



Beecher Road School

Summer Math Packet

For

Students Entering Fifth Grade



Dear Fifth Grader,

Congratulations on successfully completing fourth grade! In order to help you maintain all the great strategies, skills, and concepts you learned this year and to be ready for fifth grade, we hope you complete the attached summer packet. The packet consists of 2 calendar pages, one for July and one for August. It also includes directions for math games to be played at home as well as cool math books we recommend. We'd like you to try to spend at least ten minutes each day this summer, 4 - 5 days a week, working on the attached problems, reading some of the suggested math books, visiting the websites, or practicing your math facts.

Just a few minutes each day spent "thinking and talking math" will help reinforce the math that you have learned and begin to prepare you for all the new concepts you will learn in fifth grade. The goal of this packet is for you to have fun while you keep your math skills and concepts fresh. Remember to communicate your mathematical thinking by discussing how you approached a problem, what strategies you used and why, and how you know your solution makes sense.

When you have completed the packet, please sign your name on the slip at the bottom of this paper and ask your parent to sign it, too. Please return the slip to your fifth grade teacher in August.

Have a safe and happy summer vacation!



Date

I, _____, spent at least 200 minutes working on math activities this summer.

Student Signature

Parent Signature



Grade 5 **SUMMER** Math Ideas

Math Books To Read:

A Place for Zero (Charlesbridge Math Adventures) by Angeline Sparagna LoPresti

Sir Cumference and the First Round Table by Cindy Neuschwander

Sir Cumference and the Great Knight of Angleland by Cindy Neuschwander

Fraction Fun by David Adler

Math Curse by Jon Scieszka

How Much Is a Million? By David M. Schwartz

Anno's Mysterious Multiplying Jar by Masaichiro Anno

Counting on Frank by Rod Clement

A Grain of Rice by Helena Clare Pittman

Sideways Arithmetic from Wayside School by Louis Sachar

Divide and Ride by Stuart Murphy

Lemonade for Sale by Stuart Murphy

Books About Perseverance and Mindset:

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Making a Splash by Carol E. Reiley

The Most Magnificent Thing by Ashley Spires

Giraffes Can't Dance by Giles Andreae

Your Fantastic Elastic Brain by JoAnn Deak

Games To Play:

Games To Play (You will need a regular deck of cards)

1. Multiplication Double War: Remove all the face cards and 10s from a deck of cards. The ace will equal 1. Deal out the cards equally between 2 to 3 players. Each player turns over 4 cards and multiplies a two-digit number by a two-digit number. Use the symbols $<$, $>$, or $=$ to compare the products. The person with the highest product wins all the cards. If two or more of the products are the same, it's war. The players with equal products each lay three more cards face down, then four cards face up, multiplying another 2-digit by 2-digit number. The player with the highest product wins all the cards in the hand. (This game can be played with more than one deck.)

2. Close to 1000: Deal 8 cards to each player. Use any 6 cards to make two 3-digit numbers. Try to make the sum close to or exactly 1000. For example, you can combine 148 and 853 to make 1001. Your score is 1 because the difference between 1001 and 1000 is 1. The lowest score after five rounds wins!

3. Hit The Target: Groups of two to five players. Use a deck of playing cards. Aces are worth 1 or 11, Jacks are worth 12, Queens are worth 13, Kings are worth 14.

How to Play: Each group of 2 - 5 players selects a target number from 1- 30. One of the players will turn five cards from the deck face up and the object is for each player to make a number sentence using all five cards with any operations to reach the target number. The first player to find a winning combination keeps the cards and chooses the next target number. If no combination is found in about a minute, flip over another card and try to make a combination using six cards.

Other games to play: Monopoly, Othello, Battleship, Connect Four, Mastermind, Mancala, Legos, K'Nex, Simon, Yahtzee, puzzles, Parcheesi, Crazy Eights

**Entering 5th Grade
July**

<p>The school bought 467 pieces of purple construction paper and 234 pieces of orange construction paper. The students used 345 pieces of construction paper. How many pieces of construction paper are left?</p>	<p>Tara and Jax each had a bagel for breakfast. Tara ate $\frac{1}{4}$ of her bagel. Jax ate $\frac{3}{8}$th of his bagel. Jax thinks he ate more. Do you agree? How do you know?</p>	<p>A lawn water sprinkler rotates 65 degrees and pauses. It then goes back 25 degrees and pauses again. What is the total degree rotation of the sprinkler? To cover a full 360 degrees, how many more degrees will it move?</p>	<p>Make this equation true:</p> $\begin{array}{r} 50 _ 6 \\ - _ 48 _ \\ \hline 16 _ 8 \end{array}$	<p>Family Math Activity: Play the game Close to 1000. (see directions)</p>
<p>Solve the riddle: I am a whole number between 1 and 100. If you multiply me by 3, my product is less than 300 but greater than 290. The digit in the one's place is an odd number. The sum of all the digits is 18. What number am I?</p>	<p>Mr. White wants to redo his bathroom floor. His bathroom is 5 ft. by 10 ft. If Mr. White uses 6 inch square tiles, how many will he need?</p>	<p>With a partner take turns scooping coins from a cup. Write the total in dollars and cents using decimal notation. Compare totals using $<$, $>$, or $=$. Take ten turns. Find the total of your amounts. Who scooped the most?</p>	<p>What number could you put in the blank to make the expression true? $(4 \times 10) + 8 = 12 \times \underline{\hspace{1cm}}$</p>	<p>Family Math Activity: Play Multiplication Double War. (see directions)</p>
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Entering 5th Grade August

<p>You have two minutes. Write down all the multiplication and division facts you know. <i>GO!</i> How many facts did you know? What did you notice about the facts you know? What facts are missing? Choose 5 facts to add to what you know.</p>	<p>Read <u>Anno's Mysterious Multiplying Jar</u>. How many jars are there in the end of the story. How do you know? Did you notice a pattern?</p>	<p>The sum of two mixed numbers is $5\frac{3}{4}$. What might the two mixed numbers be? Show as many different solutions as you can. Explain your strategy.</p>	<p>Fill in the squares to give the correct answer to the problem. All of the digits in the addends are the same.</p> $ \begin{array}{r} \quad _ _ _ _ \\ + \quad _ _ _ _ \\ \hline 1 _ _ _ 8 \end{array} $	<p>Family Math Activity: Play <u>Hit the Target</u> (see directions)</p>												
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Activity Five: A Class Pet

Your teacher is considering getting a class pet and has asked you to research how much it would cost to feed a hamster, a snake or a leopard gecko per year. Display your data about the costs to feed each pet in a bar graph. Be sure to include a title and labels! Write a recommendation to your teacher based on your data. Write a paragraph explaining how you collected your data and the math you used in completing the project.

Activity Six: Planning a Birthday Party

Your mom and dad said that you can help plan your birthday party! YAY! You are to pick the theme of the party and make a list of all the items that you will need: tablecloth, goody bags, goody bag items, cups, plates, forks, balloons, and of course, the cake. You may use the Internet for your research or look at fliers or catalogs. You might even want to visit Party City or other places to find out how much it would cost to have a party if you invited ten friends. Share the list and the expenses with your parents.

Activity Seven: Split the Bill

You visit a new restaurant for dinner with three of your friends. After a delicious meal, the waiter hands you the check so that you can split the bill equally with your friends. For the project: decide on the type of restaurant you will visit. Create a restaurant menu that shows the price for five different drinks, entrees, side dishes and desserts. Create a guest check that shows what each person ordered, the cost of each item and the total cost of the meal. Split the bill equally with your friends. How much money does each person need to pay? Explain your thinking. Think of a creative way to share your work!

Activity Eight: Create a Math Storybook

In this project you can choose to create a math storybook for the local library or the school library. Requirements: Choose a math topic and decide on a title for your book (e.g. A Day without Measurements, The Land of Quadrilaterals, Fraction Frenzy etc.) Create your main characters and supporting characters. Write a draft copy of an original math story. When you are ready to publish: design a cover that includes the title, author and an illustration. Write a blurb on the back cover that explains how your book will help the reader learn more about math, and suggest what grade level it is best suited to. Type or neatly print your story. Include at least one illustration in your story.



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Other games to play: Monopoly, Othello, Battleship, Connect Four, Mastermind, Mancala, Legos, K'Nex, Simon, Yahtzee, puzzles, Parcheesi, Crazy Eights

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Entering 5th Grade August

<p>You have two minutes. Write down all the multiplication and division facts you know. <i>GO!</i> How many facts did you know? What did you notice about the facts you know? What facts are missing? Choose 5 facts to add to what you know.</p>	<p>Read <u>Anno's Mysterious Multiplying Jar</u>. How many jars are there in the end of the story. How do you know? Did you notice a pattern?</p>	<p>The sum of two mixed numbers is $5\frac{3}{4}$. What might the two mixed numbers be? Show as many different solutions as you can. Explain your strategy.</p>	<p>Fill in the squares to give the correct answer to the problem. All of the digits in the addends are the same.</p> $\begin{array}{r} \quad _ _ _ _ \\ + \quad _ _ _ _ \\ \hline 1 _ _ _ 8 \end{array}$	<p>Family Math Activity: Play <u>Hit the Target</u> (see directions)</p>												
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Activity Five: A Class Pet

Your teacher is considering getting a class pet and has asked you to research how much it would cost to feed a hamster, a snake or a leopard gecko per year. Display your data about the costs to feed each pet in a bar graph. Be sure to include a title and labels! Write a recommendation to your teacher based on your data. Write a paragraph explaining how you collected your data and the math you used in completing the project.

Activity Six: Planning a Birthday Party

Your mom and dad said that you can help plan your birthday party! YAY! You are to pick the theme of the party and make a list of all the items that you will need: tablecloth, goody bags, goody bag items, cups, plates, forks, balloons, and of course, the cake. You may use the Internet for your research or look at fliers or catalogs. You might even want to visit Party City or other places to find out how much it would cost to have a party if you invited ten friends. Share the list and the expenses with your parents.

Activity Seven: Split the Bill

You visit a new restaurant for dinner with three of your friends. After a delicious meal, the waiter hands you the check so that you can split the bill equally with your friends. For the project: decide on the type of restaurant you will visit. Create a restaurant menu that shows the price for five different drinks, entrees, side dishes and desserts. Create a guest check that shows what each person ordered, the cost of each item and the total cost of the meal. Split the bill equally with your friends. How much money does each person need to pay? Explain your thinking. Think of a creative way to share your work!

Activity Eight: Create a Math Storybook

In this project you can choose to create a math storybook for the local library or the school library. Requirements: Choose a math topic and decide on a title for your book (e.g. A Day without Measurements, The Land of Quadrilaterals, Fraction Frenzy etc.) Create your main characters and supporting characters. Write a draft copy of an original math story. When you are ready to publish: design a cover that includes the title, author and an illustration. Write a blurb on the back cover that explains how your book will help the reader learn more about math, and suggest what grade level it is best suited to. Type or neatly print your story. Include at least one illustration in your story.