Key

Looking Back on the Oldies, but Goodies!
Midcourse Review of Chapters 1-5

Directions: Each group will be assigned to make a poster of one of the topics that we have covered so far this year. You may use any resources that you have (book, toolkit, notebook…) to complete the poster. Please be sure to include whatever is needed (definition, example, formula, how to solve, steps…).

When everyone is complete, we will go around to check the other team's work and create notes.

Team 1 -Area (rectangle, parallelogram, triangle, trapezoid)

Team 2-Data (stem & leaf plot, histogram)

Team 3 -Fractions (adding, subtracting, multiplying)

Team 4-Fractions (mixed numbers, improper fractions, giant one)

Team 5-Converting Numbers (fractions to decimals to percents)

Team 6-Expressions (variables, evaluating)

Team 7-LCM/GCF (Multiple, Least Common Multiple, Factor, Greatest Common Factor, Prime number, composite number)

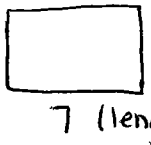
Team 1 -Area (rectangle, parallelogram, triangle, trapezoid)

Area is the inside of a shape

*label is square units because you are literally counting the squares inside the shape

Area of Rectangle = length · width

example



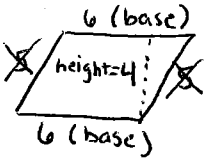
$A = l \cdot w$

$A = 7 \cdot 3$

$A = 21$ square units

Area of Parallelogram = base · height

example

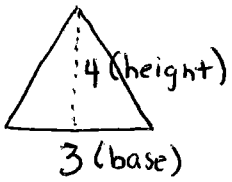


*remember that the height is straight and connected to base(s)

$A = b \cdot h$ $A = 6 \cdot 4$ $A = 24$ square units

Area of Triangle = base · height ÷ 2

*divided by 2 because 2 triangles = 1 parallelogram



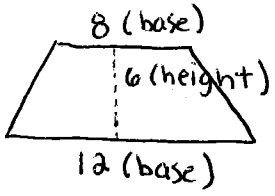
$A = b \cdot h \div 2$

$A = 3 \cdot 4 \div 2$

$A = 12 \div 2$

$A = 6$ units squared

Area of Trapezoid = (base 1 + base 2) · height ÷ 2



* bases are the opposite sides that are parallel

$A = (b1 + b2) \cdot h \div 2$

$A = (12 + 8) \cdot 6 \div 2$

$A = (20)(6) \div 2$

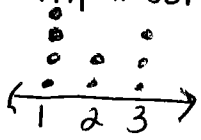
$A = 120 \div 2$

$A = 60$ square units

Team 2-Data (stem & leaf plot, histogram)

Displays of data

Dot Plot - displays data on a number line
- good for quick comparison and small ranges

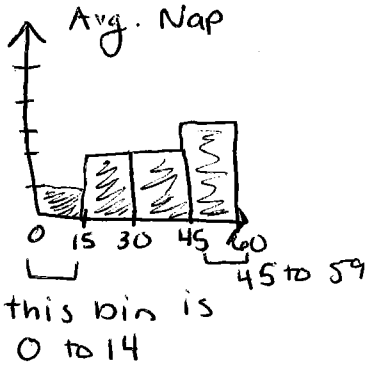


Bar graph - displays data in categories

*good for comparing non-numbers

Venn diagram - displays data and what they have in common

Histogram - similar to dot plot except we have bins!
- Y-axis is the frequency
- X-axis is the intervals
- *good for comparing



Stem-and-Leaf Plot - like a histogram, but lists each #
- *good for specific data
- *separated by place value

Key 8|2 means 82

1	
2	2 2 7
3	3 4
4	0 9

Team 3 -Fractions (adding, subtracting, multiplying)

Adding Fractions

$\frac{1}{4} + \frac{1}{3}$

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

$\frac{7}{12}$

① Find common denominator

$\frac{1}{4} \cdot \boxed{\frac{3}{3}} = \frac{3}{12}$ $\frac{1}{3} \cdot \boxed{\frac{4}{4}} = \frac{4}{12}$

② Plug-in equivalent Fractions

③ Solve (simplify if need)

Hint; If mixed numbers, convert into improper fractions and follow steps

Subtracting fractions

$1\frac{+1}{\times 2} - \frac{3}{4}$

$\frac{3}{2} - \frac{3}{4}$

$\frac{6}{4} - \frac{3}{4}$

$\frac{3}{4}$

* if mixed numbers, convert to improper

① Find common denominator

$\frac{3}{2} \cdot \boxed{\frac{2}{2}} = \frac{6}{4}$

② Plug-in equivalent fractions

③ Solve

Multiplying Fractions

$\frac{1}{2} \cdot \frac{2}{3} = \frac{2}{6}$ Multiply straight across!

*If mixed numbers, convert to improper fractions!

$3\frac{+2}{\times 7} \cdot 1\frac{1}{2}$

$\frac{23}{7} \cdot \frac{3}{2} = \frac{69}{14} = \frac{14}{14} + \frac{14}{14} + \frac{14}{14} + \frac{14}{14} + \frac{13}{14}$ (28, 42, 56)

$= 1 + 1 + 1 + 1 + \frac{13}{14}$

$= 4\frac{13}{14}$

0

Team 4-Fractions (mixed numbers, improper fractions, giant one)

Mixed Number: a whole number with a fraction

example $2\frac{1}{3}$ or $19\frac{7}{16}$

Improper Fraction: a fraction in which the numerator is greater than the denominator

example: $\frac{12}{9}$ or $\frac{17}{3}$

Giant One: anything multiplied by or divided by one is itself! We can use this to create equivalent fractions :)

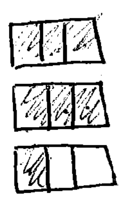
$\frac{6}{18} \div \boxed{\frac{6}{6}} = \frac{1}{3}$ ↑ $\frac{6}{6} = 1$

$\frac{1}{3} \cdot \boxed{\frac{5}{5}} = \frac{5}{15}$ ↑ $\frac{5}{5} = 1$

All equal! $\frac{6}{18} = \frac{1}{3} = \frac{5}{15}$

Converting Mixed numbers in to improper fractions

$2\frac{1}{3}$ =



$= \frac{7}{3}$ or 2×3 (6) $+ 1$ → $2\frac{1}{3} = \frac{7}{3}$

Converting improper fractions to mixed numbers

÷ → $\frac{7}{3}$

7 ÷ 3

$3 \overline{)7.0}$ = 2.
−6
(1) → 1 left over

* could draw or how many wholes in top # or fraction bar means ÷

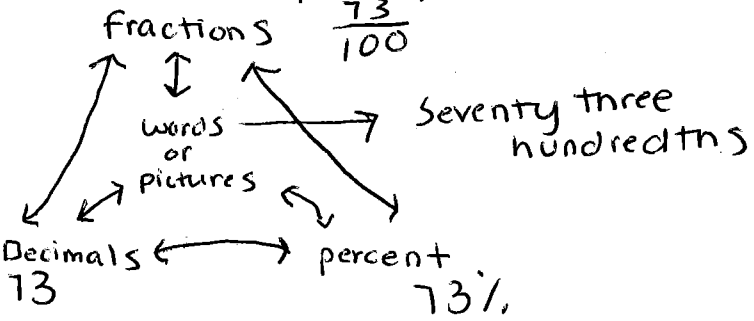
$\frac{7}{3} = \frac{3}{3} + \frac{3}{3} + \frac{1}{3}$

$= 1 + 1 + \frac{1}{3}$

$= 2\frac{1}{3}$

Team 5-Converting Numbers (fractions to decimals to percents)

Representation of Portions



Fraction to decimal

$\frac{60}{100}$ ← means divide! $= 60 \div 100 =$

$$\begin{array}{r} .6 \\ 100\overline{)60.0} \\ -600 \\ \hline 0 \end{array}$$

decimal to fraction

.125 ① Say it, then write it $\frac{125}{1000}$

↓ thousandths, write # over 1000

Percent to decimal

97% ÷ 100 = .97

decimal to percent

.97 × 100 = 97% * means out of 100

Percent to fraction

86%, percent means out of 100 $\frac{86}{100}$

Fraction to percent

$\frac{1}{4} \cdot \frac{25}{25} = \frac{25}{100} = 25\%$

Team 6-Expressions (variables, evaluating)

Variable: a symbol used to represent one or more numbers

* we use letters for unknown numbers

example Croakie hopped 3 feet and did 2 (zigzag's) → x

$$3 + 2x$$

Expression: a number sentence to describe a situation

* like example above
* does not have an equal sign

Equation: two expressions set equal to each other

example $3 + 2x = 13$

Solving Problems

If $x = 5$, what is $7x + 3 - 1$?

plug-in $7(5) + 3 - 1$

Solve (use order of operations!) $35 + 3 - 1$

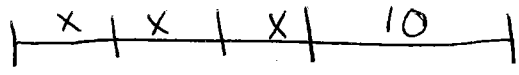
$38 - 1$

(37)

Solve for x, $3 + \underbrace{2x}_{10} = 13$

($x = 5$)

Describe Situation Below



$x + x + x + 10$

or

$3x + 10$

Team 7-LCM/GCF (Multiple, Least Common Multiple, Factor, Greatest Common Factor, Prime number, composite number)

Multiple - goes out of a number

example 2, 4, 6, 8, 10...

Least common Multiple - the smallest multiple in common between 2 or more numbers

example 6 and 5

6, 12, 18, 24, 30 LCM is 30
5, 10, 15, 20, 25, 30

Factor - goes in to a number

example factors of 12 1, 2, 3, 4, 6, 12

Greatest common factor - largest factor in common between 2 or more numbers

example GCF of 12 and 15

1, 2, 3, 4, 6, 12 GCF is 3
1, 3, 5, 15

Prime number; has only 2 factors, one and itself

ex. 2, 3, 5, 7, 19

Composite number; has 3 or more factors

ex. 6, 12, 64

* 1 is neither prime nor composite
↳ only 1 factor!