

Summer Math Ideas – 4th Grade



Mathematics concepts are more meaningful when they are rooted in real-life situations. To help your child review some of the concepts he or she has learned in fourth grade, here are some suggestions for simple and routine math activities for you and your child to do together over vacation.

- Have your child practice any multiplication and division facts that he or she has not yet mastered. Include some quick drills.
- Provide items for your child to measure. Have your child U.S. customary and metric measuring tools.
- Use newspapers and magazines as sources of numbers, graphs, and tables that your child may read and discuss.
- Help your child identify real-world examples of right angles (the corner of a book) and parallel lines (railroad tracks). Have your child compile a shapes scrapbook or create a collage of labeled shapes. Images can be taken from newspapers, magazines, and photographs.
- Using a map, internet resources or reference books, have your child calculate the distance to a location you will visit (the zoo, another city, another country). Research the difference in total miles and total kilometers.
- Gather money from piggy banks or wallets. Ask your child to show you two different amounts, such as \$1.33 and \$4.20. Practice adding or subtracting the amounts.
- Have your child write numbers through the millions and billions and practice reading them. Then select two and ask your child to tell which one is the greater number.
- Make a game of identifying and classifying angles: acute (less than 90°) obtuse (between 90° and 180°), right (90°), and straight (180°) in everyday things (buildings, bridges, ramps, furniture).
- During trips in the car, let your child know how far you will be traveling and the approximate speed you'll be moving at. Ask your child to estimate about how long it will take to get to your destination.
- When grocery shopping, ask your child to help you find the "best buy" by comparing the cost per unit (ounce, gram, each) of different package sizes. For example, compare the cost of a family-size box of cereal with the cost of a regular-size box.
- Go to www.paloaltoparentresources.wordpress.com for links to free internet resources for mathematics games and activities.



Building Skills through Games

- Games are an entertaining way to practice math skills. The following games can be played at home with simple materials. Use number cards used from 3" by 5" index cards.
- For more ideas, see the list of commercial games that use mathematics.

Name That Number

Materials: 1 complete deck of number cards (4 sets of cards labeled 0-10)

Players: 2 or 3

Object of the game: To collect the most cards

Directions:

1. Shuffle the cards and deal five cards to each player. Place the remaining cards number-side down. Turn over the top card and place it beside the deck. This is the **target number** for the round. In the example below, two cards were used to get the target number **16**.

2. Players try to match the target number by adding, subtracting, multiplying, or dividing the numbers on as many of their cards as possible. A card may be used only once.

3. Players write their solutions on a sheet of paper. When players have written their best solutions:

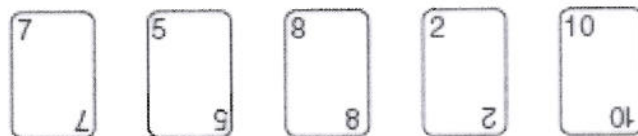
- *They set aside the cards they used to name the target number.*
- *Replace them by drawing new cards from the top of the deck.*
- *Put the old target number on the bottom of the deck.*
- *Turn over a new target number, and play another hand.*

4. Play continues until there are not enough cards left to replace all of the players' cards. The player who sets aside more cards wins the game.

Example:

Target number: **16**

A player's cards:



Some possible solutions:

$$10 + 8 - 2 = 16 \text{ (three cards used)}$$

$$7 \cdot 2 + 10 - 8 = 16 \text{ (four cards used)}$$

$$8 \div 2 + 10 + 7 - 5 = 16 \text{ (all five cards used)}$$

Multiplication Bingo

Materials:

Easy Facts-- **Number Cards 1—6 and 10 (4 of each)**

All Facts-- **Number Cards 2—9 (4 of each)**

Multiplication Bingo Game Mat for each player
(see below – you can make your own on a piece of paper)

8 counters (beans) for each player

Players: 2 or 3

Skill: Mental Multiplication Skills

Directions:

1. Write each of the numbers in the list on one of the squares on the grid. Don't write them in order – mix them up.
2. Shuffle the number cards and place the deck number-side down on the table.
3. Players take turns. When it is your turn, take the top 2 cards and call out the product of the 2 numbers.
 - *If your answer is incorrect, you lose your turn.*
 - *If your answer is correct and the product is a number on your game mat, place a counter on that number. You may only place a counter on your game mat when it is your turn.*
4. If you are the first player to get 4 counters in a row, column, or diagonal, call out "Bingo!" and win the game. (If all the cards are use before someone wins, shuffle the cards again and keep playing.)

For a game with easy facts, use these numbers:

1, 4, 6, 8, 9, 12, 15, 16, 18, 20, 24, 25, 30, 36, 50, 100

For a game with all facts, use these numbers:

24, 27, 28, 32, 35, 36, 42, 45, 48, 49, 54, 56, 63, 64, 72, 81

Vacation Reading with a Mathematical Twist

Books can contribute to children's learning by presenting mathematics in a combination of real-world and imaginary contexts. The books listed below were recommended by teachers who use *Everyday Mathematics* in their classrooms. They are organized by mathematical topic. Visit your local library and check out these mathematics-related books with your child.

Geometry

A Cloak for the Dreamer by Aileen Friedman
The Greedy Triangle by Marilyn Burns

Measurement

The Magic School Bus Inside the Earth by Joanna Cole
The Hundred Penny Box by Sharon Bell Mathis

Numeration

Alexander, Who Used to be Rich Last Sunday by Judith Viorst
If You Made a Million by David M. Schwartz
Fraction Action by Loreen Leedy
How Much Is a Million? by David M. Schwartz

Operations

Anno's Mysterious Multiplying Jar by Masaichiro Anno
The King's Chessboard by David Birch
One Hundred Hungry Ants by Elinor J. Pinczes
A Remainder of One by Elinor J. Pinczes

Patterns, Functions, and Sequences

Eight Hands Round by Ann Whitford Paul
Visual Magic by David Thomas

Examples of Commercial Games that Use Mathematics

Sorry![®]

Uno[®]

Guess Who?[®]

Rummikub[®]

The a-MAZE-ing Labyrinth[®]

Battleship[®]

Connect Four[®]

Jenga[®]

Mancala[®]

Othello[®]

