Bullhead City Elementary

Quarter 1 – Quarter 2	
Skills	**Activities**
Operations with Fractions	To Multiply Fractions: • Multiply the numerators (the number on top)of the fractions • Multiply the denominators (the number on bottom) of the fractions • Place the product of the numerators over the product of the denominators • Simplify the Fraction **Example: Multiply 2/9 and 3/12** • **Multiply the numerators (2*3=6)** • **Multiply the denominators (9*12=108)** • **Place the product of the numerators over the product of the denominators (6/108)** • **Simplify the Fraction (6/108 = 1/18)** Count out a dollar worth of change using several types of coin. Have your child calculate what fraction of the dollar value is represented in pennies, nickels, etc. http://www.amblesideprimary.com/ambleweb/mentalmaths/fracto.html http://www.kidsolr.com/math/fractions.html http://www.gamequarium.com/fractions.html Hands on models for dividing fractions: http://ims.ode.state.oh.us/ODE/IMS/Lessons/Content/CMA_LP_S01_BH_L06_I08_01.pdf
Operations with Decimals	Create flash cards out of random numbers with decimals. (1.34, .03, etc.) draw two flash cards and count all the numbers **behind** the decimal point. This is the number of digits which would appear **behind** the decimal point if you multiplied these two numbers together. Use a menu or catalog to have your child find total cost of purchased items. Calculating the tax requires multiplying by a decimal (In Arizona, the state sales tax is 6.6% or .066. Local taxes are then added on to that). Or, start your child with a specific amount of "money" and have them choose what they could buy before running out of money. www.funbrain.com/tens/index.html http://www.math.com/school/subject1/lessons/S1U1L4GL.html http://www.math.com/school/subject1/lessons/S1U1L5GL.html http://www.math.com/school/subject1/lessons/S1U1L6GL.html
Classifying Numbers	Draw a chart on a piece of paper with the columns labeled: Natural, Whole, Integer, Rational and Irrational. Give random numbers (fractions, decimals, positives, negatives, etc.) to your child and have them write the number in ALL of the columns that it belongs to. Most numbers will fit in more than one column. (**Natural Numbers** are the "counting numbers" 1, 2, 3, 4…etc. **Whole Numbers** are all of the Natural numbers as well as 0. **Integers** include all of the Whole numbers and their negatives (-1, -2, -3…) but NOT Fractions. **Rational Numbers** include all the Integers as well as fractions and most decimals. **Irrational Numbers** are only numbers that are expressed as decimals which never end and do not repeat the same digit forever…they cannot be expressed as fractions.) http://staff.argyll.epsb.ca/jreed/math9/strand1/1101.htm

Order of Operations with Roots and Absolute Value	To solve order of operations problems: 1. First do all operations that lie inside parentheses or absolute values. 2. Next, do any work with exponents or radicals. 3. Working from left to right, do all multiplication and division. 4. Finally, working from left to right, do all addition and subtraction. Example: $(3+\sqrt{4})$ x 4 = ?. First determine that $\sqrt{4} = 2$. This gets you $(3+2)$ x 4 =? Add 3+2 to equal 5. Then multiply it by 4. 5x4=20 So, $(3 + \sqrt{4})$ x 5 = 20. http://classroom.jc-schools.net/basic/math-order.html *Discuss with your child following the steps in a recipe. What happens when you do not follow the steps?
Prime Factorization and Greatest Common Factor (GCF)/Least Common Multiple (LCM)	Practice multiplication facts through 12 **GCF** of two numbers is the largest number that can each be divided by evenly. **Example**: GCF of 6 and 9 is 3 because 3 is the biggest number that divides evenly into both **LCM** of two numbers is the smallest number that can be divided by both evenly. **Example**: LCM of 6 and 9 is 18 because 18 is the smallest number that can be divided evenly by both. **GCF**: Use coins or buttons for this concept. Let's say you're trying to find factors of 24. Ask the child to divide the 24 buttons/coins into 2 piles. The child will discover that 12 is a factor. Ask the child how many ways they can evenly divide the coins. Soon they will discover that they can stack the coins into groups of 2, 4, 6, 8 and 12. **LCM**: Hot dogs come in packs of 10 and buns come in pack of 8 or 12. Have your child determine how many packs of each you would need to buy so that there is a bun for every dog. http://www.math-play.com/Factors-and-Multiples-Jeopardy/Factors-and-Multiples-Jeopardy.html
Operations with Integers	Play FACE OFF, the integer card game! Using a deck of cards, make red cards negative numbers and black cards positive numbers. Each player draws 2 cards and adds, subtracts, or multiplies their two numbers. The player with the higher total wins the duel and gets to keep all 4 cards. The winner of the game is the person who winds up with all the cards at the end. To learn the rules for adding, subtracting, and multiplying integers, please refer to this web site: http://www.homeschoolmath.net/teaching/integers.php http://www.gamequarium.com/equations.html
Solve One and Two-Step Equations	Provide your child with a math journal (a notebook in which they can do math). Work with your child to help them create and solve two-step equations (for example, n-3=6+2. To solve this, you would add the 6+2 and get n-3=8.) Then you add the inverse of (-3) to both sides (n-3 +3=8+3). The answer is n=11.) Continue to solve two step equations in the math journal. http://nlvm.usu.edu/en/nav/frames_asid_201_g_4_t_2.html?open=instructions http://www.ixl.com/math/grade-7/model-and-solve-equations-using-algebra-tiles http://www.gamequarium.com/equations.html
Locate Points on a Coordinate Plane, Scale Drawings	In a phone book, have your child find the "coordinate" location of your house, a store, etc. Or give them a coordinate and have them tell you what is in that square of the grid. On a square piece of paper, the child can transfer the map information to scale. http://www.shodor.org/interactivate/activities/GeneralCoordinates/
Recognize/Write the Rule for a Function	Decide on a math function (for example multiply by 3) and create a sequence of numbers with this rule by performing that function on each answer in turn. (3, 9, 27, etc.) Have the child try to guess the math function that created the sequence. You can start with numbers other than one. You can also create sequences out of two step equations (i.e. 2a+5) which would create the following sequence: (7, 19, 43, 91…etc.) Other games can be found here http://www.mathwire.com/games/guessmyrulegame.pdf http://pbskids.org/cyberchase/games/functions/functions.html

2011-2012
Parent Learning Calendar

Use Pythagorean Theorem to find distance	The Pythagorean Theorem is $a^2 + b^2 = c^2$ where a and b are the sides of a triangle and c is the longest side-also called the hypotenuse. a^2 is a "squared" or multiplied by itself ($a \times a$) http://regentsprep.org/Regents/math/ALGEBRA/AT1/TActive.htm http://www.kidsnumbers.com/pythagorean-theorem-game.php
Using coordinates in formulas (i.e. slope and midpoint)	Get a ruler. Find any slanted surface in the house. (Railings, chair arms, etc.) Measure its horizontal length and its vertical height. The height divided by the length will be its slope. The midpoint formula is $\left(\dfrac{x_1 + x_2}{2}, \dfrac{y_1 + y_2}{2}\right)$ and is used to find the midpoint, or center, of a line. The slope formula is $\dfrac{y_2 - y_1}{x_2 - x_1}$ and is used to find the steepness, $\dfrac{rise}{run}$ of a line. ("Rise" is the change in y coordinates, or the vertical (up and down) direction of the line. "Run" is the change in x coordinates, or the horizontal (flat) direction of the line.) In these formulas x_1 is the x-coordinate of the first point and x_2 is the x-coordinate of the second point you are given. Likewise y_1 is the y-coordinate of the first point, and y_2 is the y-coordinate of the second point. For example, if you are given the two points (3, 7) and (9, 21) - the x_1 is 3, x_2 is 9, y_1 is 7 and y_2 is 21. Plugging this example into the midpoint formula, you get $\left(\dfrac{3+9}{2}, \dfrac{7+21}{2}\right)$ which becomes $\left(\dfrac{12}{2}, \dfrac{28}{2}\right)$ which reduces to (6, 14). So, the point at (6, 14) is the midpoint of this line. Plugging the same coordinates into the slope formula, you get $\dfrac{21-7}{9-3}$ which becomes $\dfrac{14}{6}$ which reduces to 7/3. So the line has a slope of 7/3. http://www.mathopenref.com/coordvertical.html http://www.college-cram.com/study/algebra/graphs-and-lines/midpoint-of-a-line-segment/

RESOURCES

http://www.amblesideprimary.com/ambleweb/mentalmaths/fracto.html
http://www.kidsolr.com/math/fractions.html
http://www.gamequarium.com/fractions.html
Hands on models for dividing fractions:
http://ims.ode.state.oh.us/ODE/IMS/Lessons/Content/CMA_LP_S01_BH_L06_I08_01.pdf
www.funbrain.com/tens/index.html
http://www.math.com/school/subject1/lessons/S1U1L4GL.html
http://www.math.com/school/subject1/lessons/S1U1L5GL.html
http://www.math.com/school/subject1/lessons/S1U1L6GL.html
http://staff.argyll.epsb.ca/jreed/math9/strand1/1101.htm
http://classroom.jc-schools.net/basic/math-order.html
http://www.math-play.com/Factors-and-Multiples-Jeopardy/Factors-and-Multiples-Jeopardy.html
To learn the rules for adding, subtracting, and multiplying integers, please refer to this web site:
http://www.homeschoolmath.net/teaching/integers.php
http://www.gamequarium.com/equations.html
http://nlvm.usu.edu/en/nav/frames_asid_201_g_4_t_2.html?open=instructions
http://www.ixl.com/math/grade-7/model-and-solve-equations-using-algebra-tiles
http://www.gamequarium.com/equations.html
http://www.shodor.org/interactivate/activities/GeneralCoordinates/
http://www.mathwire.com/games/guessmyrulegame.pdf
http://pbskids.org/cyberchase/games/functions/functions.html
http://regentsprep.org/Regents/math/ALGEBRA/AT1/TActive.htm
http://www.kidsnumbers.com/pythagorean-theorem-game.php
http://www.mathopenref.com/coordvertical.html
http://www.college-cram.com/study/algebra/graphs-and-lines/midpoint-of-a-line-segment/