**Big Apple Academy 2018 Mathematics Department**



**Grade 6 🡪 7 Summer Homework Math Package**

It is important that you keep practicing your mathematical Knowledge over the summer to be ready for **7th 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, . . . and so on);
* Use the internet to find the meaning of each word you do not know:

[www.a**mathsdictionaryforkids**.com/**dictionary**.html](http://www.amathsdictionaryforkids.com/dictionary.html)

* 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 4, 2018 - the first school day.

**Have a Great Summer!!**

**Big Apple Academy Mathematics Department**

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|  **July\_**  **6 🡪 7**  **Monday 2** | Integers, negative integers, positive integers, absolute value**Tuesday 3** | Distributive Property**Wednesday 4** | Closure Property counterexamples**Thursday 5**  | Exponent, base, power**Friday 6** | Laws of Exponents**Saturday 7** | **Incoming****7th Grade** |
| Order of Operations**9** | Consecutive numbers**10** | Expression, Evaluation of the Expression**11** | Like Terms, constant, coefficient, simplest form**12** | Two- step equation**13** | Formula **14** | **Summer Home Work VOCABULARY** |
| Division Property of Equality**16** | Terminating decimal**17** | Repeating Decimal **18** | Compatible numbers**19** | Negative exponent. **20**  | Scientific Notation **21** |  |
| Prime Numbers**23** | Prime factorization  **24** | Least common multiple**25** | Division Property of Inequality **26** | Stem- and -Leaf plot **27** | Factorial**28** |  |
| Fundamental Counting Principal **30** | Permutations**31** | Combinations**1** |  |  |  | davinci.png |

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|  **July\_**  **6 🡪 7**  **Monday 2** | Order from greatest to least:– 20, 12, – 4, |– 9|, –|–7|**Tuesday 3** | Find the values of the missing integers8[3-6]=\_\*3 – 8\*\_**Wednesday 4** | Tell whether this set is closed under given operation. If not, provide a counterexample.Set: Negative integersOperation: Multiplication. **Thursday 5**  | Use the law of exponents to simplify expression37 \* 30 34**Friday 6** | Evaluate:– ( –8 )2**7** | **Incoming****7th Grade** |
| (6– 24 ÷3) + 32 \* 2**9** | The sum of the squares of two consecutive num-bers is 135. What are those two numbers?  **10**  | Evaluate 5x3y4 forX= – 2, y= – 1**11** | -3(r+4) – 4(3-r)5c-d-8c-d**12** | Solve and check 34= 9 – w/2**13** | The perimeter of a square is 28 meters. What is the area? **14** | **Summer Home Work for FUN** |
| Solve :9k-4k-8k = -15**16** | Write 15/16 in decimal form and identify as terminating or repeating **17** | Order from least to greatest3.33, 3.3, 33 1/3, -3.3 **18** | Estimate a quotient by using the compa-tible numbers.622.9 ÷7.75  **19** | Evaluate909-2  **20**  | Write in scientific notation -0. 000000705 **21** |  |
| Find the sum of the first 7 prime numbers.**23** | Write the prime factorization of this number in exponential form.36,036**24** | A pair of numbers has a GCF of 6 and a LCM of 60. What could the numbers be?**25** | Solve and graph– 6w – 2w > -80 **26** | Make a stem- and- leaf plot using numbers: 51,53,45,39,36,47,42,33,32,31 **27** | Find the Value **11!** **9!****4! – 5!****28** |  |
| Find the number of 3-digit codes that can be made using all digits, if digits can be repeated and if digits cannot be repeated. **30** | How Many three letter arrangements can you make from the letters in the word Number?**31** | How many ways can you choose 2 letters from the word MINUS? **1** |  |  |  | davinci.png |

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|  **August-**  **6 🡪 7** **Monday** |  **Tuesday**  |  **Wednesday**  | Pascal’s Triangle**Thursday 2**  | Sequence, term, Arithmetic and geometric sequence**Friday 3** | Rational Number, Irrational Number **Saturday 4** |  **Incoming****7th Grade** |
| Polygon, Interior and Exterior Angles**6** | Regular Polygon**7** | Triangle Inequality Theorem**8** | Quadrilaterals, parallelogram, rectangle, rhombus, square, trapezoid, kite**9** | Perfect Square **10** | Pythagorean Theorem **11** | **Summer Home Work VOCABULARY** |
| Pythagorean triple**13** | Density property**14** | Greatest common factor, Divisibility rules **15** | Ratio, equivalent ratios **16**   | Rate, Unit rate, Unit cost  **17**  | Proportion **18** |  |
| Percent **20** | Percent Increase**21** | Profit, selling price**22** | Sales tax, sales tax rate, Total Cost**23** | Similar figures**24** | Law of Exponents for division **25** |  |
| Linear Equation **27** | Mean**28** | Median**29** | Range, Mode, Central Tendency**30** | **31** |  | davinci.png |

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|  **August-** **6 🡪 7**  **Monday**  |  **Tuesday**  |  **Wednesday**  | Draw first 8 rows of Pascal’s l Triangle**Thursday 2**  | Write the rule and find the missing term:75, 15 ,3,\_\_,0.12…**Friday 3** | Write three distinct rational numbers and 3 distinct irrational numbers. **Saturday 4** |  **Incoming****7th Grade** |
| Find the measure of each interior and exterior angle of regular pentagon. **6** | If the sum of the measure of a regular polygon is 1800o, how many sides does the polygon have?**7** | Can sides lengths 3cm, 5cm, 11 cm be used to form a triangle? Write yes or no, explain.**8** | List all possible quadrilaterals that have two pairs of adjacent sides that are congruent**9** | Give examples of a perfect square that is also a perfect cube.  **10** | Determine whether a triangle with sides 4m ,5m, 6m is a right triangle. **11** | **Summer Home Work for FUN** |
| Find the length of a diagonal of the rectangle whose length is 12 inches and width is 5 inches.**13** | Write a rational number that is between 1/4 and 1/3.**14** | What is the greatest common factor of 108, 81, 162 , 216? **15** |  Express each ratio in simplest form. 8:4/5**16**  | Find the Better buy:3 cans for $4 or 4 cans for $5.50.   **17**  | Write two different proportions using this set of numbers$1.80, $1.20, 14,21 **18** |  |
| What percent of 10 is 1/5**20** | An amount increased from 40 to 45. Find the Percent increase.**21** | An antique car dealer made a profit of 15% on a car that cost $60,000. For how much did he sell the car?**22** | Find tip and total cost of $65 dinner with 18% tip.**23** | Under the late afternoon sun a lamppost cast a 30ft shadow. Nearby a 5ft tall person casts a shadow 15ft tall. What is the height of the lamp post?.**24** | (-72x6y3z2) /(8x5yz2)**25** |  |
| Solve:14 – 5(p+3) = -16**27** | Remove a number from the following set so the mean is 20:25,23,12,10,20**28** | Remove a number from the data set so the median is 12:10,6,3,13,12,4**29** | Find the median, mean, mode, and range of the set-2,6,2,-4.**30** | **31** |  | davinci.png |