Words and definitions

average (**av**-uh-rij) – an average is a sort of middle number used to describe two or more numbers. The average of two numbers is the number exactly between them. Example: If you get an 80 on one test and a 90 on a second test, the average is an 85.

bar graph (**bar graf**) – a graph with the data shown in the shape of bars

base (**bayss**) - the bottom number when you have a number to a power. (Example: In 3^4, the 3 is the base.)

box and whisker plot (**boks** and **wiss**-kur **plot**) – a graph of data that divides the data into four sections and shows the results with boxes and lines (whiskers).

circle graph (**sur**-kuhl **graf**) – a graph of data shown in a circle cut up in pie shaped wedges.

cubed (**kyoobd**) - instead of saying "to the third power" you can say "cubed". (5^3 means five to the third power, or five cubed.)

cube root (**kyoob root**)– a cube root of a number is another number which when cubed, gives the first number. (The cube root of 8 is 2.)

data (**day**-tuh) - pieces of information gathered by asking questions, counting, or measuring. (I collected data on the height of the school basketball team members.)

digit (**dij**-it) - the symbols 0,1,2,3,4,5,6,7,8, and 9

double bar graph (**duh**-buhl **bar graf**) - a graph with data shown with two different bars showing two different sets of data.

double-line graph (**duh**-buhl **line graf**) - a line graph with two lines.

estimate (the noun) (**ess**-ti-muht) – a rough guess of an answer. (The estimate of 49 plus 49 is 100.)

estimate (the verb) (**ess**-ti-mate) – the action of finding the rough guess of an answer. (I estimated how much money it would cost for my groceries.)

exponent (**ek**-spoh-nuhnt) - a number written to the upper right side of another number, showing how many times that number should be multiplied. (Example: In 3^4, the 4 is the exponent. 3^4 means $3\times3\times3\times3$.)

exponential form – a short cut way to write multiplication by the same numbers over and over. Example: $6*6*6*6 = 6^4$ 6^4 is in exponential form

fifth root, etc – these are similar to the above, except when raised to the fifth power, etc.

fourth root- a fourth root of a number is another number which when raised to the fourth power, gives the first number. (The forth root of 16 is 2.)

graph (**graf**) - a way to show data (He graphed the data about plant growth.)

horizontal axis (hor-uh-**zon**-tuhl **ak**-siss) – the lower line in a graph that goes from right to left. (I drew a horizontal axis from right to left and labeled it with days of the week.)

intersection (**in**-tur-sek-shuhn) – the part where two or more shapes overlap. This means the data is a member of both groups.

key (**kee**) – some graphs have a key that shows what or how many a certain symbol or symbols represents. (The key showed that a circle represented 10 fish.) (The key shows that the dotted line represented 8^{th} graders and the solid line represented 7^{th} graders.) Examples of keys are shown in the next sections.

line graph (**line graf**) – a way to show how data changes over time. Time is usually written on the horizontal axis.

line plot (**line plot**) – a way to show data using a number line and x's to show amounts.

mean (**meen**) - another name for an average.

median (**mee**-dee-uhn) - the middle number when a group of numbers is put in order. If there are two middle numbers, the median is the average of the two middle numbers.

mode (**mohd**) - the number that shows up most often in a group of numbers.

negative exponents – negative exponents are a way to write 1 over a number to an exponent. Example: 4^{-3} is a way to write $1/4^3$

parentheses (puh-**ren**-thuh-seez) – these symbols ( ) used to enclose numbers and or symbols in math. Example: 2(4 + 2)

parenthesis (puh-**ren**-thuh-siss) – one of these symbols (or) used to enclose numbers and or symbols in math.

pictograph (**pik**-toh-graf) - a way to show data using small pictures to represent a certain number of data

pie chart (**pye chart**) - same as a circle graph

pie graph (**pye graf**) - same as a circle graph

place (**playss**) - a particular area or location. In math, it is the location in the number. (We lived in several places when we were children.) (In the number 250, the 5 is in the tens place.)

power (**pou**-ur) - another word for an exponent. The power is how many times you multiply the number. (Example: 3^4 means 3 to the forth power. 3^4 means $3\times3\times3\times3$.)

quartile (**kwor**-tile)– each whisker and each box represents one quarter (1/4) of the data and is called a quartile.

range (**raynj**) - the largest number minus the smaller number in a group of numbers.

rounding (**round**-ing) - approximating a number. (I rounded 203 to the approximate number of 200.)

scatter plot (**skat**-ur **plot**) – a graph of many data points showing an upward trend, a downward trend, or no trend. The graph looks like a scattering of points.

scientific notation (**sye**-uhn-**tif**-ik noh-**tay**-shuhn) – a shorter way to write very large or very small numbers. The number is a digit, or a digit a decimal point and more digits. (examples: 4 4.5 4.6778) Then a times symbol (×) then 10 to a power (example: 10^4) Example: 4.5×10^4 is in scientific notation.

single-line graph (**sing**-guhl **line graf**) - a line graph with just one line

squared (**skwaird**) - instead of saying "to the second power" you can say "squared". (6^2 means 6 to the second power, or 6 squared.)

square root (**skwair root**) – a square root of a number is another number which when squared, gives the first number. (The square root of 16 is 4.)

statistics (stuh-**tiss**-tikss) - math used to gather, organize, summarize, and communicate data. You can make conclusions based on statistics. (I used statistics to see what month it rains the most in Texas.)

stem and leaf plot (**stem** and **leef plot**) – a graph of data showing the first digit or digits of the numbers (stems), followed by a list of all the last digits of the numbers(leaves).

survey (**sur**-vay) - asking different people the same questions and writing down what they say. (I did a survey of my classmates to see where they wanted to go for a class trip.)

table (**tay**-buhl) - a box with columns and rows used to help gather and record data. (I wrote down my survey results in a table.)

tally mark (**tal**-ee) - a mark used to help count when you are gathering data. Tally marks are usually written in groups of 5 with four up and down, and one slanted across the others. 𝍸 (I wrote 5 tally marks in the first row of the table.)

title (**tye**-tuhl) – graphs always have a title so you know what the information is about. (The title said the graph was about science grades.)

Venn Diagrams (**ven dye**-uh-gram) – pictures of shapes, usually circles, showing how data can be a part of different groups.

vertical axis (**vur**-tuh-kuhl **ak**-siss) – the line in a graph that goes up and down. (The vertical axis was three inches high, and was numbered from 0 to 12.)

zero power – any number to the zero power is one. $23^0 = 1$, $9421^0 = 1$

event (ee-**vent**) - something that may or may not happen. (One of the possible events of tossing a coin is it will land head's up.)

probability (prob-uh-**bil**-uh-tee) - how likely it is that an event will occur. Probabilities are shown as numbers between 0 and 1. (I figured out the probability that I would select a red pencil from the bag.)

certain (**sur**-tuhn) - if you are positive an event will happen, you are certain, and the probability is 1. (If I reach into a box of white golf balls and pick one out, it is certain I will get a white golf ball. The probability of selecting a white golf ball is 1.)

impossible (im-**poss**-uh-buhl) – if it is impossible for the event to happen, then it will not happen, and the probability is 0. (If I reach into a bag of red and blue marbles, it is impossible to pick an orange one. The probability of selecting an orange marble is 0.)

equally likely (**ee**-kwuhl-ee **like**-lee) – if you have an equal chance of one or the other thing happening, the probability of each thing happening is ½. (If you toss a coin it is equally likely you will get a head or a tail. The probability of getting a head is ½ and the probability of getting a tail is ½.)

outcome (**out**-kuhm) - the result of doing something like tossing a coin, or picking a marble from a bag of marbles. (The outcome of picking from the bag, was a blue marble.)

successes (suhk-**sess**-iz) - number of possible successful outcomes. (If I wanted to pick a blue marble, and the bag held three blue marbles, there were 3 possible successful outcomes or three successes.)

failures (**fayl**-yurz)– number of possible outcomes that were not successes. (If

I wanted to pick a blue marble and there were 10 black marbles and 10 green marbles along with the blue marbles, there are 20 possible failures.)

total outcomes (**toh**-tuhl **out**-kuhmz) – number of all possible outcomes. (If the bag of marbles I was picking from held 23 marbles, 23 would be the total outcomes.)

heads (**hedz**) – on a coin, it is the side that shows a person's head. (I flipped the coin and it landed heads up.)

tails (**taylz**) – on a coin, it is the side that is not heads. (I flipped the coin again and it landed tails up.)

die (**dye**) – a small six sided cube with dots on it, used for playing games. The number of dots go from 1 to 6. (I rolled the die and it landed with 4 dots showing on top.)

dice (**disse**) – more than one die. (That board game came with 4 dice.)

odds (**odz**) – a ratio of successes to failures. Odds are shown as two numbers with the word "to" or a colon ":" between them. (The odds were 2 to 5 that he would pick a red marble.) (The odds were 7 : 15 that he would pick a green candy.)

probability (prob-uh-**bil**-uh-tee) – a ratio of successes to total outcomes. Probability is shown as a fraction or a decimal. (The probability of picking a blue marble is 3/10 or .3.)