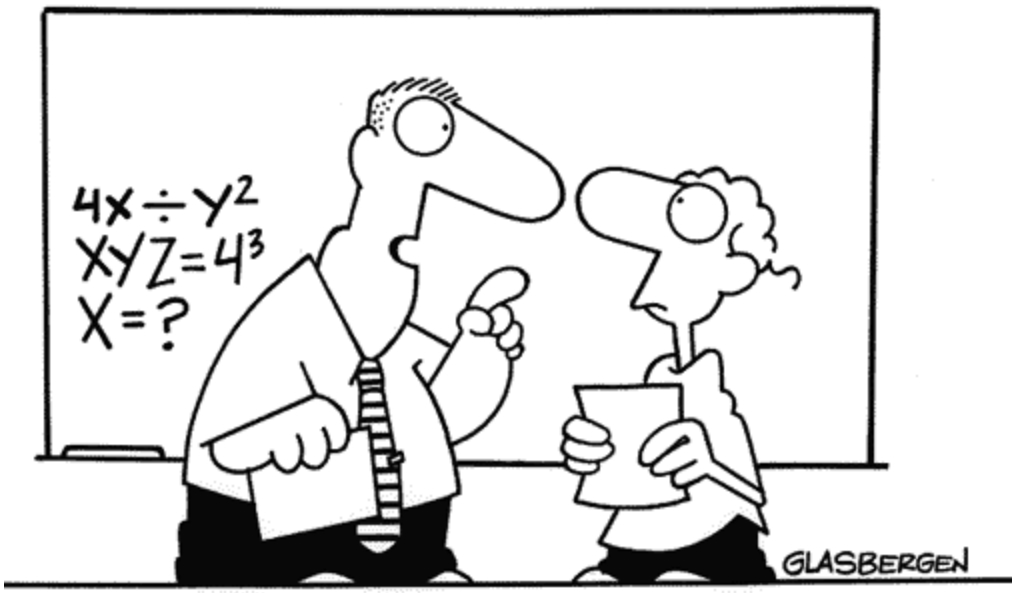
Copyright 1997 Randy Glasbergen. www.glasbergen.com



"Algebra class will be important to you later in life because there's going to be a test six weeks from now."

Pre-Algebra

2011-2012

Mrs. Overdorff

doverdorff@stfrancis-scool.org

COMING INTO THE ROOM……

1. Get a Journal- write your name on the cover
2. Sit in a seat (it may be assigned later this week)
3. Have your book
4. Get out homework (none obviously right now)
5. Make sure you have at least two sharpened pencils

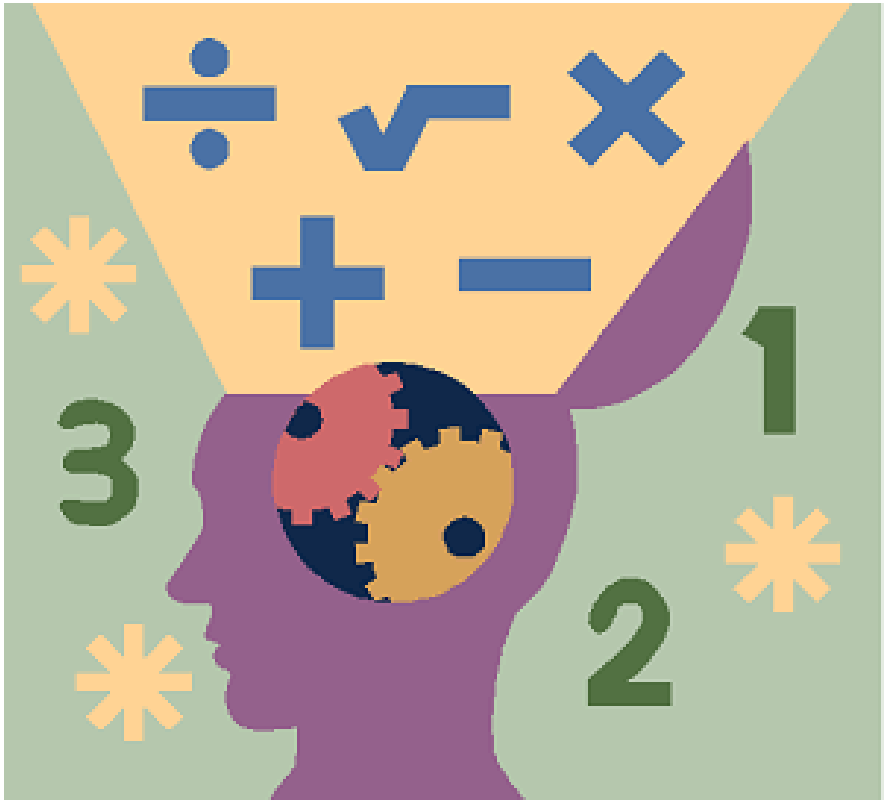
On the first page of the Journal

1. Write Date, and “Math Monster or MM for short”
2. Work the Problem on the board
3. When done, sit quietly until teacher calls time

Class Routine

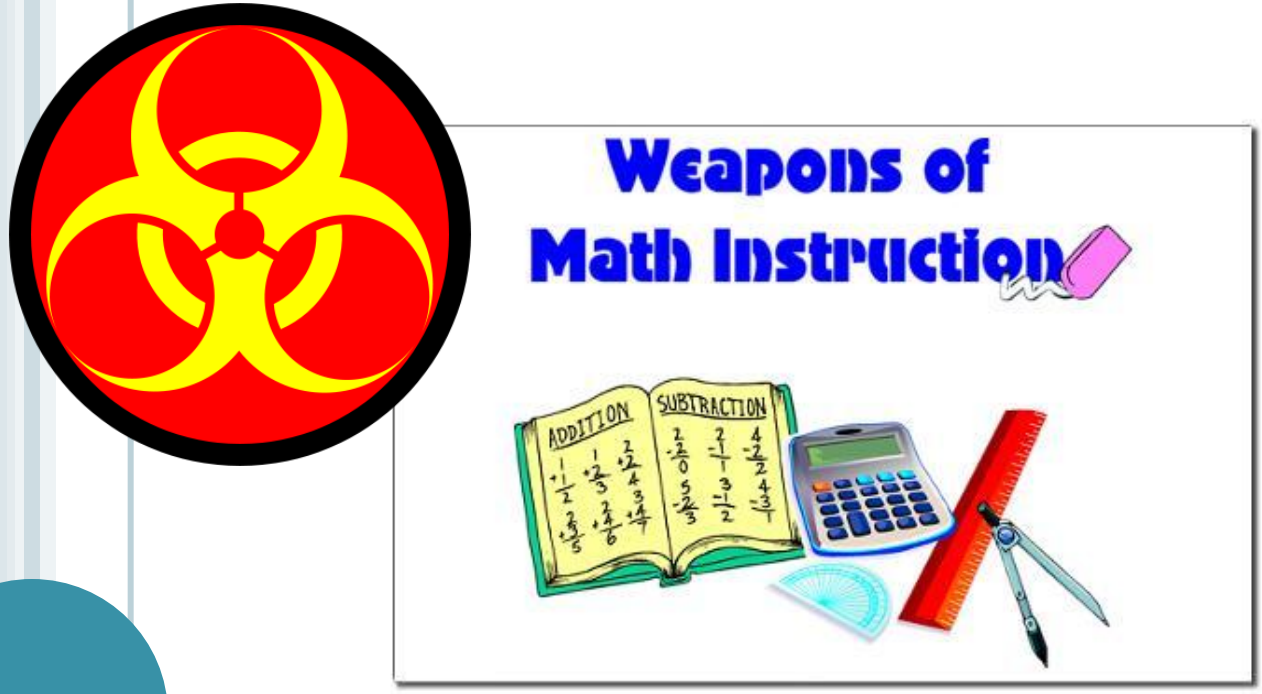
- 5-10 minutes - Warmup/Journal
- 5-10 minutes or less – Homework debriefing (if needed)
- 20-25 minutes Lesson, cooperative learning activity
- 10-15 minutes- Exit Ticket completion and start on homework if time
- 3 minutes- debriefing, cleanup

Warming up the Math Mind



Chapter 1-1 Problem solving skills- hands on

- Problems to solve in small groups.
- Finding patterns
- Learning ways to solve certain kinds of problems



Chapter 1- Tools of the Trade (warmup- vocab)

What you need to do….

- Goals
  - Learn the language- it will make your life so much better, really!
  - Develop a problem solving, can do it attitude
  - Know how to use the Order of operations

- Why?
  - Big Picture- These are building blocks, if you get this stuff you will be Kings and Queens of math land.
  - Practical- Your grades will be higher (really!)

Vocabulary – Chapter 1

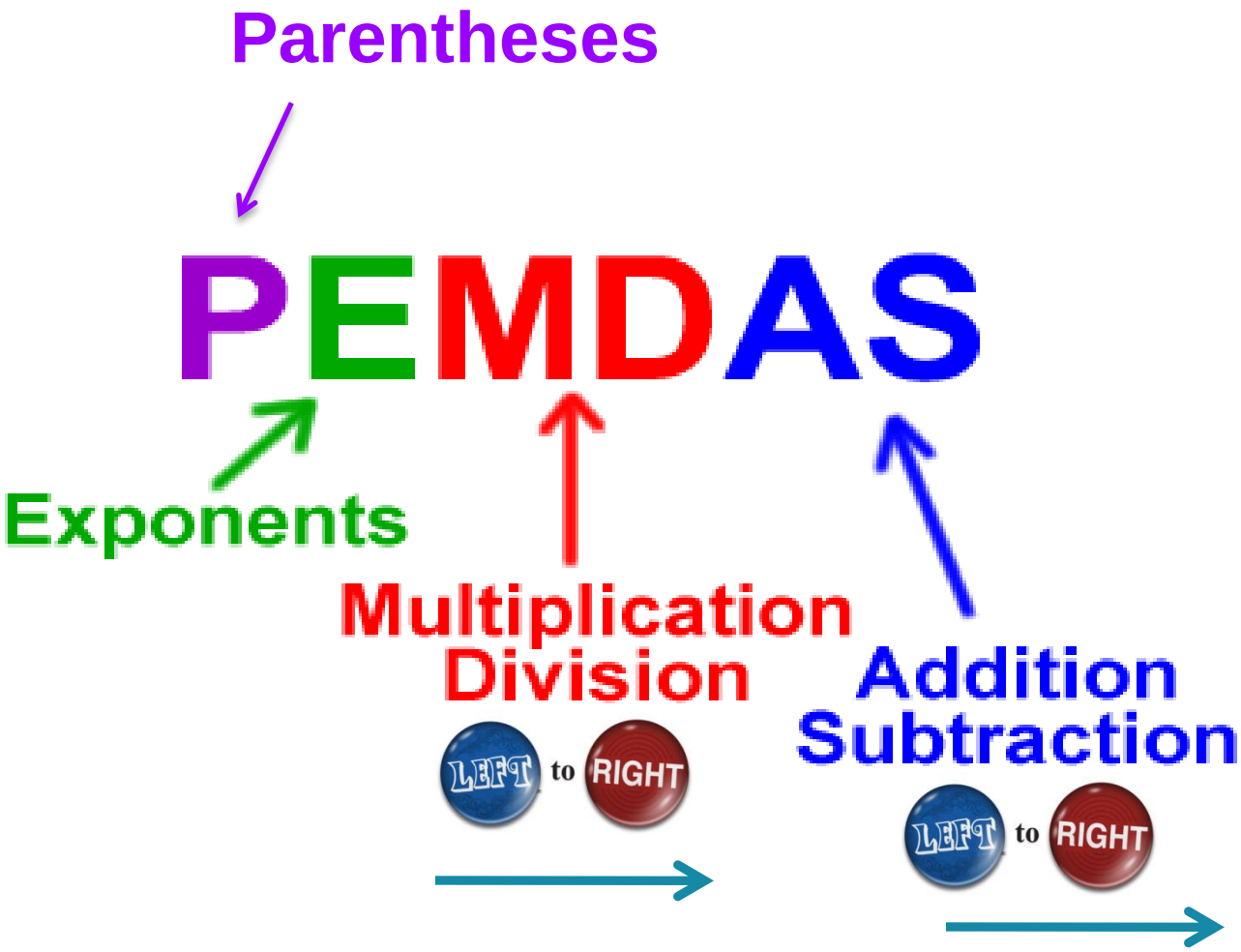
(do pretest)

- Numerical expression
- Algebraic expression
- Order of operations
- Evaluate
- Variable
- Properties
- Simplify
- Equation
- Open sentence
- Solve
- Coordinate plane
- Ordered pair
- X and y axis
- Domain and range
- X and y coordinates
- relation
- Origin
- Scatter plots (plot and interpret)

Ch 1-2 Order of Operations

Expression	$1 + 2 \times 5$	$8 - 4 \div 2$	$10 \div 5 + 14 \times 2$
Value			

15 or 11 6 or 2 32 or 30


Parentheses
PEMDAS
Exponents
Multiplication
Division
LEFT to RIGHT
Addition
Subtraction
LEFT to RIGHT

PLEASE
EXCUSE
MY
DEAR
AUNT
SALLY

Practice with Expressions (no = sign)

$3 + 4 \times 5$

$18 \div 3 \times 2$

$6(2 + 9) - 3 \cdot 8$

$4[(15 - 9) + 8(2)]$

$$\frac{53 + 15}{17 - 13}$$

(Pg 13 of book for answers)

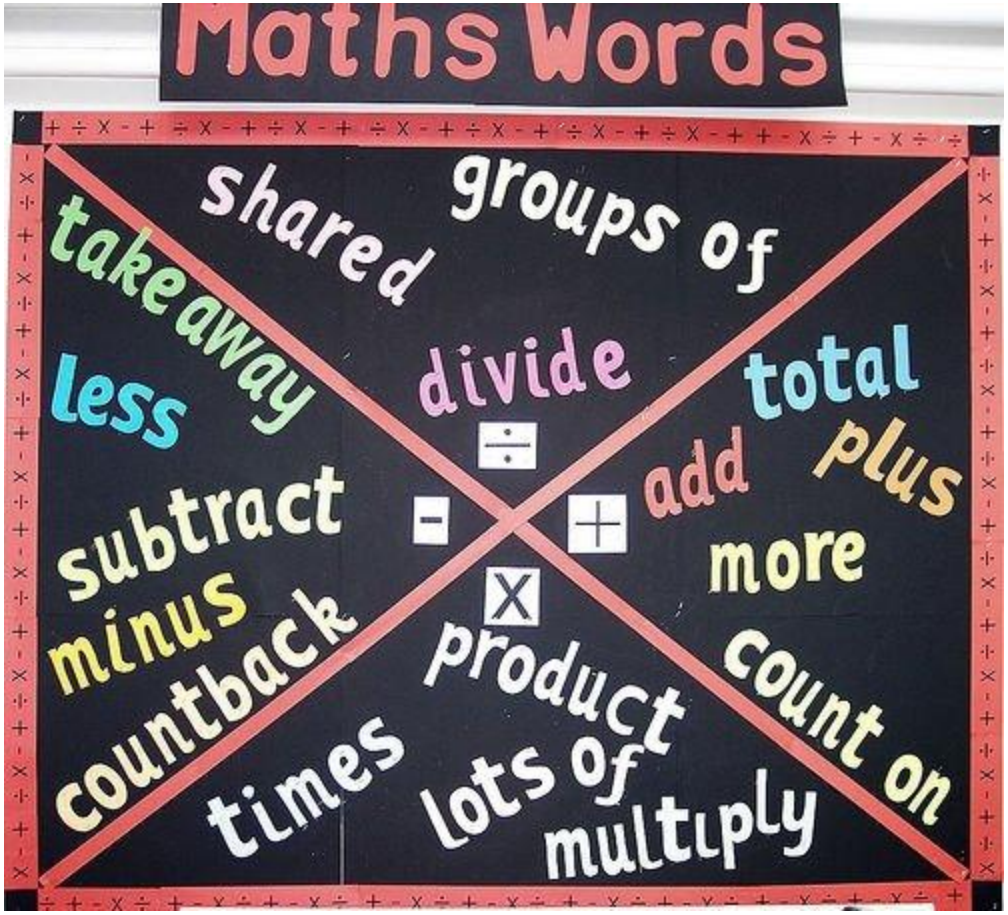
Exit Ticket - order of operations

$3 \times 6 - 4$

$32 - 24 \div 2$

$$\frac{10 - 4}{1 + 2}$$

$11 + 56 \div (2 \times 7)$



Chapter 1-2 part 2 Math translation

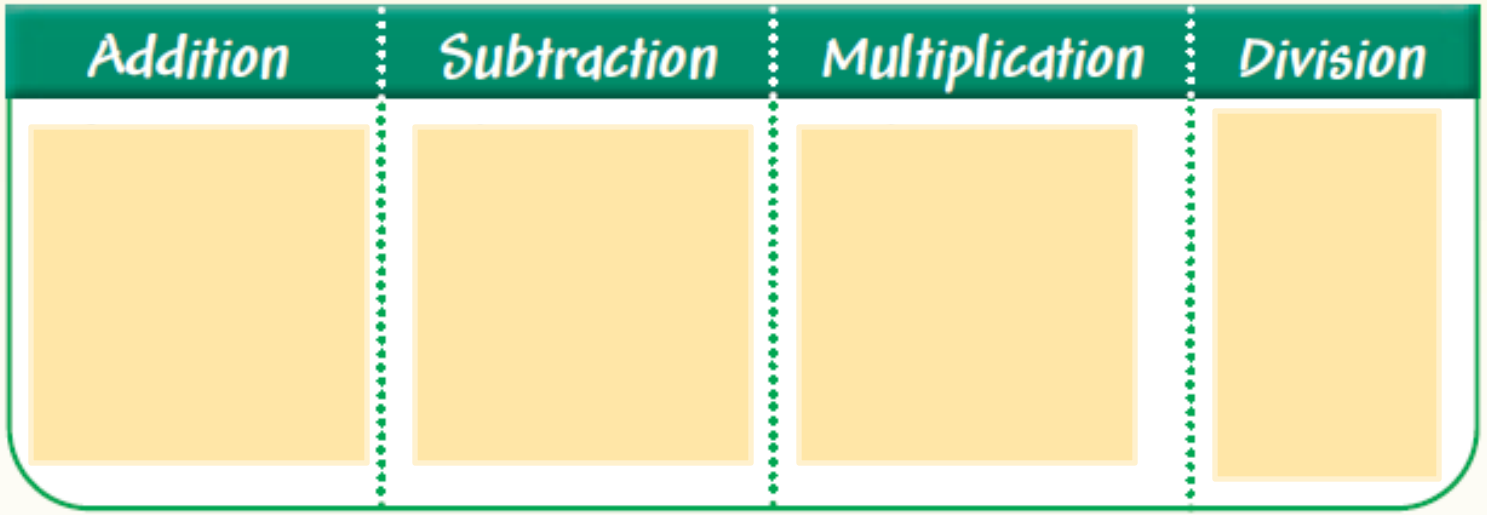
Translate into numbers and operations WARMUP

the product of eight and seven

the difference of nine and three

TRANSPORTATION A taxicab company charges a fare of $4 for the first mile and $2 for each additional mile. Write and then evaluate an expression to find the fare for a 10-mile trip.

MATH DECODED (MATCHING GAME)



(Each person gets cards, have to get them into the right side of the room)

PRACTICE…

Expression	Key Word	Verbal Phrase
5×8		
$2 + 4$		
$16 \div 2$		
$8 - 6$		
2×5		
$5 - 2$		

Activity

- Break out into groups
- Each group gets an operation
- Make a list
- Create a problem
- Debrief

Chart of what we came up with….

EXIT TICKET

Write two verbal expressions for each expression

5 + 1

20/4

Write the expression for each phrase…

The difference of 11 and 5

7 less than 8

Warmup Platypi Math Ninja

- Try Singapore Order op questions from blue book

- Expressions

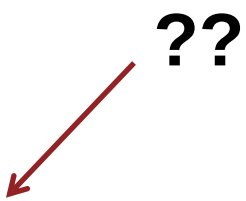
"Just a darn minute! — Yesterday you said that X equals **two**!"

Chapter 1-3 Variables and Expressions

What is a variable?

- A letter that represents any value in an expression
- A "placeholder"
- Often is "X" but can be any letter (h for hours for eg.)

- Some examples



x + 12 **4x - 2**

Evaluate an expression…

$6m - 3k$ when $m = 7, k = 2$

$\frac{mn}{2}$ when $m = 7, k = 2, n = 4$

$n + (k + 5m)$ when $m = 7, k = 2, n = 4$

Defining a variable

- Pick a letter, lets say “P” for Platypus
- Translate the word problem or verbal expression

1) **Team Kangaroo scored 12 more points than team Platypus**

2) **Four times a number decreased by 6**

3) **Five goals less than the Pirates scored**

4) **Seven increased by the quotient of a number and 8**

Word Problem practice…

- The AIPL for private school soccer teams ranks each team in their league using points. A team gets three points for a win, and one point for a tie.

Define a variable **w = win** **t = tie**

Translate **Points per win?** **Points per tie?**

3 x w or 3w **1 x t or t**

Put it together **3w + 1t = rank**

EXIT TICKET

Evaluate $7x - 3y$ if $x = 4$ and $y = 2$

Translate: Kate's salary plus a $200 bonus

Evaluate $2z + 9$ when $z = 5$

Translate: Five times a number less four