## Big Apple Academy

## Mathematics Department



## Grade $5 \rightarrow 6$ Summer Homework Math Package

It is important that you keep practicing your mathematical Knowledge over the summer to be ready for $6^{\text {th }}$ grade. In this Package you will find a calendar of activities for the month of July and August.

What should you do?

- Take a new notebook for every-day practice. For each day you will need 2 pages;
- Start each day with vocabulary words: copy each word from the given day-list, find and write the meaning of each word in your notebook on the front page (pages $1,3,5, \ldots$ and so on):
www.amathsdictionaryforkids.com/dictionary.html
- Use the internet to find the meaning of each word you do not know;
- Solve the problem of the day and write the solution with full explanation on the back page (pages 2,4,6,... and so on);
- Have the date of the entry. Have a clear and complete answer. Be neat and organize.

Do not forget to bring your notebook to school on September 1, 2015 - the first school day.

Big Apple Academy

| July $5 \rightarrow 6$ | Exponential form base exponent expanded form | Round <br> Estimate Clustering | Order of operations Properties of operations | Variable <br> Expression <br> Equation <br> Properties of equality | Decimal <br> Negative power of ten | Incoming $6^{\text {th }}$ Grade |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Monday 29 | Tuesday 30 | Wednesday 1 | Thursday 2 | Friday 3 | Saturday 4 |  |
| Scientific notation | Divisibility Divisibility rules | Prime and composite numbers | Prime factorization GCF <br> LCM | Equivalent <br> fractions <br> LCD <br> Simplest form | like denominators unlike denominators | Summer Home Work VOCABULARY |
| 6 | 7 | 8 | 9 | 10 |  |  |
| Mixed numbers Improper fraction | Reciprocal Multiplicative inverse | Ratio <br> Equal ratios <br> Rate <br> Unit rate | Proportion Cross product | Scale drawing Scale | Percent |  |
| 13 | 14 | 15 | 16 | 17 | 18 |  |
| Convert percent to fraction and decimal Convert fraction and decimal to percent | Percent of a number | Sales tax Total cost | Discount Sale price | Increase Decrease | Principal <br> Interest <br> Simple interest |  |
| Commission <br> Rate of commission | Opposites Integers Absolute value | Rational numbers |  |  |  |  |
| 26 | 27 | 28 |  |  |  |  |

Big Apple Academy

| $5 \rightarrow 6$ | Write 78,045 in expanded form using exponents. | The sum of my digits is 11. When rounded to the nearest hundred, I am 500. Rounding to the nearest ten makes me 530. What number am I? <br> Wednesday | Evaluate the expression $2\{5[12+5(500-100)+99]\}$ <br> Thursday 2 | Decide if the solution is correct. $\begin{aligned} & 12 n-5=4 n+35 \\ & n=4 \end{aligned}$ | In the number 44.444 which digit has $1 / 10$ the value of the 4 in the hundredth place? <br> Saturday | Incoming $6^{\text {th }}$ Grade |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Write 0.00000678 in scientific notation. | I am a 3-digit number less than 300. I am divisible by 2 and 5, but not 3. The sum of my digits is 7 . What number am l? 7 | The number 59 and I are the only two prime numbers between 50 and 60.Who am I? | I am the least common multiple of two numbers whose sum is 20 . One number is 4 greater than the other. What number am I? 9 | Use two prime numbers to create a fraction that is equivalent to $\frac{21}{49}$. | One-half of a number added to one-fourth of 96 is 30. What is the number? | Summer Home Work for FUN |
| $4 \frac{5}{12}-2 \frac{9}{16}$ | $\frac{2-\frac{3}{4}}{6 \frac{1}{4}+\frac{1}{2}}$ | Which is the better buy: One gallon of milk for $\$ 1.99$, or $\frac{1}{2}$ gallon of milk for $\$ 0.98$ ? | Ruth's batting average was 400 after 60 bats. After 20 more bats she lifted her average to 500. How many hits she get in those 20 bats? | Tina wants to enlarge this old photograph of her parents for their anniversary. If the scale is 1 inch $=2,5$ inches, what will the dimensions of the final photo be? | I am a three-place decimal that is equivalent to the difference between 1 and $\frac{3}{8}$. What decimal am 1 ? |  |
| Write $\frac{2}{5} \%$ as a fraction and decimal | What is $20 \%$ of $\frac{2}{5}$ of 15 | A rug cost \$296 plus $6 \frac{1}{2} \%$ sales tax. Find the sales tax and the total cost. | After a discount of $15 \%$, the price of a shirt is $\$ 51$. What was the original price of the shirt? | After 2 month on a diet, John's weight dropped from 168 to 147 pounds. By what percent did John's weight drop? | Find the amount of interest and the total amount. \$250 for 2 years at simple interest rate of 7.5\% per year. |  |
| Amount sold for $\$ 4,500$. Rate of commissions 2.5\% Commission? | Compare \|-6| and -6 | Order from greatest to least <br> $-2.4, \frac{5}{8},-\frac{5}{8}, 0$ $29$ |  |  |  |  |


| August |  |  | Operations with integers | Equation | expression | ming |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Monday | Tuesday | Wednesday | Thursday 30 | Friday 31 | Saturday 1 |  |
| Exponent <br> Base <br> Power | Order of operation | Coordinate plane <br> Ordered pair <br> Quadrant <br> Origin | Relation <br> Function | t-table linear equation | Angle <br> Acute angle <br> Obtuse angle <br> Right angle <br> Straight angle | Summer <br> Home Work VOCABULARY |
| Complementary angles Supplementary angles | Reflex angle $\begin{array}{rr} \\ \\ & 11\end{array}$ | Triangle Classify the triangles by sides and angles | Sum of all angles of a triangle | Perimeter Square Rectangle | Area <br> Rectangle <br> Perimeter |  |
| trapezoid parallelogram rhombus square rectangle | Similar triangles Corresponding sides | Perimeter Area | Parallelogram <br> Area <br> Perimeter | Surface area Area of a square | Circle <br> Radius diameter Circumference |  |
| Area of a circle $\begin{aligned} & \\ & \\ & \\ & 24\end{aligned}$ | Volume <br> Rectangular prism <br> Base <br> Height | Mean <br> Median <br> Mode <br> Range | Average | Permutations Combinations | Probability |  |



