**Big Apple Academy 2018 Mathematics Department**

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**Grade 5 🡪 6 Summer Homework Math Package**

It is important that you keep practicing your mathematical Knowledge over the summer to be ready for 6th 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):

 [www.a**mathsdictionaryforkids**.com/**dictionary**.html](http://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 4, 2018 - the first school day.

**Have a Great Summer!!**

**Big Apple Academy Mathematics Department**

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|  **July\_** **5 🡪 6** **Monday** | **Tuesday**  | **Wednesday**  | **Thursday** | VariableExpressionEquationProperties of equality**Friday 29** | DecimalNegative power of ten**Saturday 30** | **Incoming****6th Grade** |
| Scientific notation **2** | DivisibilityDivisibility rules**3** | Prime and composite numbers**4** | Prime factorizationGCFLCM**5** | Equivalent fractionsLCDSimplest form**6** | like denominatorsunlike denominators  **7** | **Summer Home Work VOCABULARY** |
|  Mixed numbersImproper fraction**9** | ReciprocalMultiplicative inverse**10** | RatioEqual ratiosRate Unit rate **11** | ProportionCross product**12** | Scale drawingScale **13**  | Percent **14** |  |
| Convert percent to fraction and decimalConvert fraction and decimal to percent **16** | Percent of a number **17** | Sales taxTotal cost**18** | DiscountSale price **19** | IncreaseDecrease **20** | PrincipalInterestSimple interest**21** |  |
| CommissionRate of commission **23** | OppositesIntegersAbsolute value**24** | Rational numbers**25** | Exponential formbaseexponentexpanded form **26** | RoundEstimateClustering **27** | Order of operationsProperties of operations **28** | davinci.png |

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|  **July\_** **5 🡪 6****Monday**  | .**Tuesday**  | **Wednesday**  | **Thursday**  | Decide if the solution is correct.12n – 5 = 4n + 35n = 4**Friday 29** | In the number 44.444 which digit has 1/10 the value of the 4 in the hundredth place?**Saturday 30** | **Incoming****6th Grade** |
| Write 0.00000678in scientific notation.**2** | 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 I? **3**  | The number 59 and I are the only two prime numbers between 50 and 60.Who am I?**4**  | 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?  **5** | Use two prime numbers to create a fraction that is equivalent to $\frac{21}{49}$.  **6** | One-half of a number added to one-fourth of 96 is 30. What is the number? **7** | **Summer Home Work for FUN** |
| 4$\frac{5}{12}$ - 2$\frac{9}{16}$**9** | $$\frac{2-\frac{3}{4}}{6\frac{1}{4}+ \frac{1}{2}}$$**10** | Which is the better buy: One gallon of milk for $1.99, or $\frac{1}{2}$ gallon of milk for $0.98? **11** | Ruth’s batting average was 400 after 60 bats. After 20 more bats she lifted her average to 500. How many hits she get in those 20 bats? **12**  | Tina wants to enlarge this old photograph of her parents for their anniversary. If the scale is 1 inch = 2,5 inches, what will the dimen-sions of the final photo be?  **13** | I am a three-place decimal that is equivalent to the difference between 1 and$ \frac{3}{8}$. What decimal am I ? **14** |  |
| Write $\frac{2}{5}$% as a fraction and decimal**16** | What is 20% of $\frac{2}{5}$ of 15**17** | A rug cost $296 plus 6$\frac{1}{2}$% sales tax. Find the sales tax and the total cost.**18** | After a discount of 15%, the price of a shirt is $51. What was the original price of the shirt? **19** | After 2 month on a diet, John’s weight dropped from 168 to 147 pounds. By what percent did John’s weight drop? **20**  | Find the amount of interest and the total amount. $250 for 2 years at simple interest rate of 7.5% per year. **21**  |  |
| Amount sold for $4,500. Rate of commissions 2.5%Commission?**23** | Compare |-6| and -6**24** | Order from greatest to least-2.4, $ \frac{5}{8}$, - $\frac{5}{8}$, 0**25** | Write 78,045 in expanded form using exponents **26** | 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? **27** | Evaluate the expression 2{ 5[12 + 5(500 - 100) + 99]}  **28**  | davinci.png |

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|  **August-** **5 🡪 6** Average **Monday 30**  | PermutationsCombinations **Tuesday 31**  | Probability **Wednesday 1**  | Operations with integers**Thursday 2**  | Equation**Friday 3** | expression **Saturday 4** |  **Incoming****6th Grade** |
| ExponentBasePower**6** | Order of operation**7** | Coordinate planeOrdered pairQuadrantOrigin**8** | RelationFunction**9** | t-tablelinear equation **10** | AngleAcute angleObtuse angleRight angleStraight angle  **11** | **Summer Home Work VOCABULARY** |
| Complementary anglesSupplementary angles **13** | Reflex angle**14** |  TriangleClassify the triangles by sides and angles**15** | Sum of all angles of a triangle **16**  |  PerimeterSquareRectangle   **17**  | AreaRectanglePerimeter **18** |   |
| trapezoidparallelogramrhombussquarerectangle  **20** | Similar trianglesCorresponding sides**21** | PerimeterArea**22** | ParallelogramAreaPerimeter**23** | Surface areaArea of a square**24** | CircleRadiusdiameterCircumference **25** |  |
| Area of a circle **27** | VolumeRectangular prismBaseHeight**28** | MeanMedianModeRange**29** |  Review**30** |  |  | davinci.png |

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|  **August-** **5 🡪 6**  32 + (–5)2 – (–1)3 = ? **Monday 30**  | Marcy’s average score on four tests was 84. Three of scores were 84, 88, and 80. What was the fourth score? **Tuesday 31**  | Eight children line up at the water fountain. Find the number of possible arrangements. **Wednesday 1** | Find the probability of getting a sum of 5 or a sum of 7 when two cubes are tossed. **Thursday 2** | Solvex + (–21) = –59 **Friday 3** | Evaluatex – (–2) for x = 3 **Saturday 4** |  **Incoming****6th Grade** |
| Compare–72  and (–7)2 **6** | $$\frac{-5^{2}+(-5)^{2}}{\left|4^{2}- 2^{5}\right|-(-3)}$$**7** | Draw a coordinate plane. Graph and label the points given.(0,5), (–3,1), (–1,0) (–4, –5)  **8** | Tell whether relation is a function

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| a | 1 | 6 | 9 | 1 |
| b | 3 | -1 | -1 | 3 |

 **9** | Make a T-table. Then graph each equation.Y = -3Y = – x –3X = – 4 **10** | From midnight to noon, the hands of a clock form straight angles several times. How many times?  **11** | **Summer Home Work for FUN** |
| Find the complement and supplement of 56° angle.**13** | Draw a 255° angle.**14** | Is it possible to make an equilateral obtuse triangle? Explain.**15** | Find the third angle of a triangle, given that the first two angles are 55° and 70°. What kind of triangle is it?  **16**   | Find the area of the square which has the same perimeter as a rectangle 12 by 2. **17**  | What is the greatest area of a rectangle with a perimeter of 50? **18** |  |
| True or false.All trapezoids are parallelograms.Every square is a rhombus.Every rectangle is a square.  **20** | two similar triangles with dimensions shownx = y =**21** | Q_ARE05 Find the perimeter and the area. **22** |  15cm10 cm 20cmArea = ?Perimeter = ?**23** | Find the surface area of a cube with edge of 3.2 meters.**24** | If circumference of a Ferris wheel is 134 meters, what is its diameter? Use 3.14 for π.**25** |  |
| What is the area of a circular garden with a diameter of 4 feet? **27**  | An aquarium has a rectangular base 36 in by 12 in. its volume is 6912 in3. Find its height. **28** | Find the mean, median, mode and range of a data set.1.8, 1.95, 1.85, 1.8, 1.6  **29** | **Check everything you solved and prepare your questions for teacher.****30** |  |  | davinci.png |