

Virtual Math Manipulatives

CLICK ANYWHERE

TOY THEATER



MATH LEARNING CENTER



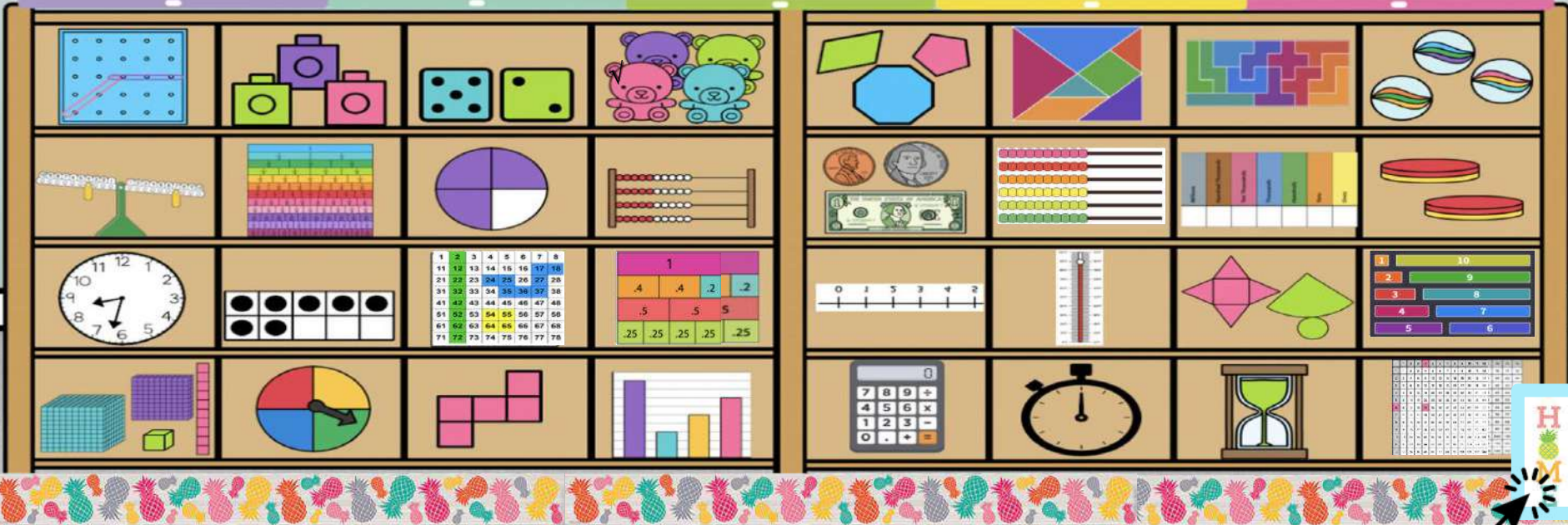
MATHIGON'S POLYPAD

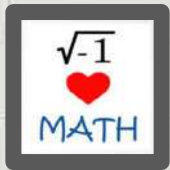


MATH PLAYGROUND



DIDAX



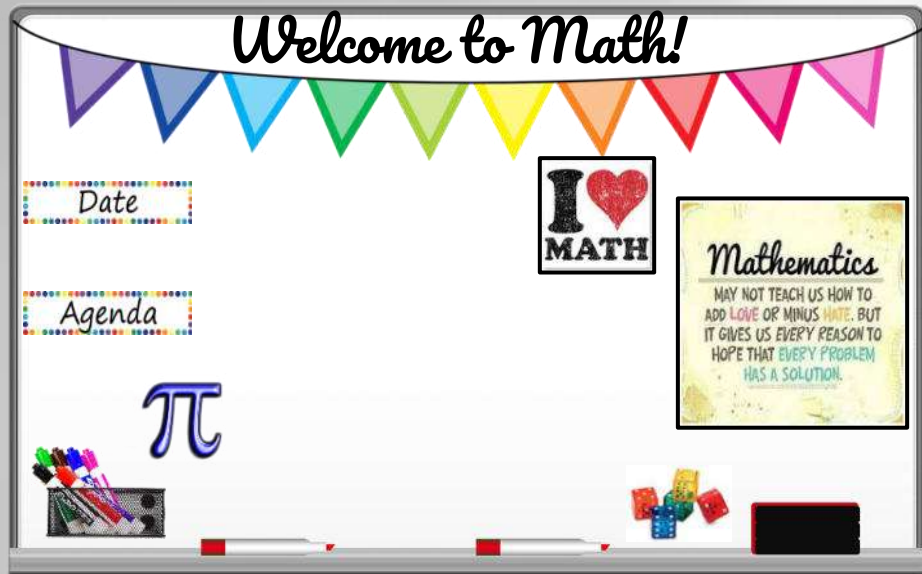


hello

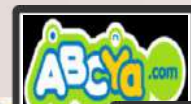
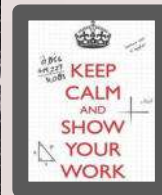
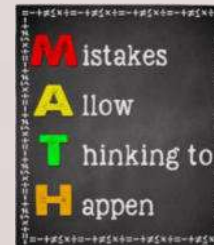
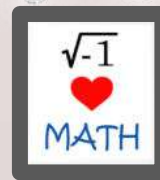
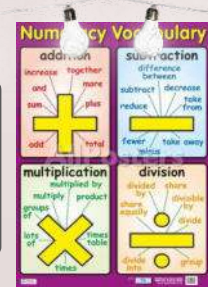


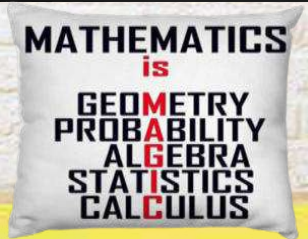
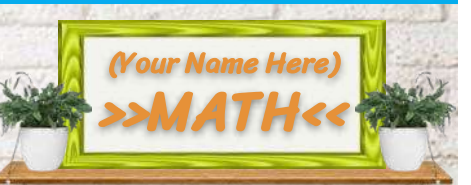
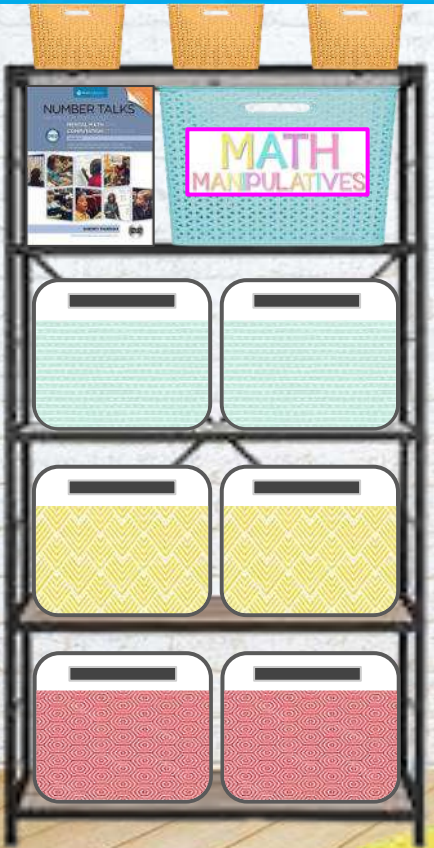
LEARN





Happy Learning!





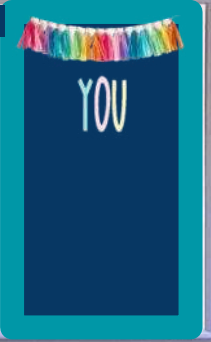


EVERYTHING
IS GOING TO BE OKAY.

BELIEVE
IN THE
PERSON YOU
WANT TO
BECOME



Welcome



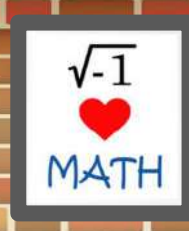
Now we got
PROBLEMS,
and I
think we
can
solve them





#mathislife



Click on a math tool to play a game!



Almost everything
you see has a link
to a video.
Click to watch.



RULES!

R Respect is shown to all.

E Everyone raises their hand to talk and when two to talking.

S Soft voices and appropriate language in class.

P Participation is expected from all students and teachers.

E Everyone comes to class prepared.

C Class begins on time, so be on time.

T Teachers and students are allowed the first one.

C Conversation

H Help

A Activity

M Movement

P Participation

S

Standards for Mathematical Practice

C Circle key numbers & units. What do I know? What do I need to know?

U Underline the question. What am I being asked to do?

B Box math (fraction) words. Am I going to ADD, SUBTRACT, multiply or divide?

E Evaluate and eliminate. Which steps do I need? What information do I need?

S Show your work and check. Does my answer make sense? How can I check my work?

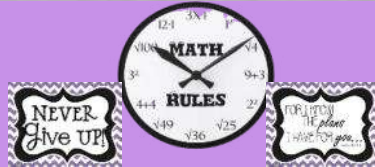
CLASSROOM AWARD

Compliments to: _____

for being the best at: _____

You have been in my special part of class this year!

Can you explain what you mean by _____?



SOLVE PROBLEMS!
 ANALYZE DATA
 EXPLAIN THEIR THINKING
 CHECK THEIR WORK
 REUSE IDEAS
 USE APPROPRIATE TOOLS
 PERFORM ACCURATELY
 MAKE CONNECTIONS
 ATTEND TO PRECISION
 THINK CRITICALLY
 FIND PATTERNS
 APPLY PRIOR KNOWLEDGE
 SETBACKS

Today's Objectives

I can recognize the x-axis and the y-axis.

Math

Absent Folder

Name: _____

Happy Birthday!

January	February	March
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12

If you ROCK!!



Decimals

Hundredths	Ten	One	Decimal	Tenths	Hundredths
			.		

Tenths are like coins.
It takes 10 dimes to make 1 dollar.
It takes 10 pennies to make 1 dime.
Hundredths are like pennies.
It takes 100 pennies to make 1 dollar.
It takes 100 hundredths to make 1 whole.

Comparing Decimals

Compare decimals the same way you compare whole numbers, but MAKE SURE you line up the decimals.

283.4	>	283.12
2		2
8		8
3		3
.		.
4		1
		2

283.4 > 283.12 because the whole numbers are the same and 4 tenths is bigger than 1 tenth.

Adding Decimals

Step 1: Convert decimals into fractions over 100.
Step 2: Add the fractions and whole numbers.
Step 3: Convert fraction answer back into a decimal.

$$3.3 + 2.44 = 3 \frac{33}{100} + 2 \frac{44}{100} = 5 \frac{77}{100} = 5.77$$

Area Model:

Step 1: Write the factors in expanded form.
Step 2: Draw and label your boxes.

Conversion Chart

Fewer big units	=	Many smaller
1 pound (lb)	=	16 ounces (oz)
1 yard (yd)	=	3 feet (ft)
1 foot (ft)	=	12 inches (in)
1 gallon	=	4 quarts
1 quart	=	2 pints
1 pint	=	2 cups
1 minute	=	60 seconds
1 hour	=	60 minutes
1 day	=	24 hours

Use multiplication to convert from a larger size unit to a smaller size unit.
Use division to convert from a smaller size unit to a larger size unit.

Example:
How many feet are in 4 yards?
1 yard is 3 feet.
3 ft 3 ft 3 ft 3 ft
So if we have 4 groups of 3 feet
We could do $4 \times 3 = 12$ ft

How many gallons is 20 quarts?
1 quart is 1/4 gallon.
20 quarts divided by 4 is 5
5 gallons 2 quarts

ing 2 Digits by 2 Digits!

Standard:

by the ones
by the tens

$$\begin{array}{r} 53 \\ \times 26 \\ \hline 318 \leftarrow 6 \times 53 = 318 \\ + 1,060 \leftarrow 2 \times 53 = 1,060 \\ \hline 1,378 \end{array}$$

Partial Products:

Measurement and Conversions

Lots of small units	=	Fewer larger units
100 centimeter (cm)	=	1 meter (m)
1,000 meter (m)	=	1 kilometer (km)
1,000 grams (g)	=	1 kilogram (kg)
1,000 milliliters (mL)	=	1 liter (L)
12 inches (in)	=	1 foot (ft)

Units of Capacity



1 cup = 8 fluid ounces
2 cups = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon

Classifying Triangles by Their Angles

Name	Definition	Illustration
Acute	All three (3) angles are less than 90 degrees. All 3 angles are acute angles.	
Right	Has one (1) angle that measures 90 degrees. This triangle has one right angle.	
Obtuse	Has one (1) angle larger than 90 degrees. This triangle has one obtuse angle.	

• Triangles can have more than one classification.

• For Example:

• An equilateral triangle is also an acute triangle because an equilateral triangle has 3 acute angles.

• A right triangle is also an isosceles triangle because a right triangle has two sides that measure the same length.

ing Whole Numbers

rs by place value
biggest place value
ber is bigger than the others it is
at (greater than)
bers are the same you move to the
value

437,082 and 431,967.

erals are polygons with 4 sides.

ifying Quadrilaterals

Attributes	Illustration
• 1 pair of parallel sides.	
• 2 pairs of opposite sides.	
• 2 pairs of opposite sides of equal length.	
• 2 pairs of opposite sides of equal length.	

Square:

• Some quadrilaterals can have multiple names.

EXAMPLE: A square is a quadrilateral because it has 4 sides. It can also be called a parallelogram because it has 2 pairs of parallel sides.

KEY:

Parallelogram Rhombus Rectangle

Classifying Triangles by Their Sides

Name	Definition	Illustration
Equilateral	All three (3) sides and angles are equal.	
Isosceles	Has only two (2) side lengths that are equal.	
Scalene	Has no equal sides or angles.	

Types of Fractions

A fraction is a number that expresses EQUAL PARTS of a WHOLE

UNIT FRACTION	PROPER FRACTION
$\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{1}{9}$	$\frac{4}{5}$
• a fraction whose numerator is LESS than the denominator.	• a fraction whose numerator is LESS than a WHOLE.

PART

WHOLE

MIXED NUMBER

• a number that consists of a WHOLE number and a fraction.

EXAMPLE: $3 \frac{5}{8}$

Write numbers using only digits!

Lines Vocabulary

m	Definition
Point	An exact location in space (DOT).
Line	An endless straight path with no end points (GO).
Ray	A part of a line with a single endpoint.
Segment	A part of a line with TWO endpoints.
Parallel Lines	Lines that are the same distance apart and NEVER intersect (cross).
Intersecting Lines	Lines that cross at a point.
Two Intersecting Lines	Two intersecting lines.

AREA & PERIMETER

Area Inside 15ft. 8ft.

AREA

$A = L \times W$
(length) x (width)

$A = 15 \times 8$
 $A = 120 \text{ sq. ft.}$

PERIMETER

$P = 12 + 12 + 6 + 6$
 $P = 36 \text{ ft.}$

METER Outside

P-Add all Sides



Click on a math object around the classroom to play some fun math games and other fun surprises!



Lesson 5

Objective: Name decimal fractions in expanded, unit, and word forms by applying place value reasoning.

Links

Grade 5
Module 1
Lesson 5



Lesson 6

Objective: Compare decimal fractions to the thousandths using like units and express comparisons with $>$, $<$, $=$.

Links

Grade 5
Module 1
Lesson 6



Topic B-
Decimal Fractions and Place
Value Patterns

Topic C-
Place Value and Rounding
Decimal Fractions

Focus Standards:

NC.5.NBT.3

NC.5.NBT.4

Lesson 7

Objective: Round a given decimal to any place using place value understanding and the vertical number line.

Links

Grade 5
Module 1
Lesson 7



Lesson 8

Objective: Round a given decimal to any place using place value understanding and the vertical number line.

Links

Grade 5
Module 1
Lesson 8



5.NBT.A.3 **Ordering decimals**

$> = <$

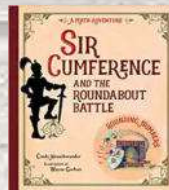
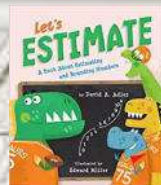
STACK YOUR NUMBERS.

ALWAYS START COMPARING AT THE LARGEST PLACE VALUE SPOT.

LEFT TO RIGHT

3.56, 4.2, .78

Stack	4.20	0.78	Order
LEFT	3.56	3.56	LEAST
TO			TO
RIGHT	0.78	4.20	GREATEST



5.NBT.A.4 **Rounding decimals**

find your PLACE. LOOK

Next door $\odot$. 5 OR GREATER Add 1 MORE, 4 OR LESS Let it Rest.

ALL DIGIT'S IN THE FRONT STAY THE SAME.

ALL DIGIT'S BEHIND, ZERO'S THEIR NAME!

Rounded to the tentHS:

38.25 $\sim$ 38.3

Rounded to the HuNdredthS:

19.723 $\sim$ 19.72



Lesson 9

Objective: Add decimals using place value strategies and relate those strategies to a written method.

Links

Grade 5
Module 1
Lesson 9



Lesson 10

Objective: Subtract decimals using place value strategies and relate those strategies to a written method.

Links

Grade 5
Module 1
Lesson 10



Topic D- Adding and Subtracting Decimals

Topic E- Multiplying Decimals

Focus Standards:

NC.5.NBT.2

NC.5.NBT.3

NC.5.NBT.7

Lesson 11

Objective: Multiply a decimal fraction by single-digit whole numbers, relate to a written method through application of the area model and place value understanding, and explain the process.

Links

Grade 5
Module 1
Lesson 11



Lesson 12

Objective: Multiply a decimal fraction by single-digit whole numbers, including using estimation to confirm the placement of the decimal point.

Links

Grade 5
Module 1
Lesson 12



5.NBT.A.2 decimal Place Value

THOUSANDS	HUNDREDS	TENS	ONES	TENTHS	HUNDRETHS	THOUSANDTHS
2	5	2	6	1	7	9

How CAN I Show My Number?

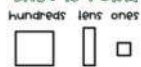
STANDARD FORM

3,526.179

WORD FORM

Three thousand five hundred twenty-six AND one hundred seventy-nine thousandths

BASE 10 FORM



EXPANDED FORM

$(3 \times 1000) + (5 \times 100) + (2 \times 10) + (6 \times 1) + (1 \times 1/10) + (7 \times 1/100) + (9 \times 1/1000)$

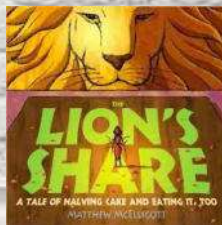
5.NBT.B.7 Adding & Subtracting decimals

- Step 1:**
LINE UP THE DECIMALS!
- Step 2:**
ADD FROM RIGHT TO LEFT!
- Step 3:**
DROP DOWN THE DECIMAL!

$$4.68 + 9.670$$

$$\begin{array}{r} 4.680 \\ + 9.670 \\ \hline 14.350 \end{array}$$

Add zeros as place holders to help line everything up!



5.NBT.B.7 MULTIPLICATION with decimals

MULTIPLY LIKE A NORMAL NUMBER.

COUNT THE NUMBER OF DECIMAL PLACES THAT ARE IN EACH NUMBER.

IN YOUR ANSWER (STARTING FROM THE RIGHT) MOVE THE TOTAL NUMBER OF DECIMAL PLACES TO THE LEFT. PLACE YOUR DECIMAL POINT THERE.

$$\begin{array}{r} 3.46 \quad \text{2 places} \\ \times 23 \quad \text{2 places} \\ \hline 1038 \\ + 6920 \\ \hline 7958 \quad \text{4 total places} \end{array}$$



Lesson 13

Objective: Divide decimals by single-digit whole numbers involving easily identifiable multiples using place value understanding and relate to a written method.

Links

Grade 5

Module 1
Lesson 13



Lesson 14

Objective: Divide decimals with a remainder using place value understanding and relate to a written method.

Links

Grade 5

Module 1
Lesson 14



Topic F- Dividing Decimals

Focus Standards:

NC.5.NBT.3

NC.5.NBT.7

Lesson 15

Objective: Divide decimals using place value understanding, including remainders in the smallest unit.

Links

Grade 5

Module 1
Lesson 15



Lesson 16

Objective: Solve word problems using decimal operations.

Links

Grade 5

Module 1
Lesson 16



5.NBT.A.2 ORDERING decimals

$> = <$

STACK YOUR NUMBERS.

ALWAYS START COMPARING AT
THE LARGEST PLACE VALUE SPOT.
LEFT TO RIGHT

3.56, 4.2, .78

Stack	4.20	0.78	Order
LEFT	3.56	3.56	LEAST
TO			
RIGHT	0.78	4.20	TO GREATEST

5.NBT.B.7 division with decimals

WHEN THE DECIMAL IS IN THE DIVIDEND.

1. Push the decimal up above.
2. Then divide like normal!



32 $\overline{) 47.61}$

WHEN THE DECIMAL IS IN BOTH THE
DIVISOR & THE DIVIDEND.

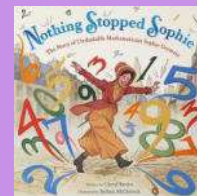
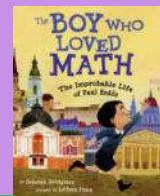
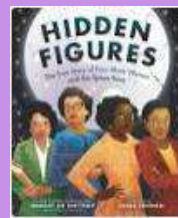
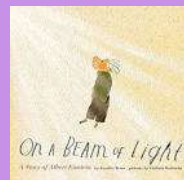
1. Move the decimal to the right in the divisor to make it a whole number.
2. Whatever you do in the divisor, you must do in the dividend.
3. Raise your decimal up and then divide like normal!

2.6 $\overline{) 7.634}$ 26 $\overline{) 76.34}$



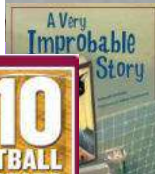
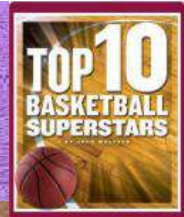
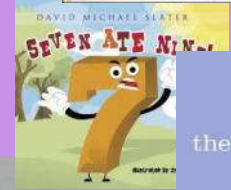
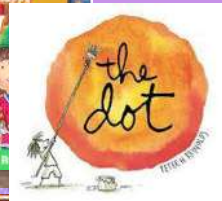
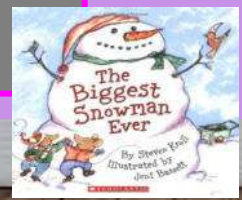
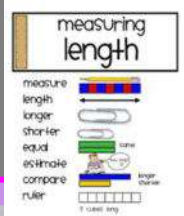
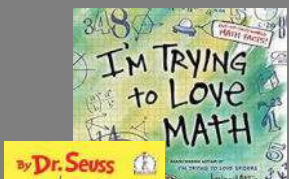
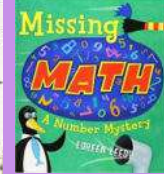
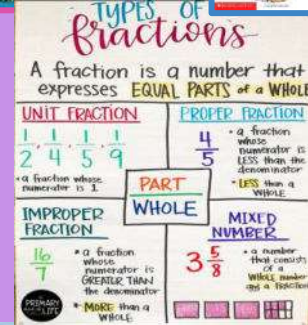
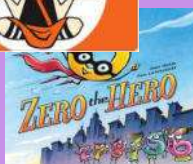
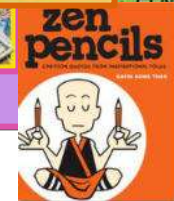
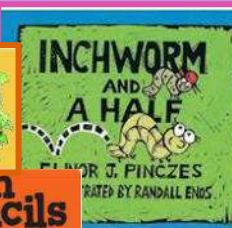
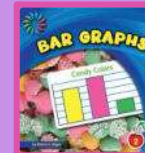
CLICK ON A BOOK TO READ ABOUT
MATHEMATICIANS

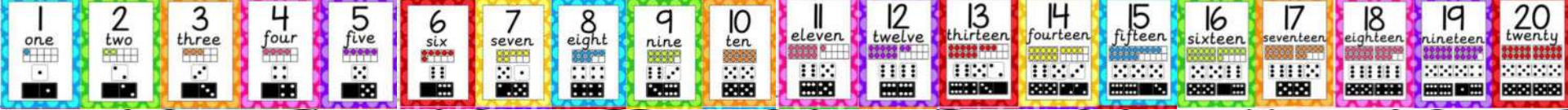
SOLVE PROBLEMS
ANALYZE DATA
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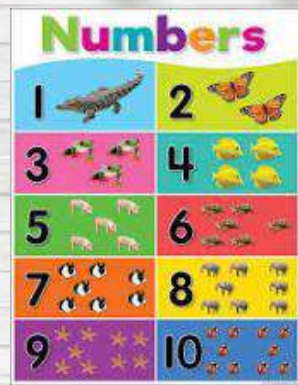
Click on a book to read about
EXTRA
FUN and also math
 in the holidays

Place Value Chart						
Millions			Thousands			Ones
Hundred millions	Ten millions	One million	Hundred thousand	Ten thousand	One thousand	Hundred
1	2	3	4	5	6	7





123
456
789
0

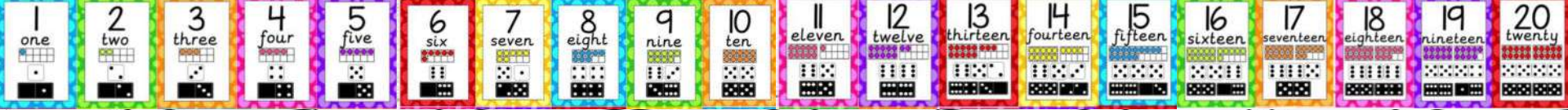


1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



Number Poster			
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20





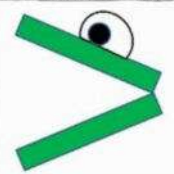
Greater than



7  7

Is equal to

3  9



greater than

COMPARING NUMBERS

deciding if numbers are larger, smaller, or the same



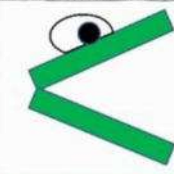
greater than



equal to



less than



less than





8 9 _



_ 5 6



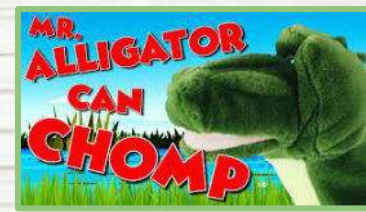




1 _ 3



7 8 _

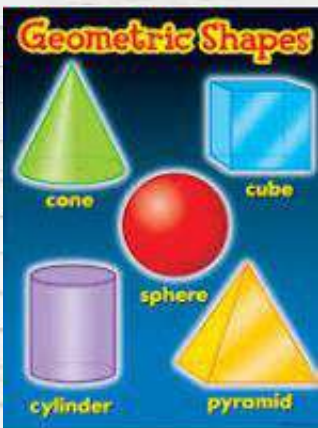
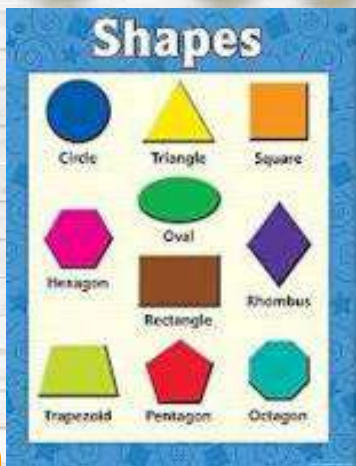
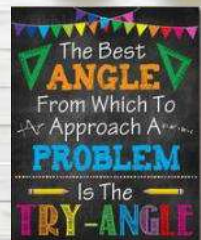
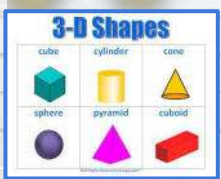
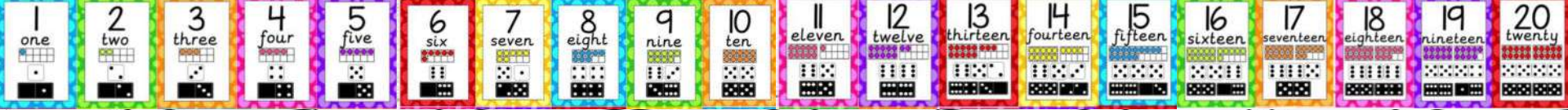


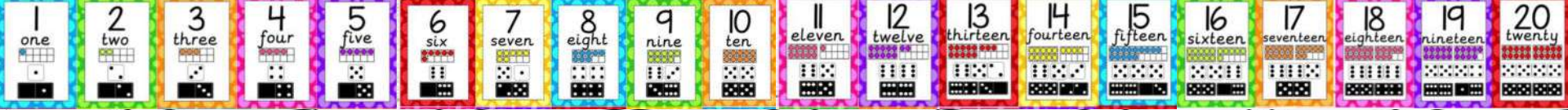
Equal To



5  5
5 is equal to 5







Addition strategies

$3 + 2 = \square$ Count to add	$3 + 2 = \square$ Draw the problem
$4 + 2 = \square$ Count on	$7 + \square = 10$ Ten frame

ways to Add and Subtract

Use your fingers:
 $3 + 1 = 4$

Use counters:
 $4 + 4 = 8$

Draw dots or pictures:
 $4 + 2 = 6$

Count forwards or backwards:
 $4 - 2 = ?$

Subtraction strategies

Count $5 - 2 = \square$ How many are left?	Draw the problem. $5 - 2 = \square$
Count back $7 - 4 = \square$	Find the difference.

Count on: 9



How Can I Solve a Math Problem?

I Can Use a Ten Frame

$5 + 2 = 7$

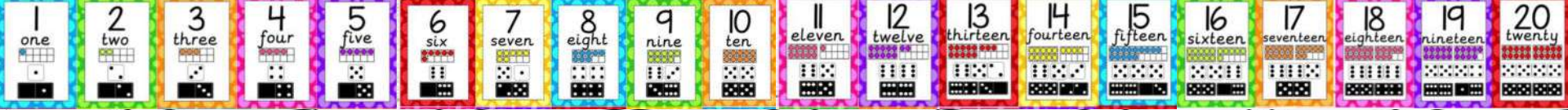
Addition

join altogether
 plus sum
 combined add
 in all both
 total increase

Subtraction

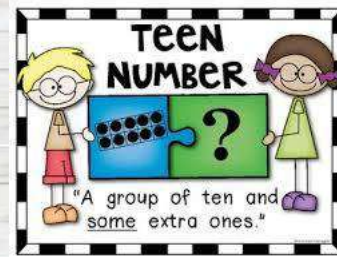
take away
 decrease minus
 less left
 take subtract
 fewer how many more
 difference



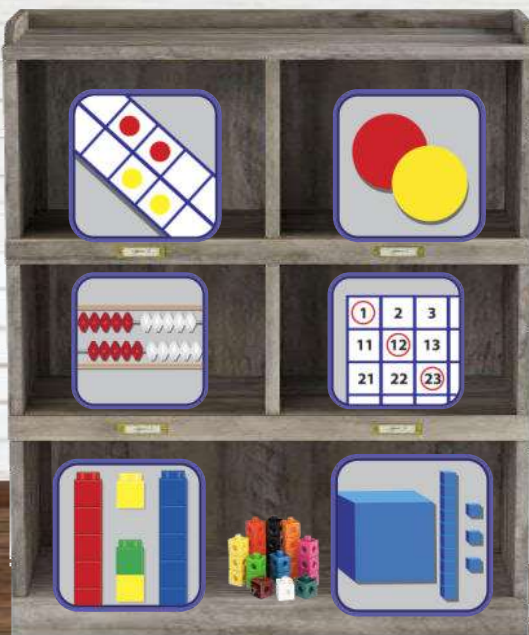


Skip Count by 10s
10 20 30 40 50
60 70 80 90
100

Skip counting by 2s
5, 10, 15, 20, 25,
30, 35, 40, 45, 50,
55, 60, 65, 70, 75,
80, 85, 90, 95, 100

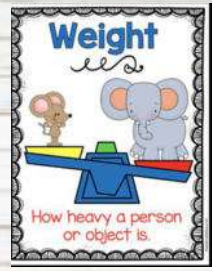
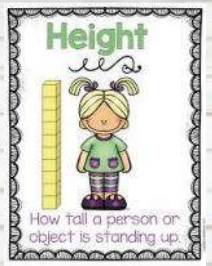
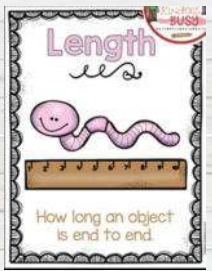
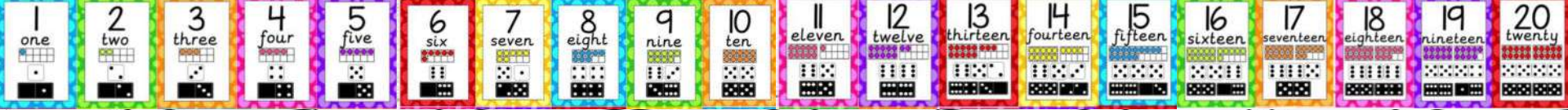


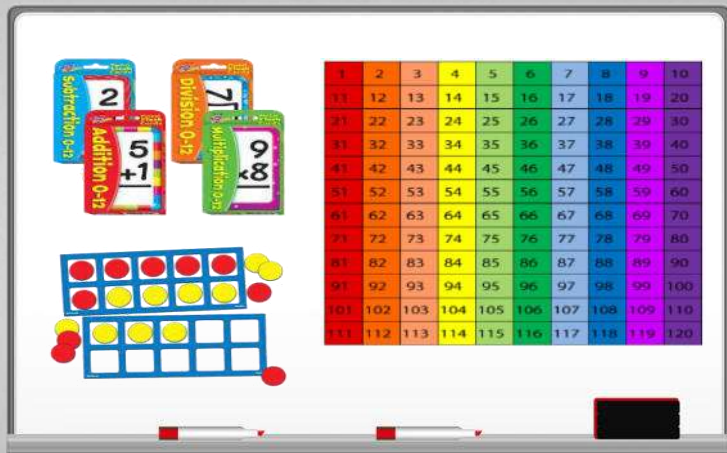
Nobody's
PERFECT,
that's why
PENCILS
have
ERASERS!



1







MATH TOOLS

