

Welcome to the May 2023 Clyde Hill Math Challenge!

Submit by May 26, 2023!

Remember from last time: We believe ***math is for everyone!*** No one is born "bad" at math - we all have different learning styles and obstacles to overcome - but with motivation and practice we can all build a good math foundation that will help us with many life skills. Cooking, art, music, gaming, budgeting, construction, boating, and sports all benefit from mathematical foundations. Just like you do drills in soccer to build your foundational soccer muscles, we encourage math practice to build your math muscles!

Also just like with your favorite sport or music or art - practice and drills can be fun! These Math Challenges are designed to show the many ways puzzles and games use and reinforce math concepts. We love math and want to share our excitement with you! If there are other challenges you want to see in the future - please let us know!

If you would like the challenge translated into another language, please email us at math-challenge@clydehillpta.org.

How does the Math Challenge work?

Every month we will post 6 math challenges that focus on different skills. You can do as many or as few as you like. Even if you don't find the solution - that's ok! Our growth mindset lets us try our best and improve in steps. Trying is our first step! Our goal is to encourage participation, learn and have fun! At the end of each month, during the monthly assembly we will announce the class that has the most participants that month. At the end of the year, the grade that participated the most during the school year will have a special prize!

How do I participate?

You have two ways of submitting your entry ***by May 26, 2023:***

1. You may scan/take a photo of your entry and email it to math-challenge@clydehillpta.org
2. You may drop your entry off at a mailbox in the front office

Your entry must contain:

- Your name, grade and teacher (We need to know who you are!)
- Your work on at least one of the challenges. (To participate, you only have to try!)

We will post the solutions after the announcement at the monthly assembly!



Thank you! Gracias! 谢谢! どうもありがとう! 감사합니다! धन्यवाद! спасибо! Благодаря!

Before going to this month's questions, I wish to extend many thank yous to everyone who helped me get the Math Challenge off the ground and into as many languages as possible!

Thank you! Gracias! 谢谢! どうもありがとう! 감사합니다! धन्यवाद! спасибо! Благодаря!

AJ Decostanza	Kathy Bessler
Shera Myers	Bo Su
Principal García de León	Kayo Takashima
Vice Principal Hook	Yuji Ono
Lizie Piazza	Junho Yamamoto
Charu Jeevanandam	Joy Maeng
Rajesh Sugumaran	Jaehong Min
Shoba Girish	Karam Nam
Debyani Ghosh	Hyejin Cho
Anu Bandi	Suh Hyun Choi
Meg Kutsarova	Pavel Bronnikov

Thank you again everyone!

Jennie Cochran-Chinn and Clyde Hill PTA

Thank you! Gracias! 谢谢! どうもありがとう! 감사합니다! धन्यवाद! спасибо! Благодаря!

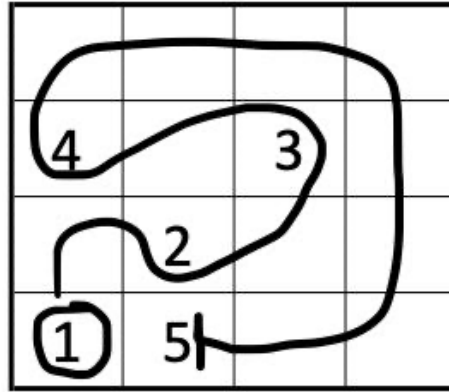
Name: _____

Grade: _____ Teacher: _____

Number Paths

In the puzzles below, we draw path through the numbers in order from least to greatest. The path can only move up, down or side to side; it cannot go diagonally. The path must go through all squares, and can only go through each square once.

Example:



Puzzles:

80	16		
	67	43	
		34	
	76	28	

32		87	
		23	
	15		
	51	78	

Name: _____

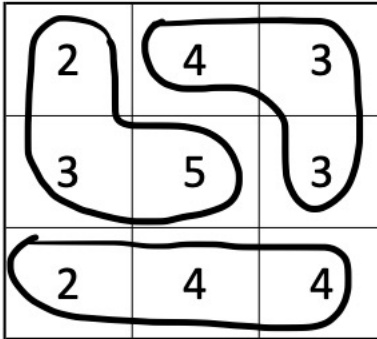
Grade: _____ Teacher: _____

Sum Blobs

In the puzzles below, we circle blobs where the sum of the numbers in the blob equals a given goal number. Each square is part of exactly one blob. (Each square is in one and only one blob.) Each square in a blob must share at least one edge with another square in the blob. (Squares must be connected horizontally or vertically, not diagonally.)

Example:

sum: 10



Puzzles:

sum: 50

5	11	17	7
40	23	27	15
5	26	11	13
2	18	23	7

sum: 37

24	19	16	21
13	18	4	17
6	13	7	16
6	12	15	15

Name: _____

Grade: _____ Teacher: _____

Make a times table poem or song

Mnemonics are things that help you remember something. For the order of operations you might use the acronym: PEMDAS - parenthesis, exponents, multiplication/division, addition/subtraction. For learning the letters used in the English language you might sing the English alphabet song.

For this challenge, you will come up with a poem or song to help remember some part of your times table.

Here is an example I came up with:

7, 14, 21

and we're not quite done

28, 35, 42

and there's still more to do

49, 56, 63

now the end I can see

70, 77, 84

you can go for even more

Name: _____

Grade: _____ Teacher: _____

Pleasing Patterns

Finish the following patterns.

1) 2, 4, 8, 16, _____, _____

2) 1, 4, 9, 16, 25, _____, _____

3) 25, 82, 21, 30, 80, 24, 35, 78, 27, 40, 76, _____, _____, _____

4) _____, _____, 39, 46, _____, _____, 67, 74, _____, _____

5) 8, 10, 15, 17, 22, 24, 29, 31, 36, _____, _____

6) 4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20, 21, 22, 24, 25, 26, 27, 28, 30, _____, _____

7) z , $8z^2$, $27z^3$, $64z^4$, $125z^5$, _____, _____

8) $2x + 1$, $2x - 3$, $4x + 5$, $6x - 7$, $10x + 9$, $16x - 11$, _____, _____

Name: _____

Grade: _____ Teacher: _____

Egyptian Fraction Sumsoku

An Egyptian Fraction is a sum of unit fractions. For instance, $\frac{1}{2} + \frac{1}{10}$ is the Egyptian Fraction equivalent to the $\frac{3}{5}$. Also, $\frac{1}{3} + \frac{1}{9}$ is the Egyptian Fraction equivalent to $\frac{4}{9}$.

In the puzzle below, each box is filled with a unit fraction in the set $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$ or $\frac{1}{6}$. Each unit fraction appears exactly once in each column and exactly once in each row. The equivalent fraction to the Egyptian Fraction inside each heavily outlined box is shown in the upper right corner of the outlined box. (The sum of the unit fractions in each box is shown in the upper right corner.) An excerpt of another puzzle is shown here:

$\frac{1}{2}$	$\frac{1}{4}$
$\frac{1}{6}$	$\frac{1}{2}$

Puzzle:

	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{7}{10}$	$\frac{7}{12}$
$\frac{3}{4}$	$\frac{11}{30}$			
			$\frac{3}{4}$	$\frac{13}{15}$
$\frac{8}{15}$		$\frac{5}{6}$		
		$\frac{9}{20}$		