Topic 1		
Word	Definition	Picture
value	The place of a digit in a number tells the value	Place Value Place Value
digit	The symbols of 0,1,2,3,4,5,6,7,8, and 9 used to write numbers	numeral 153 digit digit digit
standard form	A number written with one digit for each place value	ten thousands hundredths hundreds thousands hundreds ten thousandths ten thousands ten thousands thousands ten thousands thousands ten thousands thousands ten thousands ten thousands ten thousands ten thousands ten thousands ten thousandths ten thousandt
expanded form	A way to write numbers that shows the value of each digit	Pulling a number apart and showing it as a sum of the value of the digits. 500 + 90 + 6

word form	A number written in words.	Five thousand , three hundred eighteen
decimal point	The dot used to separate the ones place from the tenths place in a decimal number	2.8
equivalent decimal	Decimals that name the same amount	0.7=0.70
positive rational	A positive rational is a number that can be written as a simple fraction (i.e. as a ratio). And a positive number	Origin (where we start) Negative direction Positive direction -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 One unit

compare(< > or=)	To examine for likenesses and differences	Comparing Fractions $ \frac{3}{4} \bigcirc \frac{5}{6} $ Possible 1. Cross-Multiply (Cross-Products) Solutions: 2. Change to decimals Change to common denominator 1 2 3 18 < 20 3 4 = 0.750 3 5 6 = 0.833 Compare Products Compare Decimals Compare Numerators
order	A customary mode of procedure; a way of doing things	Sequence: 3, 5, 7, 9, 1st term 3rd term 4th term three dots means goes on forever (infinite) ("term", "element" or "member" mean the same thing)

Topic 2		
Word	Definition	Picture
composite numbers	A whole number greater than 1 with more than two factors.	Characteristics Numbers that get along Multiples Pairs of numbers that make it easier to add, subtract, multiple and divide Examples COMPATIBLE NUMBERS Non- Example 3,6,9,12,15, 18, 21, 24, 27, 30 Or: 398 + 207 is sorta like 400 + 200 (right?) estimated answer = 600 Or: 6,298 divided by 84 is sorta like 5,400 divided by 80 estimated answer = 80
compensation	Adjusting a number to make a computation easier and balancing the adjustment by changing another number.	Compensation a mental math strategy unit for subtraction Compensation
Commutative Property of Addition	Addition: numbers can be added in any order and the sum remains the same.	3+2 = 2+3 3+6+9=6+3+9= 9+6+3
standard algorithm	A common way of writing a problem.	Array/area drawing for 36 × 94 90 4 30 × 91 = 30 × 4 =

subtraction/difference	The result of subtracting one number from another.	8 - 3 = 5
addition/sum	The result of adding two or more addends.	Addition: 8 + 3 = 11 Addend Addend Sum
compatible number	Numbers that are easy to compute with mentally	23 + 74 Compatible 25 + 75 = 100
Associative Property of Addition	Addends can be regrouped and the sum remains the same	1+(3=5) = (1+3) +5

Topic 3		
Word	Definition	Picture
round	A process t;hat determines which multiple of 10,100,1000, and so on, a number is closest to.	let it rest. 5 or more raise the score.
underestimate	An estimate that is less than the actual answer.	\$36.23 \rightarrow \$36.20 +\$63.44 \rightarrow +\$63.40 \$99.67 \$99.60 < \$99.67 \$99.60 is under
overestimate	An estimate that is greater than the actual answer.	$\$57.65 \rightarrow \$57.70 \\ +\$43.31 \rightarrow +\$43.30 \\ \$101.00$ $\$100.96 101.00 > \100.96
partial estimate	To give some of an approximate value rather than an exact answer.	Acrespierce descring for 36 × 94 0

variable	A letter such as n, that represents a number in an expression or an equation.	n + 3 a number plus three the variable
product	The number that is the result of multiplying two or more factors.	Multiplication: 6 × 3 = 18 Factor Product (or Multiplier) (or Multiplicand)
factor	Numbers that are multiplied to get a product.	8 x 4 = 32
greatest common factor	The largest number that is a factor or divides two or more numbers is called the greatest common factor or GCF.	Factor 24 and 60 3 · 3

least common factor

LCM is the smallest multiple that two or more numbers have in common.

Example A: What is the LCM of 20, 40 and 60.

Multiples of 20 are: 20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240

Multiples of 40 are: 40, 80, 120, 160, 200, 240, 280, 320......

Multiples of 60 are: 60, 120, 180, 240, 300.......

We notice that 120 and 240 are both multiples of all the numbers, but we want the LCM or the smallest so 120 is

the LCM.

Topic 4 -5 - 6		
Word	Definition	Picture
division	An operation to find the number in each group or the number of equal groups	6 ÷ 3 = 2
divisor	The number by which another number is divided	Dividend ÷ Divisor = Quotient Quotient Divisor) Dividend
dividend	The number to be divided.	$\begin{array}{c} 6 \leftarrow \text{quotient} \\ \hline 4 \) \ 24 \leftarrow \text{dividend} \\ \hline \\ \text{divisor} \end{array}$
quotient	The answer to a division problem.	Dividend ÷ Divisor = Quotient Quotient Divisor) Dividend

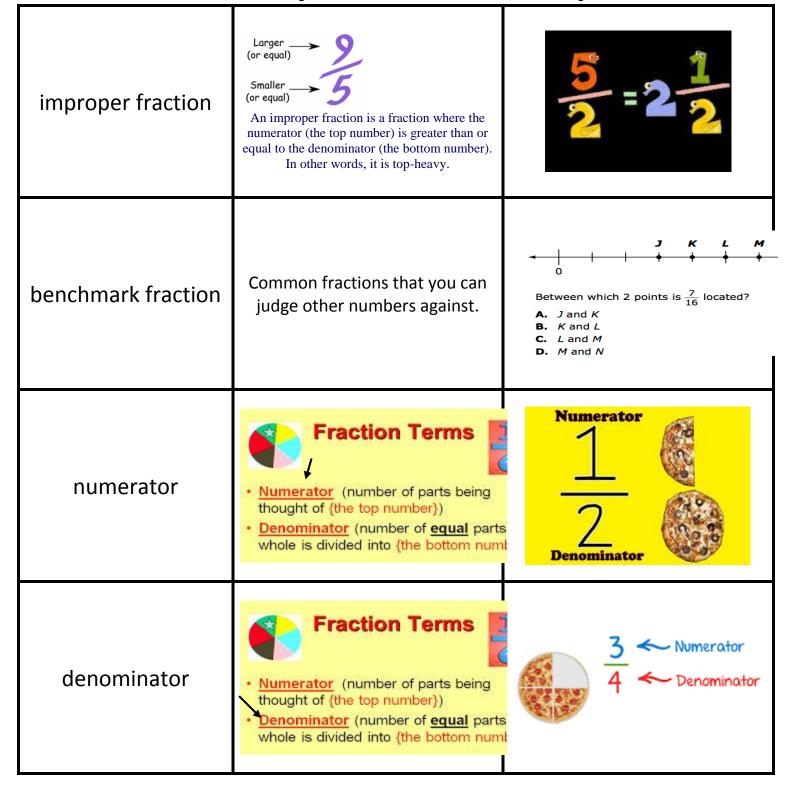
remainder	The amount that is left after dividing a number into equal parts.	quotient→ 5 divisor→3 16 dividend 15 remainder→1
estimate	To give an approximate value rather than an exact answer.	47 Ballpark +82 Estimate 50 + 80 = 130
fluency	Quickly and accurately	2+2= 5-3= 6+4=
reasonableness	agreeable to <u>reason</u> or sound judgment; logical:	After solving a problem, go back and check your answer in the problem. Does your answer make sense?

Topic 7		
Word	Definition	Picture
Prime number	A whole number greater than 1 that has exactly two factors, itself and 1.	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 A Prinne Numnheer is a velhelle mumalber verially incompared in a mid fide-slift).
Composite number	A whole number greater than 1 with more than two factors.	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
algebraic form	A mathematical phrase involving a variable or variables, numbers, and operations.	Y=x+a
multiples	The product of a given whole number and any other whole number.	$ \begin{array}{c} $

factor tree

A structure used to find the prime factorization of a positive integer.

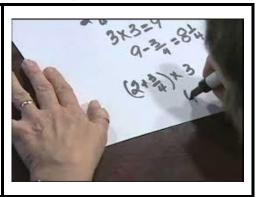
Topic 8		
Word	Definition	Picture
fraction	Part of a whole	3 4
proper fraction	A proper fraction is a fraction where the numerator (the top number) is less than the denominator (the bottom number).	Fraction Wall 1
mixed fraction	A whole number and a fraction combined into one "mixed" number. Example: 1½ (one and a half) is a mixed number.	Mixed Form to Fraction Form. $2 \frac{2}{5} = \frac{2X5+2}{5} = \frac{12}{5}$



Topic 9		
Word	Definition	Picture
Unit fraction	Unit Fractions A fraction where the top number (the "numerator") is 1	Examples of unit fractions: 1 6 8
reciprocal	The reciprocal of a number is: 1 divided by the number Examples: • the reciprocal of 2 is 1/2 (half) • the reciprocal of 10 is 1/10 (=0.1)	3 4 × 3
Invert	The opposite	$ \frac{1}{2} \div \frac{3}{4} = $ $ \downarrow \qquad \qquad \qquad \downarrow \qquad \qquad \qquad \downarrow \qquad \qquad$
Unlike denominator	Fractions with two or more different denominators	the original fractions: $\frac{1}{3} + \frac{1}{2}$ with a common denominator: $\frac{2}{6} + \frac{3}{6}$ result: $\frac{5}{6}$

Computation of fractions

The operation of solving a problem that involve fractions



Topic 10		
Word	Definition	Picture
Order of operations	The rules that say which calculation comes first in an expression They are: • do everything inside parentheses first: () • then do exponents, like x² • then do multiplies and divides from left to right • then do the adds and subtracts from left to right	1 () 2 x ² 3 x ÷ 4 + -
Parentheses	The symbols (and) used to group numbers or variables in mathematical expressions	Example: $(3 + 2) \times (6 - 4) = 5 \times 2 = 10$ The Parentheses group 3 and 2 together, and 6 and 4 together
Numerical expression	A mathematical phrase that contains numbers and are at least one operation	Note: Angle brackets can be confusing because they look like the "less than" and "greater than" signs. $6-2=4$
Brackets	The symbols [and] that are used to group number or variables in mathematical expressions.	[] {} () <>

Equation	A number sentence that uses an equal sign to show that two expressions have the same value.	Ex. 9 +2 = 12
Unknown	A symbol or letter, such as x, that represents a number in an expression or equation.	Expression $4x - 7 = 5$ Terms $x = 3$

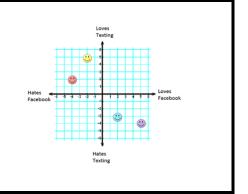
Topic 11 Definition Picture Word A grid that is used to plot and name points in a plane using an Coordinate grid ordered pair of numbers. A vertical number line y-axis, on a coordinate grid. A horizontal number line on a coordinate x-axis grid. The origin is represented where by the pair of numbers Origin ordered pair (12,5)used to locate a point on a coordinate grid.

x-coordinate	The first number in an ordered pair, which names the distance to the right or left from the origin along the x-axis.	10 12 12 5 10 15 x The X Coordinate is always written first in an <i>ordered pair</i> of coordinates (x,y), such as (12,5).
y-coordinate	The second number in an ordered pair, which names the distance up or down from the origin along the y-axis.	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
Additive pattern	A pattern in which corresponding values are related by addition.	Growing Patterns Directions: Fill in each blank with the correct number to continue the pattern. 1.35,, 55, 65, 75, 85, 95
Input-output table	A table that uses a rule to relate one set of numbers to another set of numbers.	Rule In Out Rule In Out Rule Out In Out Out

Multiplicative pattern	A pattern in which corresponding values are related by multiplication.	Columns X 0 1 2 3 4 5 6 7 8 9 10 0 </th
Intersection	Lines that have one and only one point in common.	
Parallel	In a plane , lines that never cross and stay the same distance apart.	E F G
Perpendicular lines	Two lines that intersect to form square corners or right angles.	

Quadrant

One of the quarters of the plane of the Cartesian coordinate system



Topic 12		
Word	Definition	Picture
Attribute	A characteristic of a shape.	Cube 12 edges 6 faces 8 vertices
Classify	To arrange in groups, by some property.	3 Sides 4 Sides 5 Sides
Graphic organizers	Graphic organizers are useful tools for building knowledge and organizing information. Use graphic organizers to help in problemsolving, decision-Graphic organizers are useful tools for building knowledge and organizing information. Use graphic organizers to help in problem-solving, decision-	Nume Date Venn Diagram education
Properties	A character or attribute that something has.	Number Parallel Right Congruent congruent of sides? sides? angles? sides? angles? Triangle Three None One possible possible possible possible

Sub sets	Set A is a subset of set B if all of the elements (if any) of set A are contained in set B. This is written A ⊂ B. Note: The empty set is a subset of every set.	B \subset A B Example: $\{a, b, c\} \subset \{a, b, c, d\}$
Two dimensional figures	A shape that only has two dimensions (such as width and length) and no thickness (height).	Triangle Square Pentagon Square Circle
Polygons	A closed plane figure made up of line segments.	Regular Irregular Complex Concave Irregular Pentagon Octagon Hexagon
Equilateral triangle	A triangle whose sides all have the same length.	60° 60°

Scalene triangle	A triangle in which no sides have the same length.	7cm 12cm 9cm
Isosceles triangle	A triangle with two sides of the same length.	
Acute triangle	A triangle whose angles are all acute triangle	a <90°
Obtuse triangle	A triangle in which one angle is an obtuse angle.	> 90° < 180°

A triangle in which one angle is a right angle.

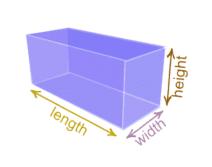
Topic 13		
Word	Definition	Picture
Perimeter	The distance around a figure.	
Area	The number of square units needed to cover a surface or figure.	Exploring Area If each side of a tile is 1 unit in length. How many different rectangles can you build with an area of 12 square un 3 × 4 = 12 12 × 6 = 12
Volume	The number of cubic units needed to fill a solid figure.	$V = 1 \times w \times h$ $V = 3 \text{ m} \times 2 \text{ m} \times 5$ $V = 30 \text{ cubic meters}$
Cube	A solid figure with six identical squares as its faces.	CUBE S

Cubic unit	The volume of a cube that measures 1 unit on each edge.	Unit Cube Group of 4 Unit Cubes
Formula	A rule that uses symbols to relate two or more quantities	SEOMETRY SHAPES AND SOUDS Market M
Composite shape	A figure made up to two or more shapes.	6 ft 5 ft
Rectangular prism	A solid figure with 6 rectangles faces.	

Exponent	A number that indicates the operation of repeated multiplication.	exponent (or index, or power)
Graph	A type of drawing used to represent data.	9 9 3 3 2 2 2 3 24 25 20 27 28 20 Weight Groups
Numerical expression	A mathematical phrase that contains numbers and at least one operation.	325 x 25 =
Prism	A solid object with two identical ends and flat sides: • The sides are parallelograms (4-sided shape with opposites sides parallel) • The cross section is the same all along its length The shape of the ends give the prism a name, such as "triangular prism"	

Three dimensional figure

An object that has height, width and depth, like any object in the real world.



Topic 14		
Word	Definition	Picture
Conversion	a change in the form of a measurement, different units(same system of measurement), without a change in the size or amount	1 km = 1,000 m 2.3 X !,000 = 2300 km
Customary measurement	The main system of weights and measures used in the United States and a few other countries. Also known as Standard system.	Customary Units Chart Length Weight 12 in = 1 ft 16 oz = 1 lb 2000 lb = 1 ton 2 pt = 1 gt 5,280 ft = 1 ml 4 ct = 1 gal 4 ct = 1 gal 2 mon = 1 yr 385 days = 1 yr 385 da
Metric measurement	the decimal measuring system based on the meter, liter, and gram as units of length, capacity, and weight	Standard Metric Standard Mitche Sinch compone to millimeter of foot compone to centimeter of foot million compone to millimeter of foot million compone to Million foot million compone to Million foot million compone to Million foot million compone to gram pound compone to gram pound compone to Million foot compone to Million foot compone to millimeter ounce compone to millimeter ounce compone to the foot millimeter ounce compone to the foot millimeter ounce compone to the foot millimeter ounce guilding compone to the foo
Units of Length	Cength measurement 40ng To the bar of med. Andre, Dem, and Ten' Continue try, Metry, Kilaruter Inch, Foot, Yed, and Mele, Mele, Ale once that to measure length. Metric and customery too, too, tod	LENGTH Metric Customary 1 kilometer = 1000 meters 1 mile = 1760 yards 1 meter = 100 centimeters 1 mile = 5280 feet 1 centimeter = 10 millimeters 1 yard = 3 feet 1 foot = 12 inches MathATube.com Together we'll learn

Units of Capacity	The amount that something can hold. Usually it means volume, such as milliliters (ml) or liters (l) in Metric, or pints or gallons in Imperial.	cops pints cops quarts cops pints
Units of Weight	Even though weight and mass are different things, weight often uses the units of mass. For example grams, kilograms and, ton (Metric) or ounces and pounds.	Customary Units of Weight 1 pound (lb) = 16 ounces (oz) 1 ton (T) = 2,000 pounds

Topic 15		
Word	Definition	Picture
Bar Graph	A graph drawn using rectangular bars to show how large each value is. The bars can be horizontal or vertical.	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
Point	An exact location. It has no size, only position. Drag the points below (they are shown as dots so you can see them, but a point really has no size at all!) Points usually have a name, often a letter like "A" or "B" etc.	В
Dot plot	A graphical display of data using dots.	0 1 2 3 4 5 6 7 8 9 10 11 12
Outlier	A value that "lies outside" (is much smaller or larger than) most of the other values in a set of data.	Outlier 0 1 2 3 4 5 6 7 8 9 10

Numerical data	Data involving numbers including measurement data.	"What sport do you play?" Sport People
Scale	A series of numbers at equal intervals along an axis on a graph.	Real Horse 1500 mm high Scale 1:10 Drawn Horse 150 mm high
Data	Collected information	Probability and Statistics Index Graphs Index
Frequency table	A table used to show the number of times each response occurs in a set of data	Scores: 1,1,2,2,2,2,2,3,3,3,3,4,4,5 Score Frequency 1 2 2 5 3 4 4 2 5 1

Sample	A representative part of a larger group.	A selection taken from a larger group (the "population") so that you can examine it to find out something about the larger group.
Interval	The difference between consecutive numbers on an axis of a graph.	Ends
Categorical data	Data that can be divided into groups.	PIZZA SALES 15 10 5 0 8347.92
Scatterplot	A graph that shows paired data values.	Height

Discrete data	Data where only whole numbers are possible.	Qualitative Quantitative "It was great fun" Discrete Continuous 3.265
Survey	A question or questions used to gather information	Example: you could survey a river's water quality by taking a cupful of water from different random locations at different times.
Stem and leaf plot	A way to organize numerical data using place value.	15,16,21,23,23,26,26,30,32,41 Stem Leaf 1 5 6 2 1 3 3 6 6 3 0 2 4 1
trend	A relationship between two sets of data that shows up as a pattern in a graph, including scatterplots.	A line on a graph showing the general direction that a group of points seem to be heading. \$700 \$600 \$500 \$400 \$300 \$200 \$100 \$100 \$100 \$100 \$100 \$100 \$1

Topic 16		
Word	Definition	Picture
Taxes	Money people pay to support the government.	Example: Alex earned \$300 but had to pay \$42 of that to the government as tax.
Net income	The amount of money a person receives after deductions are taken from gross income.	TABLE 33 NET INCOME STATEMENT
Debit budget	Money taken out of a person's account	DEBIT CREDIT Debits on left side, Credits on the right side.
Gross income	The total amount of money a person earns.	Build Your Budget Start with your total monthly \$800 Subtract \$40 - Savings manulatory \$350 - Rent \$100 - Gas \$150 - Food \$20 - Utilities This is how much you have left for your extra expenses \$140

Deposit	Money put into a person's account.	Check Register Section Section
Balance budget	A budget in which the total amount of money spent, saved, and shared equals total income.	Build Your Budget Start with your total monthly income: Subtract \$40 - Savings #350 - Rent \$100 - Gas \$150 - Food \$20 - Utilities This is how much you have left for your extra
Expenses	The amount of money spent.	Asset Deb Balance sheet Credit care
Financial resources	The means to get or find ways to find help with financing.	Banks and Other Financial Institutions Commercial Banks, S &L's and Credit Unions

Financial security	The ability to keep finances secure and invest money wisely.	AOLK Inventment Portfolio See Anne
Payment	Something that is paid; an amount paid; compensation; recompense.	MR MAURICE MIZRAHI May 21, 10.68 PAYTO THE THE WORK FILER OF SO. DO ORDER OF AUSTRALIAN AND MY 100 OCLARS STATE BANK TO DELLARS 1:11, 10:21,01: 8305=657=85* AUSTRALIAN AUGUSTA TO THE TO THE
Payroll	A list of employees to be paid, with the amount due to each.	Form W4 (2006) Form W4 (2006)
property	That which a person owns; the possession or possessions of a particular owner:	

Topic		
Word	Definition	Picture
Budget	A plan for how much income will be received and how it will be spent.	Build Your Budget Start with your total monthly income: \$800 Subtract \$40 - Savings manuatory \$350 - Rent \$100 - Gas \$150 - Food \$20 - Utilities This is how much you have left for your extra expenses. \$140