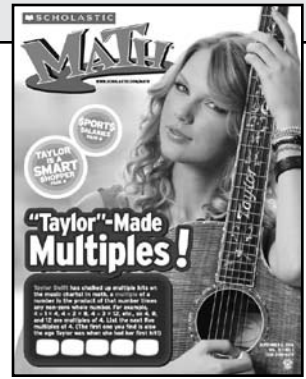


WELCOME to a great new year of Scholastic MATH Magazine!



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 If you ever have any questions or comments about the magazine, you can reach me directly at [mathmag@scholastic.com](mailto:mathmag@scholastic.com). Thanks!

*Jack Silbert*  
 Jack Silbert, Editor

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# SKILLS GUIDE

= Calculator Use Suitable    = Critical Thinking    = Writing in Math

ARTICLE	MAJOR FOCUS	REAL-LIFE CONNECTIONS	SUPPLEMENTARY SKILLS	NCTM STANDARDS*
ACTIVITY: cover "Taylor"-Made Multiples!	Multiples	• Singer Taylor Swift	• Whole number $\times$	1, 8
FAST MATH: p. 2	Mixed skills	• Splitting a bill in a restaurant • Birthdays	• Money $\div$ ; multiples; working with time; order of operations; etc.	1, 2, 4, 6, 8, 9
MATH FOR YOUR DAILY LIFE: p. 4 Swift Shops!	Estimating costs	• Singer Taylor Swift • Shopping for clothes	• Rounding to the nearest ten • Money $+$ , $-$	1, 6, 7, 8, 9, 10
STATISTICS/SPORTS: p. 6 Win at All Costs	Reading a bar graph	• World's highest-paid sports teams	• Comparing data • Visual discrimination	1, 5, 8, 9, 10
MATH AT WORK: p. 8 Putting Out Fires	Mixed skills	• Career: firefighter	• Whole number $\times$ , $\div$ ; rate: gallons per minute, bpm, psi; etc.	1, 2, 4, 6, 8, 9
PRACTICE TEST: p. 10 Skylight: Factor Fantasy	Factors	• Standardized test practice • <i>Twilight</i> spoof	• Whole number $\div$	1, 2, 8
RATE: SPEED: p. 12 Fearless Felix's Fast Fall	Rate (speed): meters per second/miles per hour	• Skydiver Felix Baumgartner • Breaking the speed of sound	• Using a formula • Decimal $\div$	1, 2, 4, 6, 8, 9
MATH WIZ COMICS: p. 14 Lost In Place	Decimal place value	• Comic strips as a literacy tool	• Word form of numbers • Rounding decimals	1, 8
STAR WRAP: back page Meet the First Lady	Inverse operations	• First Lady Michelle Obama	• Whole number $+$ , $-$ , $\times$ , $\div$ • Solving an equation	1, 2, 8

- \*NCTM Middle School Curriculum Standards**
- |                                |                        |
|--------------------------------|------------------------|
| 1. Number and Operations       | 6. Problem Solving     |
| 2. Algebra                     | 7. Reasoning and Proof |
| 3. Geometry                    | 8. Communication       |
| 4. Measurement                 | 9. Connections         |
| 5. Data Analysis & Probability | 10. Representation     |

For more detailed information about the National Council of Teachers of Mathematics Standards, write to: NCTM, 1906 Association Drive, Reston, VA 20191-9988. Phone: (703) 620-9840. Fax: (703) 476-2970. E-mail: [infocentral@nctm.org](mailto:infocentral@nctm.org)

**DON'T MISS OUR 9/27 ISSUE... IT'S OUR 30TH ANNIVERSARY!!!**

**MATH FOR YOUR DAILY LIFE:** Actor/comedian/musician/TV exec Nick Cannon explains television ratings!

**SPORTS BY THE NUMBERS:** A look at the greatest sports moments of the past 30 years.

**STATISTICS:** Movie theaters have changed a lot since 1980, but what about movie ticket prices? Our **line graph** has the answers.

...AND MUCH, MUCH MORE!

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# TEACHING TIPS

## COVER

### “Taylor”-Made Multiples!

Discuss: What is the difference between a factor and a multiple? Students often confuse the two concepts.

## PAGES 2 – 3

### Fast Math

**MATH Spotlight on...Harry Shum:** Remember to divide by 6, not 5!

**Birthday Time:** Students might note that besides leap years, you are also ignoring the time of day she was born.

**MMMcDonald’s:** Encourage your students to look for their own MMMs and then send them to us! Visit our Web site, [www.scholastic.com/math](http://www.scholastic.com/math), to print out handy submission forms.

**Nutty Numbers:** Any one of the nutty number facts could lead to an interesting discussion.

## PAGES 4 – 5

### Swift Shops!

Students should be able to relate to the need for estimating when shopping. No one wants to be at the register without enough money. Use a flyer that advertises prices of various items and ask students to round prices to the nearest \$10 or \$5 or \$1.

## PAGES 6 – 7

### Win at All Costs

Review with students that a bar graph displays categorical data. Review how to use the scales to read the bar graph, and point out the different parts of the graph (title, axes,

source, etc.).

Discuss the information displayed in the bar graph. If there are soccer fans in your class, they will immediately recognize that 3 of the teams are well-known international soccer teams.

## PAGES 8 – 9

### Putting Out Fires

As a warm-up, try a problem similar to #2, but change the numbers to a 400-gallon tanker with a hose spraying 80 gallons per minute. The rates involved in the problems allow a number of solution strategies. Have students work with a partner and then have students share their strategies.

## PAGES 10 – 11

### Skylight: Factor Fantasy

Earlier in the magazine, students were working with multiples, often mixed up with factors. The Study Tip should get students headed in the correct direction.

## PAGES 12 – 13

### Fearless Felix’s Fast Fall

A projectable PDF of this article, excellent for whiteboard use, is available at [www.scholastic.com/math](http://www.scholastic.com/math). To get students thinking about

rates, time two students walking the same distance (say 12 feet across the front of the classroom), but at different rates. One student skips while the other student walks heel-to-toe as if measuring a distance. Their times will be different. Ask how their rates can be determined. Rate (feet per second) = distance (feet) ÷ time (seconds). Remind students that there are alternate forms of the equation:

$$r = d \div t$$

$$d = rt$$

$$t = d \div r$$

Now have the students read the information about Felix and work the problems with a partner.

## PAGES 14 – 15

### Lost in Place

Write the decimal 3.14 on the board and ask a student to read it. They may say “pi” or “three point one four,” but have students keep trying until they give the correct answer: three and fourteen hundredths. Though we often are sloppy in reading decimal numbers, there is a correct way to read them which students will practice with these problems.

## BACK PAGE

### Meet the First Lady

Can students think of any real-life examples of inverse operations? Activities that “undo” one another.

For a list of  
**ONLINE RESOURCES**  
related to this issue, visit:  
**[www.scholastic.com/math](http://www.scholastic.com/math)**

# EXTENSION ACTIVITIES

PAGES 2 – 3

## Fast Math

**Critic's Corner: *The Simpsons*:** How many T-shirts would Zack be wearing when the shirt reads 161? [Answer: 23;  $23 \times 7 = 161$ ]

**Birthday Time!:** If her heart rate averaged 60 beats per minute since birth, has she had her millionth heartbeat by the time she turns 11? Billionth? [Answer:  $11 \times 365 \times 2,460 \times 60 = 346,896,000$ ]

PAGES 6 – 7

## Win at All Costs

Ask students why no football team is mentioned. Perhaps it is related to the number of starters (offensive and defensive) and the overall size of the team versus, say, a basketball team. FYI: George Steinbrenner bought the Yankees for \$10 million in 1973, and today the top salary is Alex Rodriguez, who earns \$33 million a year! Ask

students how the \$33 million skews the data and the average is *only* \$7 million.

PAGES 8 – 9

## Putting Out Fires

In the first question, the linear model  $y = 50x + 75$  can be used to find the pounds per square inch (psi) needed for any length hose where  $x$  is in hundreds of feet. Have students make a table of values for  $x = \{.5, 1, 1.5, 2, 2.5, 3\}$ .

PAGES 12 – 13

## Fearless Felix's Fast Fall

In problem #3 it says Felix will be traveling at a rate of 220 feet per second. Compare this to the rate your students were moving when they walked across the room. Have students convert this rate to miles per hour. [Answer: approximately 136.4 mph]. For students who'd like an additional challenge, on our Web site ([www.scholastic.com/math](http://www.scholastic.com/math)), you'll find

differentiated-instruction reproducibles for this article. There is also a read-along podcast for struggling readers.

PAGES 14 – 15

## Lost in Place

To practice identifying place value, use a thick marker and write 6 or 7 digits, each on a  $8.54 \times 11$ -inch paper. Have students stand at the front of the room, in random order, each holding a digit card. Have one additional student hold a card with a decimal point. Position the decimal point between the other students and ask the rest of the class, "What digit is in the hundredths position?" Ask several questions of this type; then rearrange the students and relocate the decimal point.

After completing this activity, try a review of decimal rounding.

Teaching tips and extension activities  
written by Dr. Laurie Boswell  
*Laurie is a teacher and the headmaster of  
Riverside School in Lyndonville, Vermont.*

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