

Summer Enrichment Packet  
Rising Math Grade 5 Students



**Prince George's County Public Schools**  
**Division of Academics**  
**Department of Curriculum and Instruction**

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You have learned so much in math this year! This packet is a compilation of important mathematical concepts and skills that you are expected to know prior to moving to the next level and exposure to new items for the upcoming year. These examples focus on both mathematical skills and problem solving. While you may use calculators and other tools as needed, be prepared to explain the reasoning behind your answers. Some problems require answers from previous activities but, overall, you may do the problems in any order or any day that you choose. Create a math journal by stapling sheets of paper together or use a notebook to show your work.

A list of books and resources needed are included at the end of each grade level packet.  
Have a happy and safe summer!

*Prince George's County Public Schools Mathematics*



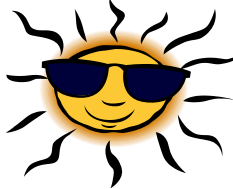
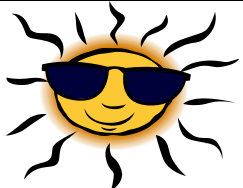
*Manipulatives-Modeling-Monitoring-Mastery*

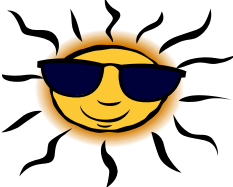
# Rising Math Grade 5 Students

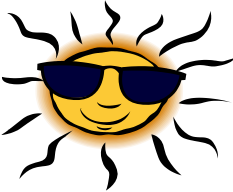
Some indicators that students leaving Grade 4 should be able to perform include, but are not limited to:

- Generate and analyze repeating and growing patterns
- Generalize place value understanding to 1,000,000
- Determine equivalent fractions
- Describe and analyze two-dimensional shapes
- Draw points, lines, and line segments
- Draw parallel and perpendicular lines
- Identify lines of symmetry for two-dimensional figures
- Measure and draw angles
- Fluently add and subtract multi-digit numbers
- Determine equivalent units of time
- Add and subtract to determine intervals of time
- Interpret line plots
- Identify factors and multiples
- Multiply whole numbers: one digit by four digits, two digits by two digits
- Divide whole numbers: up to four digits by one digit
- Represent mixed numbers, improper and proper fractions on a number line
- Determine perimeter and area
- Compare fractions with or without using the symbols ( $>$ ,  $<$ , or  $=$ )
- Decompose a fraction into a sum of fractions
- Add and subtract mixed numbers with like denominators
- Multiply a fraction by a whole number
- Compare order, and describe decimals to the hundredths place with or without using the symbols ( $>$ ,  $<$ , or  $=$ )

Throughout the summer continue to practice for fluency all basic fact operations, recognize and understand benchmark fractions, and think mathematically! Be sure to check out our enrichment math lessons on **PGCPS TV (Comcast Channel 96/Verizon Channel 38)** beginning July 1<sup>st</sup>.

<b>Week 1</b>				
Look in a catalogue/online for the price of a game you want. Determine how much change you will receive if you paid with \$100.00. Count your change for a parent.	Read a math book from the attached list of books.	Find a recipe. Order the fractions from least to greatest.	List the factors of 93. Write the divisibility rule(s) that works for 93.	How many: Tenths in 1? Hundredths in 1? Thousandths in 1? Ten-thousandths in 1?  Explain your answer.
<b>Week 2</b>				
Estimate and then measure the length and height of your bed in inches. Convert the measurements from inches to feet.	Mark McGwire's 70 <sup>th</sup> homerun ball sold for about \$3,000,000. Babe Ruth, an earlier homerun king, hit 60 in 1927. Suppose that Ruth's ball was valued at \$3,000.00 in 1927 and, like many good investments, doubled its value every seven years. Would you rather have had the value of Ruth's ball or McGwire's in 1999? What would the values be today?	In your math journal, draw rectangular arrays for: 1. $12 \times 6 =$  2. 15 groups of 9  Create 3 additional rectangular arrays and ask a friend to write the equations for each.	In your math journal, write how many minutes there are in 2 hours? How many seconds are in 2 hours? Show how you got your answer.	
<b>Week 3</b>				
	What could be the measures of two acute angles if the sum of the two angles is an obtuse angle? Explain your answer.	Is the sum of $6\frac{7}{8}$ and $4\frac{5}{8}$ closer to 11 or 12? Explain your answer.	Suppose the current time is 4:45 p.m. and the train is due to arrive in 14 and a quarter hours. What time is the train due to arrive?	List the multiples of 6 and 8 that are less than 100. Circle the common multiples. What is the least common multiple for 6 and 8?

<b>Week 4</b>				
Ms. Hill divided 4 <sup>th</sup> graders into groups of 7. If there are 45 fourth graders, how many are not yet in a group? Explain your answer.	Read a math book from the attached list of books.	Find the area and perimeter of your bedroom floor. Draw a picture and label the dimensions on the graph paper. Paste in your math journal. What unit of measurement did you use to find the area and perimeter of your bedroom?	Estimate your parents' weight in pounds and record. Then, using a scale record your parents' actual weight. What is the difference between your estimate and the actual weight?	Write the number 23.69 as a fraction, in word form, and expanded form. Also draw a model using place value blocks to represent the number.
<b>Week 5</b>				
Look in magazines for pictures of angles. Cut out and paste 2 examples of right angles, acute angles, and obtuse angles. Be sure to label each angle.	Solve the following problems in your math journal. Reduce to simplest form: 1. $\frac{1}{2} + \frac{3}{4} = ?$ 2. $1\frac{5}{8} - \frac{7}{8} = ?$	A ticket at an amusement park costs \$49.99 for adults and \$39.99 for a child over the age of 2. How much will it cost for 2 adults, an 11-year-old and a 1-year-old? Show your work.	Estimate the measures of the angles between your fingers when you spread out your hand.	A rule for a given pattern is add 6. Starting with the number 3, list the next 9 numbers. Describe all features of this pattern.
<b>Week 6</b>				
Determine if this number sentence is balanced: $3 \times 12 = 100 \div 2$ ? If it is not balanced, add more numbers and operations to one (or both) sides to balance it!	Create a story problem (with the answer) focusing on elapsed time for a family member to solve.	Find the largest container in your house and estimate how much water it will hold. Record the estimate and the actual amount in cups, quarts, pints, and gallons.	Take a walk around your neighborhood with a family member and make a map of the streets. Label the streets as parallel or intersecting lines.	

<b>Week 7</b>				
<p>The cost of a sofa your mom wants to buy is \$820.00. It is on sale for \$699.00. Estimate the difference between the regular and the sale price. Determine the actual difference between the two prices.</p>	<p>In your math journal, list 5 fractions that are equivalent to <math>\frac{3}{8}</math>.</p>	<p>There are 365 days in a year. Divide the number of days in a year by the number of people who live with you. Before dividing, estimate the quotient. Show your work in your math journal.</p>	<p>Solve in your math journal: Jennifer buys 5 yards of fabric to make pillows. Each pillow needs 25 inches. Will she have enough fabric to make 9 pillows? If not, how much more fabric will she need? If she has enough, can she make more pillows? Show your work and explain your answer.</p>	<p>Read a math book from the attached list of books.</p>
<b>Week 8</b>				
<p>Draw a picture of a playground. Be sure to include 3 obtuse angles, 2 acute angles, and 4 right angles.</p>	<p>Find the unknown(p):</p> <ol style="list-style-type: none"> <li>1. <math>352 + p = 924</math></li> <li>2. <math>700 - p = 254</math></li> <li>3. <math>25 \times p = 175</math></li> <li>4. <math>400 \div p = 8</math></li> </ol>	<p>Juan goes to the grocery store. He spends \$87.88 a week. Estimate how much Juan will spend in one month. Explain how you got your answer.</p>	<p>Noriko multiplies <math>13 \times 45</math>. What are the partial products? Draw an area model to show the partial products.</p>	

Suggested Math Reading for Intermediate Grades

Title	Author
1. If You Made a Million	David M. Schwartz
2. Is a Blue Whale the Biggest Thing There Is? (Size)	Robert E. Wells
3. Math for All Seasons	Greg Tang
4. The Go-Around Dollar	Barbara Johnston Adams
5. The Cat in Numberland	Ivar Ekeland
6. Cook-A-Doodle-Do! (Capacity)	Susan Stevens Crummel
7. The Grapes of Math	Greg Tang
8. Math Potatoes: Mind-Stretching Brain Food	Greg Tang
9. The Story of Clocks and Calendars	Betsy Maestro
10. Full House: An Invitation to Fractions	Dayle Ann Dodds
11. A Cloak for the Dreamer (Shapes)	Aileen Friedman
12. A Fly on the Ceiling (Ordered Pairs)	Julie Glass
13. Cubes, Cones, Cylinders, and Spheres	Tana Hoban
14. Grandfather Tang's Story (Spatial/Shapes)	Ann Tompert
15. Sir Cumference and the Dragon of Pi (Circles)	Cindy Neuschwander
16. Sir Cumference and the Great Knight of Angleland (Angles)	Cindy Neuschwander
17. The Adventures of Penrose	Theoni Pappas
18. Three Pigs, One Wolf, and Seven Magic Squares (Tangrams/Shapes)	Grace Maccarone
19. What's Your Angle, Pythagoras? (Angles)	Julie Ellis
20. X Marks the Spot! (Ordered Pairs)	Lucille Recht Penner



<b>21. Fly a Jetfighter</b>	<b>Hilary Koll</b>
<b>22. Edgar Allan Poe's Pie: Math Puzzlers in Classic Poems</b>	<b>Patrick Lewis</b>
<b>23. Horrible Harry Cracks the Code</b>	<b>Suzu Kline</b>
<b>24. Math Games &amp; Activities from Around the World</b>	<b>Claudia Zaslavsky</b>
<b>25. Place Value Level 3 Practice Pages and Easy-to Play Learning Games for Base-ten number concepts</b>	<b>April Duff</b>
<b>26. Solve a Crime</b>	<b>Hilary Koll</b>
<b>27. Ready for Addition</b>	<b>Rebecca Wingard-Nelson</b>
<b>28. Moving to Math Developing Math Literacy</b>	<b>Pamela Schiller</b>
<b>29. Read Any Good Math Lately? Children's Books for Mathematical Learning</b>	<b>David Whitin</b>
<b>30. Leonardo da Vinci</b>	<b>Rancesca Romei</b>
<b>31. Read Any Good Math Lately?</b>	<b>David Jackman Whitin</b>
<b>32. Math Smart Junior: Math You'll Enjoy!</b>	<b>Marcia Lerner</b>
<b>33. Family Math</b>	<b>Jean Kerr Stenmark</b>
<b>34. Matema?Ticas Para Ninos</b>	<b>Janice Pratt VanCleave</b>
<b>35. Sir Cumference and the Sword in the Cone: a Math Adventure</b>	<b>Cindy Neuschwander</b>
<b>36. Amazing Math Projects You Can Build Yourself</b>	<b>Laszlo C. Bardos</b>
<b>37. Eat Your Math Homework: Recipes For Hungry Minds</b>	<b>Ann McCallum</b>