Big Apple Academy **2025** **Mathematics Department**

Summer Math Homework Package Grade 6 → 7

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: **https://dynamiclearningmaps.org/sites/default/files/documents/ERP/dlm_math_glossary.pdf**

- 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 2, 2025 - the first school day.

Have a Great Summer!!

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July **6 → 7** **Monday**	Integers, negative integers, positive integers, absolute value **Tuesday**	Distributive Property **Wednesday**	Closure Property counterexamples **Thursday**	Exponent, base, power **Friday**	Laws of Exponents **Saturday**	**Incoming 7th Grade**
Order of Operations	Consecutive numbers	Expression, Evaluation of the Expression	Like Terms, constant, coefficient, simplest form	Two- step equation	Formula	**Summer Home Work VOCABULARY**
Division Property of Equality	Terminating decimal	Repeating Decimal	Compatible numbers	Negative exponent.	Scientific Notation	
Prime Numbers	Prime factorization	Least common multiple	Division Property of Inequality	Stem- and -Leaf plot	Factorial	
Fundamental Counting Principal	Permutations	Combinations				

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July **6 → 7** **Monday**	Order from greatest to least: – 20, 12, – 4, |– 9|, –|–7| **Tuesday**	Find the values of the missing integers 8[3-6]=_*3 – 8*_ **Wednesday**	Tell whether this set is closed under given operation. If not, provide a counterexample. Set: Negative integers Operation: Multiplication. **Thursday**	Use the law of exponents to simplify expression $\frac{3^7 * 3^0}{3^4}$ **Friday**	Evaluate: $-(-8)^2$	**Incoming 7th Grade**
$(6-24 \div 3) + 3^2 * 2$	The sum of the squares of two consecutive numbers is 135. What are those two numbers?	Evaluate $5x^3y^4$ for X= – 2, y= – 1	-3(r+4) – 4(3-r) 5c-d-8c-d	Solve and check 34= 9 – w/2	The perimeter of a square is 28 meters. What is the area?	**Summer Home Work for FUN**
Solve : 9k-4k-8k = -15	Write 15/16 in decimal form and identify as terminating or repeating	Order from least to greatest 3.33, 3.3, 33 1/3, -3.3	Estimate a quotient by using the compatible numbers. 622.9 ÷7.75	Evaluate $\frac{9^0}{9^{-2}}$	Write in scientific notation -0. 000000705	
Find the sum of the first 7 prime numbers.	Write the prime factorization of this number in exponential form. 36,036	A pair of numbers has a GCF of 6 and a LCM of 60. What could the numbers be?	Solve and graph – 6w – 2w > -80	Make a stem- and-leaf plot using numbers: 51,53,45,39,36,47, 42,33,32,31	Find the Value **11!** **9!** **4! – 5!**	
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.	How Many three letter arrangements can you make from the letters in the word Number?	How many ways can you choose 2 letters from the word MINUS?				

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August **6 → 7** **Monday**	**Tuesday**	**Wednesday**	Pascal's Triangle **Thursday**	Sequence, term, Arithmetic and geometric sequence **Friday**	Rational Number, Irrational Number **Saturday**	**Incoming 7th Grade**
Polygon, Interior and Exterior Angles	Regular Polygon	Triangle Inequality Theorem	Quadrilaterals, parallelogram, rectangle, rhombus, square, trapezoid, kite	Perfect Square	Pythagorean Theorem	**Summer Home Work VOCABULARY**
Pythagorean triple	Density property	Greatest common factor, Divisibility rules	Ratio, equivalent ratios	Rate, Unit rate, Unit cost	Proportion	
Percent	Percent Increase	Profit, selling price	Sales tax, sales tax rate, Total Cost	Similar figures	Law of Exponents for division	
Linear Equation	Mean	Median	Range, Mode, Central Tendency			

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