

# MATH

TEACHER'S EDITION  
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This is your **LAST ISSUE** unless you **RENEW NOW!**  
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Thank you so much for using the magazine this year. I know how many funding cuts there have been, so I truly appreciate you choosing *MATH* for your classroom. And I do hope you'll be with us again next year. Our Web site, [www.scholastic.com/math](http://www.scholastic.com/math), is getting a terrific overhaul—see below for details. (Keep checking the site every week for Numbers in the News questions all summer long.) We'll also help you navigate the Common Core Standards, and which articles hit which Standard! Good luck with the rest of the school year, and have a GREAT summer.

*Jack Silbert*  
Jack Silbert, Editor

**REPRODUCIBLE BLANK  
CIRCLE GRAPH** for pp. 6-7  
at  
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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 Harry Potter & Concluding Cover	Problem solving: number patterns	• Final Harry Potter film • <i>MATH</i> Magazine covers	• Whole number +, × • Guess-and-check	1, 2, 6, 8
FAST MATH: p. 2	Mixed skills	• Neil Armstrong's moon landing • Nutrition labels	• Proportions; sales tax; time zones; percent change; etc.	1, 2, 4, 7, 8, 9
MATH FOR YOUR DAILY LIFE: p. 4 Catching Daniel's Interest	Using a formula: calculating interest	• Simple interest • How a savings account works	• Writing percents as decimals • Decimal ×, ÷	1, 2, 8, 9
STATISTICS: p. 6 Summer Vacation USA!	Making a circle graph	• Popular vacation destinations for overseas visitors to the U.S.	• Percent of a number • Finding degrees in a circle	1, 3, 4, 5, 7, 8, 9, 10
ACTIVITY: p. 8 Why Did the Chicken...	End-of-year skills review	• Crossword puzzles	• Pre-algebra; statistics; geometry; statistics; decimals/fractions/%	1, 2, 3, 4, 6, 8, 9, 10
FEATURE: p. 10 Uncharted Success	Mixed skills	• New social-media <i>Billboard</i> chart • Music industry trends	• Whole number/decimal -; ratios; percent of a #; % change; etc.	1, 2, 5, 8, 9
SPORTS BY THE NUMBERS: p. 12 World Cup Fever	Reading a soccer box score	• U.S. women's soccer team • 2011 Women's World Cup	• Working with time • Calculating a percent	1, 5, 8, 9, 10
MATH WIZ COMICS: p. 14 An Improbable Return!	Probability	• Comic strips as a literacy tool	• Fraction × • Simplifying fractions	1, 2, 5, 8
STAR WRAP: back page $a^2 + b^2 = c^2$	Geometry: Pythagorean theorem	• Actress Elle Fanning • Summer book recommendation	• Exponents • Whole number ×, ÷	1, 2, 3, 4, 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)

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# TEACHING TIPS

## COVER

### Harry Potter and the Concluding Cover

If students have worked with patterns of this type before, they may suspect division; however, none of the quotients are whole numbers. You may need to give a hint that the pattern involves more than one operation.

## PAGES 2 – 3

### Fast Math

**Critic's Corner: Transformers: Dark of the Moon:** Although a simple proportion can solve this problem, students will have to remember to write 5 foot 9 inches as 5.75 feet and not 5.9 feet.

**Book Fair Bucks:** There are several different strategies students could use, so have them explain their methods.

**OatMMMeal Raisin Granola Bar:** Have students calculate what it should have read (what is 40% less than 1.5 g).

## PAGES 4 – 5

### Catching Daniel's Interest

If the simple-interest formula is not familiar to students, you might introduce it by sharing a scenario: You borrowed \$100 from a friend who charged you 5% interest (a fee). Students will hopefully ask about how long you borrowed the money for. Compute the difference between 5% weekly and 5% monthly if you borrowed the money for 1 month. It helps students to remember that the simple-interest formula is based upon three variables: principal, rate, and time, and the rate is stated in terms of some unit of time. If necessary, review

how to solve equations before students begin. Solve for  $r$ :  $400 \cdot r \cdot 2$

## PAGES 6 – 7

### Summer Vacation USA!

This is a great activity to review the process of making a circle graph. The circle-graph template eliminates the need to use protractors. Students will need to approximate their angles knowing what  $10^\circ$  looks like.

## PAGES 8 – 9

### Why Did the Chicken Crossnumber the Road?

This is a nice partner activity that students will enjoy.

## PAGES 10 – 11

### Uncharted Success

Discuss with students how they keep up with popular music. It's likely different than how we teachers did when we were in middle school! If your students are not using social networking, or even the Internet, their responses will be different than what is shared in this activity. This is another activity where the calculator will be helpful.

## PAGES 12 – 13

### World Cup Fever

Give the soccer enthusiast in your class time to share their passion and knowledge of soccer. For instance,

they could explain what corner kicks are and what fouls might be called—and why the 90-minute game had a 94th minute! (time added by refs)

## PAGES 14 – 15

### An Improbable Return!

Students may be familiar with finding simple probability, but not the probability of two independent events both happening. Two events are independent if the occurrence of one event does not affect the likelihood that the other event will occur. For example, the result of spinning a 4 has no effect on the probability of rolling a 4. You can demonstrate finding the probability of two independent events by listing the possible outcomes.

#### Example:

Event 1 – select a card (red, white, blue) out of a bag

Event 2 – toss a coin (heads, tails)

Sample Space = {red and heads, red and tails, blue and heads, blue and tails, white and heads, white and tails}. There are 6 different outcomes.

The probability of selecting a blue card and tossing heads is  $\frac{1}{6}$ , which is the product of  $\frac{1}{3} \times \frac{1}{2}$ .

## BACK PAGE

$$a^2 + b^2 = Elle^2$$

If students have studied the Pythagorean theorem, the introduction should be a sufficient review.

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

# EXTENSION ACTIVITIES

PAGES 2 – 3

## Fast Math

Different sorts of students will enjoy looking for different types of Fast Math submissions over the summer. Puzzle lovers will enjoy trying to craft an original math problem. “Junior detective”-types will love hunting down MMMs. And TV and movie fans will enjoy being on the lookout for “Critic’s Corner” ideas in their favorite shows and summer flicks. Encourage them to bring our address or e-mail home over the summer or bookmark our Web site; by looking for math in fun ways when school isn’t in session, they’ll form some good habits.

**Critic’s Corner: Transformers: Dark of the Moon:** Many toy model cars have scales printed on them. Have students use the scale to determine dimensions of the actual car.

**Book Fair Bucks:** Try the same problem using the tax rate for your location, which would be 0% if you live in New Hampshire!

PAGES 4 – 5

## Catching Daniel’s Interest

Using a spreadsheet, you could explore the effect of monthly compounding to annual compounding, meaning is 0.5% monthly equivalent to 6% annual? See our Web site for a reproducible activity on compound interest.

PAGES 6 – 7

## Summer Vacation USA!

Review the results of the circle graph. Discuss with students what the top regions were and brainstorm as to why. Do the same for the less popular locations.

PAGES 8 – 9

## Why Did the Chicken Crossnumber the Road?

Some students may really enjoy creating their own crossnumber puzzles (or crosswords, using math vocabulary). Graph paper will help get it done.

PAGES 10 – 11

## Uncharted Success

Graphically display the results of how your students keep up on popular music.

PAGES 12 – 13

## World Cup Fever

There are many YouTube videos about the U.S. team. On our Web site we provide links to the team’s official site and the World Cup official site.

BACK PAGE

$$a^2 + b^2 = Elle^2$$

Have students research Pythagorean triplets. If the sides of the triangle are less than 100, there aren’t all that many triplets.

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

## WHAT'S ON OUR WEBSITE FOR YOUR STUDENTS? PLENTY!

- Glossary of math terms covered in the magazine
- Student poll based on a topic from the issue
- The super-fun math game KenKen—new puzzles posted daily!
- Links to safe Internet sites related to the articles in the issue
- Forms to submit Major Math Mistakes, original puzzles, and Critic’s Corner ideas

## WE WANT TO WRITE ABOUT YOUR STUDENTS!

Do any students in your class...

- run their own business?
- have a unique hobby?
- help out the community?

If you know a student who you think could be the subject of a *MATH* Magazine article, let us know!

Send story ideas to:

Jack Silbert

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New York, NY 10012

or e-mail: MathMag@scholastic.com