Math Quickie Lessons

Palindromes: Search for numbers in the The Washington Times that are palindromes (a number that remains the same when written backwards, such as 656). If you can't find a palindromic number, compute the palindrome of any number by reversing the digits and adding the numbers together. For example, to find the palindrome of 369, add 963 to it. This gives 1,332, which is not a palindrome. Then add its reverse (2,331) to it, which equals 3663, a palindrome.

Computing Commissions: Determine the commission you would make if you sold a car listed in the classified section and made 13% commission. Find the car you would most like to sell and compute the commission you'd make.

Computing Car Finance Charges: Identify and cut several ads from the The Washington Times that offer credit terms. Determine the total amount paid for the product under the credit terms. For example, find your dream car in the classified ads. Pretend that you put $2,000 down payment and finance the balance for three years at 15%. How much will you pay the bank? What will your monthly payments be?

Interest on Savings: Put $1,000 in an imaginary savings account. Skim the bank ads in the The Washington Times to determine which savings plan would be most profitable. Compute the interest on this money at the end of one year if the interest in compounded quarterly at 7.5 %.

Investing in the Stock Market: Pretend you have just received an inheritance of $10,000. Invest $2,000 in five different stocks. Watch the growth or decline of your stock for two weeks and graph the results.

Budgeting for Travel: Plan a trip! Pretend that you have $2,000 to go anywhere you want. Skim the The Washington Times for advertisements on vacation areas and transportation. Make a list of your possible expenses and budget your money for the trip.

Miles Per Gallon: Use a car advertisement from the The Washington Times that gives the estimated miles per gallon. Determine the cost of driving from your city to another at the current price of gasoline per gallon.

Vital Statistics: Look through the obituary columns in the The Washington Times and find the average age of death for one day. Keep a record of your findings for a week and graph your results. On one given day: Find the median age of death, the mode age of death, the average age of death for men and the average age of death for women.

Cost Per Acre of Farmland: Turn to the Lots/Acreage heading in the classified section of the The Washington Times. Calculate the average cost per acre of a piece of land.

Foreign Money Exchange: Refer to the Business section of the The Washington Times for the foreign exchange rates. Exchange $500 in American money to each of the different types of foreign money listed in the column.

Graphing TV Entertainment: Categorize the television shows in today's TV schedule in the The Washington Times into the following headlines: religious, educational, humorous, sports or informative. Calculate the fractional part of the total TV schedule occupied by each type of show. Construct a circle graph to illustrate this.

Surface Area: Calculate the surface area of the walls in your room. Determine the amount of paint you need. Shop for paint in the The Washington Times ads to get the best paint for your money. Determine the cost of painting your room. (Assume that one gallon of paint covers 400 square feet.)

Geometry — Lines and Angles: Clip pictures from the The Washington Times that illustrate different types of lines (parallel, perpendicular and askew). Or find pictures that illustrate different types of angles (right, acute, obtuse and straight.)

Math in the News: Select an article of interest in the The Washington Times concerning science, technology, business or home economics.

Identify the role played by mathematics in the event described in the article.

Metric Measuring — Areas: Choose three pictures or ads from the The Washington Times. Using a metric rule, figure the area of each ad in square centimeters. Then convert each into square millimeters and square meters.

Areas and Percents: Compute the area of the advertisements on one page of the The Washington Times. What percentage of the page is used for advertisements? Do this with several different pages and different section of the newspaper, then figure the average amount of space used for ads.

Conversion to Metric Measure: Find a recipe in the The Washington Times. Clip and mount on a paper. Convert the English measures to metric units of measure.

Millionaire Spending Spree: Imagine that a millionaire died and left $1 million to you, tax-free. However, (1) you must spend one-half the money within one week's time; (2) you cannot spend more than half the money during the week on any one item; (3) you cannot buy more than one of any item; (4) you can't give the money to anyone except for services rendered; (5) your total expenditure for the week must be exactly $500,000; and (6) you must locate all items you will buy in the The Washington Times. Present your plan for spending the money. Which items cost large amounts of money? How did you make up the difference with small items? Which sections of the The Washington Times did you use?

Price Per Square Foot: Identify classified ads in the The Washington Times that list both price and square footage of three houses for sale. Compute the price per square foot for each house.

Less, Equal or Greater: Identify articles in the The Washington Times that include numbers representing relationships of less than, equal to or greater than.

Here's a Math Game for the Whole Family

Here's a fun puzzle for the whole family to enjoy. Give each letter of the alphabet monetary value. A is one cent, B is two cents, and so on.

Now try to find words that are worth the most money. Here are some ideas:

Whose name is worth the most?

Who can think of a jewel that is worth the most? (Is gold worth more than rust?)

How many words can you think of that are worth exactly $1.00?

What is the shortest word you can find that is worth the most?

— Taken from *Parents Make the Difference!*, March 1991.

Calculators Can Help, Not Hurt, Math Experts Say

Calculators are easy to use and so inexpensive that nearly every home has at least one, and often several.

Today, some parents worry whether kids who rely only on the calculator will learn enough math. Experts suggest that kids still need to learn how to add, subtract, multiply, and divide. But they can use the calculator at home to reinforce what they're learning in school. Here are two ideas:

Use the calculator to help your child learn number facts. Have her enter a problem, for example 8 x 7. Then have her give the answer. Afterwards, she can press the = sign to see if she was right.

Use the calculator to check homework. Once your child has completed a series of problems, have him get out the calculator to check his answers.

˜ Taken from *Parents Make the Difference!*, April 1991.

Try Using the Trick of the Nines, to Help Kids in Math

Is your child having trouble learning the 9 times table? Here's a trick to help. Multiply any number by 9, and the answer will always add up to 9.

Try it. 2 times 9 equals 18, and 1 plus 8 equals 9. 8 times 9 equals 72, and 7 plus 2 equals 9.

The trick works for very large numbers, as well, like this: 8142 times 9 equals 73,278. 7 plus 3 plus 2 plus 7 plus 8 equals 27˜and 2 plus 7 equals 9.

Give your child a calculator and let her try it for herself.

— Taken from *Parents Make the Difference!*

More Math Lessons

Number 10 sheets of paper from 1 to 10. Put only one number on each page. Look through the The Washington Times to find a picture showing one thing. Cut it out and paste in on your sheet of paper labeled 1. Find pictures showing 2 objects, 3 objects, 4 object 5 objects, 6 objects, 7 objects, 8 objects, 9 objects and 10 objects. Cut out each picture and paste it on the correctly numbered piece of paper.

All objects have shapes. Look through the The Washington Times for objects with the shapes of circles, squares, rectangles, triangles, ovals and other shapes. Cut out the objects and mount them on a piece of construction paper. Label the picture with the name of the shape.

Use a felt pen or crayon to outline circles, squares, rectangles and triangles found on one page of the newspaper.

How many pictures of people can you find in section A of today's Washington Times? Count every nose, not just every picture. If there are three people in a picture, count all three. How many noses in today's Washington Times in section A?

Look for all kinds of different numbers in the The Washington Times. Circle all of the ones with a red crayon. Put a yellow circle around all of the tens. Circle the hundreds in green and the thousands in blue.

Everywhere you look in the The Washington Times there are sets. Find different sets. Look for shoes, coats, toys, tires, etc. cut out all of the matching things you can find. Paste them neatly on different colors of paper.

Locate the Apartments for Rent section of the classified ads in the The Washington Times. Cut out five different monthly rent payments. Arrange the payments in order from the smallest amount to the largest amount and glue them to your paper in that order.

How many different ages are mentioned on one page of today's paper? Make a list of the people's names and ages. Then number the people in order from youngest to oldest.

Play Number Circle with a friend. You take a red crayon and have your friend take a blue crayon. Both of you circle as many numbers as you can find on the front page. Who's the winner?

Find a recipe in the Food Section. Divide the recipe in half. Can you come up with the figures for the ingredients called for? Choose another recipe to double the size and list the amount of each ingredient.

Compute savings on sale items or in grocery ads.

Look for estimates in the The Washington Times. Often headlines and stories will estimate numbers. How many estimates can you find in today's Times?

Find items for sale in the The Washington Times that are advertised for less than $1,000. Round off the figures to the nearest 100. Round off the figures below 100 to the nearest 10.

Count the number of news stories and the number of ads in the front section of the The Washington Times. Estimate the percentage of space that is used for news and for advertising in the whole paper.

List temperatures in the weather information from lowest to highest. Figure medians, averages of an area. Find the difference between selected cities, lows and highs. Make a line graph of temperatures. Convert Fahrenheit to Celsius.

Compute the average age of death from the obituaries or percentage of educational TV shows or percentage of news versus ads in the newspaper.

Math Quickie Lessons

Mean, Median, Mode
Skill: Student applies the concept of mean, median and mode.
Have students use the weather map (you may want to discuss weather for science and locations, climate and culture for soc. studies) information in the newspaper to list the high temperature for seven cities in the U.S. or the world. They should add the numbers and divide by seven to find the average or mean. Then they should list the temperatures from the highest to the lowest and find the number that is in the middle (the fourth one) to find the median. Are any of the temperatures the same? Ask them to identify the number that came up the most often. That temperature is the mode.

Math Is All Around
Skill: Student identifies math concepts in real-world applications.
How many math concepts can your students find in today's newspaper? Have students skim the paper to see how many of the following they can find: age, time, date, amount, distance, money, or percentage (or other math concepts, whole numbers, fractions, decimals, formulas, etc.).

Fraction Parts Scavenger Hunt
Skill: Student understands fractional parts and conversion to decimals and percentages.
Fractions can be found everywhere in life. Have students find these in today's paper:
A fraction that is more than 2/10; 2/3 of a comic strip; a store giving 1/4 off; an ad larger than 1/2 page; a team that has won over 1/2 of its games; a picture that is 1/4 of a page; a stock that gained or lost 7/8 of a point. Now convert them into decimals and percentages.

Cost of Living
Skill: Student selects the appropriate operation to solve a problem.
Have students use the House for Sale ads to find 5-10 houses. They can list the houses in order of least to most expensive and compare them. What does the most expensive house have that the least does not? If they put 20% down on the most expensive house, how much will they need to borrow to buy the house? If they take out a 30-year loan, how many months will it take to pay for the house? Advanced – create an algebraic formula to determine the monthly payments based on current interest rates. How much is interest on the loan and how much is principal (equity). Find an amortization chart in the Friday home guide or other source to check if the formula works.

Buying Advertising
Skill: Student uses estimation strategies to predict results.
Discuss with students the fact that because newspapers are widely read, advertising is a cost-effective way to make people aware of a product or service. Have them suppose a full page of advertising is $5,000. They can find 5 ads of different sizes in the newspaper and estimate how much each one would cost based on the $5,000-per-page price. Then have them check their estimate by measuring the square inches of the page, the square inches of the ads, divide to determine the actual percentage of the ad on the page and multiply $5,000 by the percentage to get a final cost for the ad.

Max Out
Skill: Students will practice their computation skills using large numbers.
Using number from the front page (or other pages if all numbers cannot be found) of today's newspaper, the students goal is to create the largest number (variation could be smallest number). The directions are to find the numbers and compute as instructed (solve a on separate sheet): a decimal number (or percentage), multiply it by a three-digit number, divide that number by a two-digit number, then add a number of your choice and finally subtract a prime number. (Example: .70 x 367 ÷ 24 + 2000 – 455 = _____.) The student with the largest number wins.

Algebraic Problem Solving
Skill: Translate word phrases and sentences into algebraic expressions and equations.
Choose an item form the classified section (automobiles, refrigerators, boats, housing, etc.) and have students create a word problem involving algebraic equations. For examples, an automobile gets 30 miles per gallon. How many miles will it go on ten gallons? (Thirty equals "x"

divided by ten.). If a car sells for $6,000, how much cash would be required for a 5% down payment? (Five percent times $6,000 equals "x.") Have students work their own problems and then trade with another student to work their problem.

Installment Plan
Skill: Compute the actual cost of an item purchased on an installment plan.
Find an automobile you like in the classified or AutoWeekend sections. If you are approved for a 12% three-year car loan, based on the price of the car, how much will you spend over the three years? How much per month? Advanced – create an algebraic formula for the amount of interest that you will pay.

Other Math Quickie Lessons

Have students find 5 stocks on the stock market page and write down the abbreviation, high, low, close and net change of the previous day. What stocks were worth the most and the least? What stock gained and lost the most and what was the percentage of gain and loss? Follow the stocks a few days, compare the data, and answer the questions.

Have student read a story and discuss the importance of numbers to the story. Have them rewrite the story without numbers. Can they still tell the same story?

Choose two to three cars from ads that show mile-per-gallon. Have students use a map to decide where they would like to go in the cars. How many miles is it to that place? Based on the current price of gasoline, how much will it cost to take the trip there in each car? Which car is the most economical?

Using the weather map, compute the difference between the high and low temperature for each (or some) of the cities listed. Which city had the greatest difference? Find the city on a world map.

Have students select six items to purchase then compute the cost of the six items plus state tax.

Find numbers that represent the same amount but are written different. (Example: fifty percent, 50%, .50 and half.)

In one minute have students circle all the numbers they can find on the front page. What kinds of numbers were found (dates, time age, odd/even, etc.). How do they relate to number concepts being learned in class?

Find a restaurant ad with prices for food. Choose some items you and your family would like to eat. How much will it cost for a family of 4 to eat including 5% sales tax and the tip is 15%.

In the help wanted ads, have students choose five jobs showing wages, some hourly and some yearly. Have them prepare a chart showing how much they will make per hour, per day, per week, per month, and per year from each job. If the federal tax is 15% and the state tax is 5%, how much money would they take home per week, per year?

Find various units of size and volume measurement in the newspaper (inch, mile, centimeter, gallons, pints, etc.). Rank them from the smallest to the largest.

Measure a picture, ad or story. In inches and centimeters, measure the perimeter and area.

Choose two carpet or floor coverings from an ad (showing a price). Measure the area of your classroom. What will it cost to cover the floor? Which is more cost effective?