×12

Week 2

1. Write 27.45 in expanded form.

Compare using >, < , or =

2. 31,521 ☐ 31,125
3. 1.018 ☐ 1.18

Order the numbers from least to greatest

4. 23.12 ; 23.02 ; 23.31 ; 23.13
5. .005 ; .002 ; .02 ; 0.5

Add or subtract, give answer in simplest form.

6. $6\frac{1}{3}+2$

7. $1\frac{3}{8}+5\frac{3}{8}$

8. $7\frac{2}{3}-2\frac{1}{3}$

Round to the indicate place value

9.	12. 04	*Ones*
10.	26.87	*Tenths*
11.	19.259	*Hundredths*

Multiply. Use traditional multiplication algorithm

12. 118×42

13. 419×236

Divide. Use traditional Division algorithm

14. $234 \div 9$
15. $840 \div 12$

Week 3

Evaluate each expression

1. $4 \cdot 12 - 7$
2. $15 \div 3 + 10$
3. $4 + 2 \cdot 6$
4. $10 - 4 \div 2$

Multiply. Use traditional multiplication algorithm

5. 276×49
6. $1{,}236 \times 31$

Divide. Use traditional Division algorithm

7. $512 \div 16$
8. $648 \div 72$

Find the value

9. 2^4
10. 7^2
11. 3^3

Add or subtract

12. $5.2 + .05$
13. $8.0 - 1.9$
14. $12.6 - 3$
15. $.07 + 0.2$

Week 4

Identify a pattern in the sequence, and find the missing terms.

1. 4, 9,14,19, ___, ___,____

2. 1,3,9,27, ___, ___,____

3. Write 123.09 in expanded form.
4. Write 0.1 + 0.07 + 0.006 in standard form.
5. Write 8.024 in word form

Multiply, give answer in simplest form.

6. $\frac{2}{3} \times \frac{7}{9}$

7. $\frac{1}{8} \times \frac{2}{9}$

8. $2\frac{1}{3} \times \frac{4}{5}$

Divide. Use traditional Division algorithm

9. $512 \div 16$

10. $1,472 \div 23$

Add or subtract

11. 23.17 + 7.52

12. 19.50 - 8.45

Multiply. Use the traditional multiplication algorithm.

13. 4×0.3

14. $3 \times .25$

15. $9 \times .07$

Week 5

Write each number as an improper fraction

1. $4\frac{1}{5}$

2. $11\frac{1}{4}$

Add or subtract

3. 102.35 + 35.22
4. 25 - 13.483

List the first four multiples of each number.

5. 9

6. 14

Multiply. Use the traditional multiplication algorithm

7. $12 \times .8$

8. $22 \times .15$

Add or subtract, give answer in simplest form.

9. $11\frac{2}{3} + 2\frac{1}{3}$

10. $9 - 2\frac{4}{5}$

Multiply or divide, give answer in simplest form.

11. $\frac{4}{9} \times \frac{2}{3}$

12. $2\frac{1}{4} \times \frac{2}{5}$

13. $\frac{1}{3} \div \frac{4}{5}$

14. $\frac{3}{5} \div \frac{4}{7}$

Week 6

List all of the whole number factors of each number.

1. 12
2. 30
3. 75

Multiply. Use traditional Multiplication algorithm

4. 12.4×0.2

5. 18.6×5.9

Order the fractions from least to greatest

6. $\frac{1}{4}$; $\frac{3}{8}$, $\frac{5}{8}$

7. $\frac{2}{5}$; $\frac{1}{2}$, $\frac{3}{10}$

Compare using >, < , or =

8. $\frac{4}{15}$ ☐ $\frac{3}{10}$

9. $\frac{3}{5}$ ☐ $\frac{2}{20}$

Evaluate each expression

10. $3 + 4 \cdot 6$

11. $8 \div 4 + 12$

12. $9 + 12 \cdot 2$

13. $5 \times 3 + 8 \times 2$

Week 8

Subtract

1. 4,000- 2,154
2. 8,000 – 1749
3. 10,000 – 4,523

Add or subtract

4. $7\frac{1}{4}+2\frac{1}{2}$
5. $2\frac{3}{8}+5\frac{1}{4}$
6. $11 - 7\frac{2}{3}$

Round to the indicate place value

7. 125.46 ***Tenths***
8. 24.578 ***Hundredths***

Multiply. Use traditional multiplication algorithm

9. 123.47×1.2
10. $49.7 \times .7$

Divide. Use traditional Division algorithm

11. $21{,}303 \div 27$

Find all of the whole number factors of each number.

12. 46
13. 81

Multiply or divide

14. $\frac{6}{7} \times \frac{1}{5}$
15. $4\frac{1}{4} \times \frac{2}{3}$
16. $\frac{2}{9} \div \frac{3}{5}$