
Developing Number Sense

- Use problem solving for practice using the four operations. Your child may use manipulatives, pictures, numbers, or mental math to solve the problems. Some examples are below:
 - a. Use mental math to discover as many combinations of three-digit numbers plus three-digit numbers that can equal 1,000.
 - b. Have your child practice multiplication facts by rolling two dice and finding the product of the numbers on the dice.
 - c. Think about division: How can 6 children share 36 stickers evenly? How can 15 students share 45 cookies evenly?
 - d. Discuss how your child might solve problems related to real world activities.
 - Caitlin can sprint for 7 yards. She needs to be able to sprint for 24 feet to qualify for a race. Will Caitlin qualify for the race? Why?
 - There are 630 people coming to the school concert. The custodian sets up 10 chairs in each row. How many rows of chairs will he set up for the concert?
 - e. Name 3 consecutive numbers whose sum is 144 (47, 48, 49). Explain how to solve the problem.
 - f. Use riddles such as the following: I am a 4-digit number. One of my digits is 5 and another one is 1. The two other digits are even numbers with a sum of 6. I am the greatest number you can make with these digits. What number am I? (5,421)
 - g. Have your child keep track of the number of cans the family recycles and construct a chart or graph to display the data.

More Number Sense

- Have your child use an organized list or tree diagram to solve problems involving several choices. For example: Mrs. Smith is making lunches for her 3 children. She has American and Swiss cheese, and turkey, ham, and salami for the meat. What are all the combinations of sandwiches that Mrs. Smith can make using one cheese and one meat? (There are 6 types: American and turkey, American and ham, American and salami, Swiss and turkey, Swiss and ham, Swiss and salami.)
- Put parenthesis in an equation to make it true. For example, $5 + 11 - 6 \times 5 = 30$
$$5 + (11 - 6) \times 5 = 30$$
$$5 + 5 \times 5 = 30$$
$$5 + 25 = 30$$
- Have your child solve for unknown quantities. (Example: If $3x + 5 = 23$, what is the value of $9x - 12$? Or, if $n - 35 = 65$, what is the value of n ?)
- Have your student determine the rule for a numeric pattern and extend the pattern. (Example: 102, 98, 90, 78, 62,... What is the rule? What is the next term?) Use easier patterns for younger students.

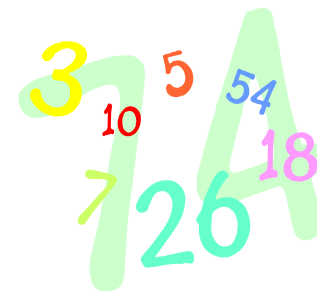
Number of the Day...

How many different ways can you show the number

24 ?

Math Activities for Families with Intermediate Students

Grades 3 to 5



FACT: “On average, all students lose approximately 2.6 months of grade level equivalency in mathematical computation over the summer months if they don’t have opportunities to practice their skills.”

Mathematics in the Real World

- Have your child look for 6-digit numbers in the newspaper and read the number(s). Discuss the context for these large numbers.
- Go on a scavenger hunt in your house. Have your child find at least 10 three-dimensional shapes. Have your child describe each shape using the geometric vocabulary: faces, edges, vertices.
- Have your child use the sales circular in the newspaper. Plan a menu for the family and make a shopping list with a specific budget.
- Have your child watch the weather reports on television. Note the highest and lowest temperatures for the week. Discuss the differences in the temperatures and how this may affect your daily activities, such as, appropriate clothing, mowing the lawn, going to sports practice, etc.
- Let your child count the change when buying something at the store to make sure it is correct. This is a life skill!
- Use elapsed time with your child during everyday activities. For example, if soccer practice starts at 5:00 PM, and ends at 7:15 PM, how much time is spent at practice?
- Make your child aware of the calendar. Discuss events that are coming up. Discuss how to “think backward” to plan for these events. For example, if a long range project is due in 2 weeks, discuss how long each part of the project takes and make a timeline for completing it.
- Ask your child to plan the family vacation, including travel (car, airplane), lodging (condominium, stay with friends), food, admission prices, and other expenses for your trip. Give him/her the budget to use when making the plan. Then, put the plan into action!
- Have your child research different cell phone plans and determine which would be the best value for your family.

Math in the Car...

1. As you are traveling, have each person take turns calling out a license plate number.
2. All players try to add the numbers in their heads. Talk about what strategies were used in the mental math addition. Were the numbers added by 10s like 2+8? Were they doubles like 6 + 6?
3. Try different problems using the numbers in a license plate. For example if you use the plate number 66321, ask, “Using the numbers on the plate, can you make 5?”
 - 5 using two numbers? “ $3+2 = 5$ ”
 - 5 using three numbers? “ $(3+2) \times 1 = 5$ ”
 - 5 using four numbers? “ $(6+3+1) \div 2 = 5$ ”
 - 5 using five numbers? “ $(6 \times 1) - (6-3) + 2 = 5$ ”



CONCENTRATION

- Make a concentration game on index cards using pairs like this:

46	10 more than 36
48	2 more than 46
63	1 less than 64
42	10 less than 52
78	between 77 and 79
60	20 more than 40

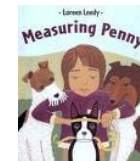
Literature and Math

- Read *A Remainder of One* by Elinor J. Pinczes. Have your child model the division or write division problems for the situations in the book.

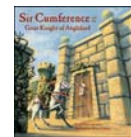


- Read *Measuring Penny* by Loreen Leedy. Find something in the house to measure to the

nearest inch, $\frac{1}{2}$ inch, $\frac{1}{4}$ inch, and $\frac{1}{8}$ inch.



- Use *Sir Cumference and the Great Knight of Angleland* by Cindy Neuswanader. Use a protractor to measure angles found in the home. Another book by the same author is *Sir Cumference and the First Round Table*, which has a focus on circles and finding circumference.



- Read *The Grizzly Gazette* by Stuart Murphy. Have your child make a circle graph of a typical school day.



- Greg Tang has authored several books all related to using math facts (*The Grapes of Math*, *Mathterpieces*, *Math Potatoes*, etc.).

