Clover School District
Summer Math Learning Packet
Students Entering Grade 4

These summer math activities will enable your child to review math concepts and reinforce skills learned this year. Just a few minutes each day spent "thinking and talking about math" will help reinforce all the math that has been learned and begin to bridge the foundation for extending to concepts that will be developed next year. The goal is for your child to have fun thinking and working collaboratively to communicate mathematical ideas. While your child is working, ask him/her how the solution was found and why a particular strategy was chosen.

The math practice in this summer packet addresses 4 critical areas in grade 3:

1. developing understanding of multiplication and division and strategies for multiplication and division within 100
2. developing understanding of fractions, especially unit fractions (fractions with numerator 1)
3. developing understanding of the structure of rectangular arrays and of area
4. describing and analyzing two-dimensional shapes.

This packet consists of 2 calendar pages, one for June and one for July. There are problems included for each day of the week, excluding weekends. Literature, APPs and websites are also recommended to explore mathematics in different ways. We encourage your child to complete at least 15 math days each month. We hope your child will spend at least 10 minutes a day, 4 to 5 times a week, practicing math. Create a goal with your child to help him/her stay strong in math over the summer. For example, my child will aim to complete at least 200 minutes of math practice over the course of the summer and keep track of his/her learning in a math journal. A math journal records your work either in print or digital format. See the example of a "great" journal entry.

If the activities suggested do not seem to "fit your child" or you have your own websites/literature/math practice you would like to do, please feel free to substitute your own activities that better suit your child's needs or learning style. Examples: practice multiplication facts using flashcards, count money, etc.

Student mathematicians - keep your mathematics skills sharp and have a safe and enjoyable summer. ☺

CSD Clover School District

Each Child, Each Day...Excellence

Adapted from Cambridge Public Schools http://www3.cpsd.us/Math/math_summer

Grade 4 Students
Summer Math Ideas

Math Tools You Will Need:

Notebook for math journal	Dice
Pencil	Regular deck of playing cards
Crayons	

DIRECTIONS:

Do your best to complete as many of these summer math activities as you can! Record your work in your math journal every day. In August, share your Math Journal with your fourth grade teacher.

Each journal entry should:

- ✓ Have the date of the entry
- ✓ Have a clear and complete answer
- ✓ Be neat and organized

Here an example of a "Great" journal entry:

June 25, 2022
Today I went outside to play at 9:35 a.m. and came in at 11:05 a.m. I was outside for a total of 90 minutes. This can also be written as 1 hour and 30 minutes, or 1½ hours.

Worksheets to Practice Math:

http://www.gregtangmath.com/resources
http://www.commoncoresheets.com/

Websites:

http://illuminations.nctm.org/Games-Puzzles.aspx
http://www.funbrain.com/
http://www.aplusmath.com/
http://pbskids.org/cyberchase/math-games/
http://www.gregtangmath.com/
http://bedtimemath.org
http://www.figurethis.org./index.html
http://xtramath.org/
http://www.summermathtools.weebly.com
http://www.mathgoodies.com
http://www.brainbashers.com/
http://hoodamath.com
http://www.mathsisfun.com/index.htm
http://mathplayground.com
https://www.setgame.com/set/puzzle

Games to Play: (You will need a deck of cards, with all the face cards removed. Treat the ace as the number 1.)

1. **Multiplication War -** Deal out all the cards equally between 2 or 3 players. Each player turns over 2 cards and multiplies the numbers together. The person with the higher product wins the pile of cards. If you have the same product, then repeat the procedure. Winner takes all the cards.

2. **Close to 1000 -** Deal 8 cards to each player. Use any 6 of your cards to make two 3-digit numbers. Try to get a sum that is close to or equal to 1000. Write these 2 numbers in your journal. Your score is the difference between your number and 1000.
Example: Your eight cards are 1, 5, 4, 3, 1, 8, 3, 8
You can combine 148 + 853 = 1001. Your score is 1 since the difference between 1001 and 1000 is 1. Discard the 6 used cards and pick 6 new cards. Whoever has the lowest total score after 5 rounds wins the game.

Other games to play: Monopoly, Othello, Battleship, Connect Four, Mastermind, Mancala, Legos, K'Nex, Simon, Yahtzee

Math Books to Read:

The $1.00 Word Riddle Book by Marilyn Burns
Fraction Fun by David Adler
The Best of Times by Greg Tang
Pigs Will be Pigs: Fun with Math and Money by Amy Axelrod

APPs:

Grades 3-5

- Everyday Mathematics, Addition Top It
- Everyday Mathematics, Beat the Computer, Multiplication
- Everyday Mathematics, Divisibility Dash
- Everyday Mathematics, Equivalent Fractions
- Pizza Fractions 1
- My Times Tables
- Tony's Fraction's Pizza Shop
- Pearl Diver HD
- Lobster Diver HD
- Factor Samurai – multiplication and division
- Fraction App by tap to Learn
- Dare to Share Fairly
- Long Division Touch
- Math Ninja HD
- Quick Math
- Wuzzit Trouble
- Sushi Monster
- Deep Sea Duel
- Zap Zap Fractions
- MathLand (Critical Thinking skills)
- Tenzen - tangrams

All Grades

- KENKEN
- Kakooma Addition, Times
- Quick Math – Arithmetic & Times Tables
- Pick-a-Path
- Sumdog
- Conundra Math
- Thinking Blocks
- Fast Facts Addition, Subtraction
- Fast Facts Multiplication, Division
- Flash to Pass
- Prodigy (20 per day)
- IXL (as a guest)

Adapted from Cambridge Public Schools http://www3.cpsd.us/Math/math_summer

June 2022 Entering Fourth Grade Mathematics Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			**1** Compare the fractions below. Use the symbols >, =, or < to record your comparisons. Draw a picture to illustrate your answer. 2/6 and 5/6 1/2 and 1/3	**2** Play a math card game. What strategy did you use? Would you use the same strategy again?	**3** Play the ***Product Game*** at www.illuminations.nctm.org. Record the strategy that you used.	**4**
5	**6** Draw a 6-inch number line that begins with 0 and ends with 1. Roll a die. Divide your number line into this number of equal segments. Label the segments. Explain your thinking.	**7** Rosa made 56 cupcakes. She put 8 cupcakes into each box and sold the boxes for $3.00 each. How much money did Rosa receive?	**8** Write a story problem that can be solved using the number sentence 9 x 3 = __.	**9** I am a number between 20 and 30. When you divide me into 6 equal groups, there is an even number in each group and 2 are left over. What number am I? Write your own division riddle.	**10** Read The Best of Times by Greg Tang. Make a set of flash cards and practice the multiplication facts.	**11**
12	**13** Play ***Chairs*** at www.illuminations.nctm.org. If you have 8 tables, what is the greatest number of people you can seat in a line?	**14** Arrange the fractions in order, beginning with the least. Explain your answer with a picture. 1/5, 1/7, 1/3	**15** Use the numbers 3, 5, and 15 to write a multiplication number story. Write a related division story. Write a number sentence for each story.	**16** Find a newspaper and cut the articles or pictures out. Organize them by area from least to greatest.	**17** Figure your age in months. How many months old are you?	**18**
19	**20** Roll 2 dice and multiply to find the product. Record the products. Do this 25 times. Create a bar graph with the results. What do you notice?	**21** Choose one activity for a day and record the start and stop time. Calculate the elapsed time for the activity. (ex. time you wake up and go to sleep)	**22** Read or watch on YouTube Fraction Fun by David Adler. Which is larger, 2/3 or ¾? How do you know? Prove it.	**23** Marsha had 120 stamps. First, she gave her sister half of the stamps and then she used three to mail letters. How many stamps does Marsha have left?	**24** Try a new game at www.funbrain.com. Challenge yourself.	**25**
26	**27** Read a math book. Explain the math related skill. Give a real life example of the skill.	**28** Gather 3 store receipts. Find the total amount that was spent.	**29** When rounding to the nearest ten, what is the smallest whole number that will round to 50? The largest? How many different whole numbers round to 50?	**30** Practice math facts in a fun way at the website www.multiplication.com. What games did you play?	**We encourage your child to** • **complete at least 15 math days each month,** • **spend at least 10 minutes a day, 4 to 5 times a week, practicing math,** • **use a math journal to record his/her work, and** • **create a goal to help him/her stay strong in math over the summer.**	

Adapted from Cambridge Public Schools http://www3.cpsd.us/Math/math_summer

July 2022 Entering Fourth Grade Mathematics Calendar

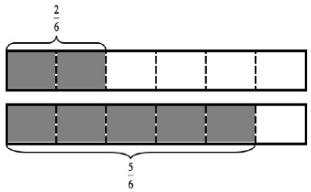
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
We encourage your child to • **complete at least 15 math days each month,** • **spend at least 10 minutes a day, 4 to 5 times a week, practicing math,** • **use a math journal to record his/her work, and** • **create a goal to help him/her stay strong in math over the summer.**						
					1 Write multiplication and division combinations for 6, 7, and 42. Can you write a word problem to go with these equations?	**2**
3	**4** 4hen rounding to the nearest hundred, what is the **smallest** whole number that will round to 500? The **largest**? How many different whole numbers will round to 500?	**5** Write a word problem whose answer is 12. Have someone solve the problem. Choose another answer and make up a problem.	**6** There are 6 tables in Mrs. Potter's art classroom. There are 4 students sitting at each table. Each student has a box of 10 colored pencils. How many colored pencils are at each table? How many colored pencils in total?	**7** A farmer has chickens and cows. What combination of animals could total 24 legs? Is there more than one combination?	**8** Play ***Multiplication War.*** (see direction page)	**9**
10	**11** Play a math card game. What strategy did you use? Would you use the same strategy again?	**12** Family fun! Go on a road trip. Write down the miles on the odometer when you leave. Write down the miles when you get home. How many miles did you travel?	**13** Try a new activity at www.funbrain.com. Challenge yourself.	**14** The product of two numbers is 30. The sum of the two numbers is less than 20. What might the two numbers be? Show all possible solutions and explain your thinking.	**15** Choose 1 number: 2, 3, 5, or 6. Double the number you chose. Double the sum. Keep on doubling until you get a sum that is greater than 1,000. How close to 1,000 is the number you reached?	**16**
17	**18** Plan a meal for your family. With an adult, make a list of the ingredients, go shopping, and then follow the recipes. Are there fractions in your recipes?	**19** Have a scavenger hunt for real-world examples of right angles (ex. the corner of a book).	**20** Gather 3 store receipts. Find the total amount that was spent.	**21** Go to the website https://www.setgame.com/set/puzzle Play and enjoy!	**22** There are 24 desks in the classroom. If the teacher puts 6 desks in each row, how many rows are there? How did you get your answer?	**23**
24 **31**	**25** Read or watch on YouTube Pigs Will be Pigs: Fun with Math and Money by Amy Axelrod. Get a menu from a restaurant and determine the total amount it would cost for your family to eat there.	**26** Play the game ***Close to 1000.*** (see directions)	**27** Find 4 numbers larger than 1,000 in a newspaper. Put them in order from least to greatest. What is the difference between the smallest and the largest?	**28** Play ***Concentration*** at www.illuminations.nctm.org. Choose cards: ***fractions*** games: ***face down*** Draw pictures that represent some fractions.	**29** Select ten items from a grocery flyer and find the total cost of the items. Calculate how much change you would receive from a one hundred dollar bill. **YOU DID IT!** Please bring your journal to your teacher on the first day of school!	**30**

Adapted from Cambridge Public Schools http://www3.cpsd.us/Math/math_summer

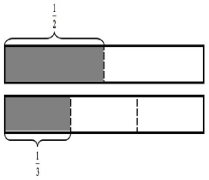
Grade 4 Answer Key - 2022
Answers will vary for many of the activities depending on the choices students make.
Below are the answers for activities with specific solutions

June 1

2/6 < 5/6



½ > 1/3



June 7

7 boxes of cupcakes. She made $21.00.

June 8

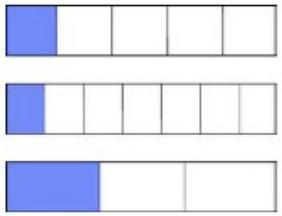
Example: There were 9 tricycles at the park. How many wheels were there altogether? (9 groups of 3 wheels)
Answer = 27

June 9

26

June 14

1/7, 1/5, 1/3



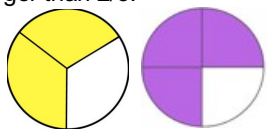
June 15

Example story problems: Multiplication number story: Kellen has 3 bags with 5 apples in each bag. How many apples are there in all? 3 X 5 = 15

Division number story: If 15 apples are to be packaged 5 to a bag, then how many bags does Kellen need? 15 ÷ 5 = 3

June 22

¾ is larger than 2/3.



June 23

Masha had 57 stamps left.

June 29

Smallest: 45
Largest: 54
Total number that round to 50: 10
The numbers are 45, 46, 47, 48, 49, 50, 51, 52, 53, 54.

July 1

6 X 7 = 42
7 X 6 = 42
42 ÷ 7 = 6
42 ÷ 6 = 7

July 4

Smallest: 450
Largest: 549
Total number that round to 500: 100
All of the numbers from 450 to 549 will round to 500.

July 6

Each student has a box of 10 pencils, which is one group of 10. There are 4 students at each table, so there are 4 groups of 10 pencils or 4 × 10 pencils at each table. We also know that the "4" in the number 40 means "4 tens" so we know there are 40 pencils at each table.

Since there are 6 tables, and 40 pencils at each table, there are 6 × 40 pencils in total. There are 240 pencils in total.

July 7
Examples:
1 cow and 10 chickens
2 cows and 8 chickens
3 cows and 6 chickens
4 cows and 4 chickens
5 cows and 2 chickens

July 14
2 x 15 = 30
3 x 10 = 30
5 x 6 = 30

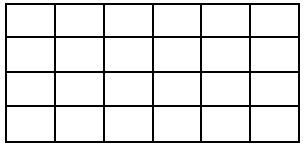
When the factors are added together they add up to less than 20.
2 + 15 = 17
3 + 10 = 13
5 + 6 = 11

The two possible numbers could be 2 and 15, 3 and 10, OR 5 and 6.

July 15
2 x 2 = 4
4 X 2 = 8
8 X 2 = 16
16 X 2 = 32
32 X 2 = 64
And so on.

July 22
Example solutions:

A student may draw an array by putting 6 desks in 4 rows.



A student may draw pictures of equal groups. 4 groups of 6 equals 24 objects

A student could also reason through the problem mentally or verbally, “I know 6 and 6 are 12. 12 and 12 are 24. Therefore, there are 4 groups of 6 giving a total of 24 desks in the classroom.”

A student may use a number line to show equal jumps.