

Math Approaches for Children

A Parent Handout

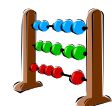


- n Appreciate Math. Make friends with math; use it daily; and add to your knowledge and skill in computation, problem solving, mental estimation, use of math tools, and computers.
- n Talk about Numbers. Count, measure, and calculate out loud in your child's hearing from his birth onward.
- n Demonstrate and Name Quantities. Show numbers from 1 to 10 on your fingers without counting until quantities are recognized. Say numbers in order.
- n Show Adding and Subtracting. Use items such as food, toys, or money that hold children's attention. Later use the same things for multiplying and dividing.
- n Teach Numeral Recognition. Point out and name numerals, then have children name or find them in many contexts and print formats. Practice forming numerals.
- n Associate Numerals with Quantities. Play matching games or quiz orally.
- n Read Math Fact Charts – addition first, then multiplication. Read these aloud daily with your child following along until he joins in, then says them from memory.
- n Show Fact Families. Use manipulatives to demonstrate the relationships between the numbers in each addition fact and its inverse subtraction fact. Then drill with triangle cards.
- n Skip-Count Multiples. Whisper one, say two, whisper three, say four, etc., to count by twos. Do the same for counting by other numbers. After this is learned, start on any odd or even number and count on from there.
- n Involve Children in Measuring. Provide measuring tools, both metric and English, and let children learn how quantities are related by watching and doing.
- n Get Your Child a Calculator and a Watch. The numbers will start to make sense to him in time.
- n Introduce Unknowns and Variables. Use symbols, then letters to represent these numbers in equations or expressions, then solve or substitute values.
- n Name Shapes. Teach specific terms such as rhombus, cube, triangle, rectangle, and



sphere when you encounter these shapes.

- n Teach Geometric Terms. Point out perpendicular lines, acute angles, etc.
- n Provide Worksheets. As soon as your child shows interest, give him a simple workbook and let him do as much as he likes, increasing difficulty when he shows facility.
- n Play Games. Any game can use some math for moves or scoring. Add some games that specifically teach math concepts or drill facts.
- n Solve Real Problems. Keep alert for daily opportunities to use math in real situations. Use the same basic strategies every time you meet a problem until they are second nature to your child.
- n Use a Number Line. Many math concepts (counting, adding, subtracting, multiplying, dividing, fractions, negative numbers, temperatures, x/y coordinates, latitude and longitude, history time lines) become clear when seen on a number line.
- n Use a Balance Scale. Get a real one with labeled weights if possible. Show equalities, inequalities, and equations by adding, subtracting, multiplying, and dividing quantities on each side.
- n Diagram Problems. Visualize any math problem or story problem on paper. Break down numbers as needed. Label all known and unknown parts.
- n Simplify Hard Concepts. Substitute smaller or more convenient numbers for larger ones or unknowns to see what to do.
- n Expand on Simple Concepts. Add up columns of huge numbers as well as one or two-digit ones, learn thousands and millions as well as tens and hundreds.
- n Use Manipulatives for Place Value. Use money or sticks and sets of tens to portray numbers and perform regrouping operations.
- n Do Mental Math. Figure the cost of a case of 24 cans of chili at 69 cents a can by rounding off, then adjusting for the extra pennies. Or play a game like "24" where a given four numbers must be manipulated (add, subtract, multiply, or divide each number only once) to give a result of exactly 24.
- n Find Math in the News. Look fo statistics, graphs, etc., and interpret them.
- n Be Logical. Learn to recognize a logical fallacy and explain it to your child.
- n Explain Your Finances. Involve your child in your budgeting, banking, and bills a little at a



time.

- n **Assess Skills Often.** Review all math skills every week (some daily) in mixed problem sets to pinpoint weaknesses. Use speed drills to determine your child's level of facility.
- n **Provide Math Challenges.** Enter a contest or post a "brain teaser" problem for fun and interest.
- n **Play With Numbers.** Look for shortcuts and patterns for multiplying by larger numbers.
- n **Combine Math with Motion.** Some children learn math facts better if they recite them while bouncing on a mini trampoline or jumping rope.
- n **Play Store.** Use real or toy money and items for purchase.
- n **Cook Together.** Measure ingredients with implements other than the obvious ones (example: use a $\frac{1}{4}$ cup to measure $\frac{1}{2}$ cup and vice versa or even use $\frac{1}{3}$ for $\frac{1}{2}$).
- n **Make or Buy Flash Cards.** Cards may show a number of objects, a numeral, a math fact with or without the answer or with another part missing, a shape, a sequence of shapes or numbers to be finished, fractions or decimals, etc.
- n **Modify Your Math Curriculum.** Streamline math instruction by skipping lessons that only repeat previously mastered material. Used skipped lessons as sources of daily review problems.

