

**HAPPY
NEW YEAR
from
MATH
Magazine!**



**TEACHER'S EDITION
JANUARY 10, 2011**

VOLUME 31, NUMBER 7 · ISSN 0198-8379



Issue Date	9/6	9/27	10/18	11/8 & 11/22	12/13	1/10	1/31	2/21	3/14	4/11	5/2
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Not to go all binary on you, but this is our 1/10/11 issue! I believe all our 1's and 0's are in order as we kick off a new calendar year at *MATH* Magazine. I did want to point out a couple of articles that should lead to solid class discussions. It's hard to believe a year has gone by since the earthquake that rocked Haiti. Our magnitude-scale article (pp. 6–7) will help students understand the devastation, and remind them that much still needs to be done. On pages 10–11, we take a look at the U.S. women's ski jumping team. This is one of only two sports at the Winter Games that don't allow female competitors. We're hoping that's going to change soon. I hope 2011 is off to a good start for you,

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 BTR MPG!	Two-step problems	• Driving from Minnesota to L.A. • Golf cart mileage	• Rate: miles per gallon • Whole number \times , \div	1, 2, 4, 6, 8, 9
FAST MATH: p. 2	Mixed skills	• Best word for "hangman" • Size of a football field	• Rate: mph; equivalent measures; combinatorics; LCM; etc.	1, 2, 4, 6, 7, 8, 9
MATH FOR YOUR DAILY LIFE: p. 4 Maslow: Never Slow	Consumer math: driving-related costs	• <i>Big Time Rush's</i> James Maslow • Car safety and maintenance	• Money $+$, $-$, \times , \div • Percent discount	1, 4, 7, 8, 9, 10
FEATURE: p. 6 One Year Ago In Haiti	Powers of 10 (magnitude scale)	• Haiti relief • How earthquakes are caused	• Reading a numerical scale • Reading for detail	1, 4, 5, 8, 9, 10
ACTIVITY: p. 8 MATH in Jeopardy	Mid-year skills review	• <i>Jeopardy</i> spoof	• Rates; factors/multiples; money; fraction skills; variables	1, 2, 4, 8, 9
SPORTS BY THE NUMBERS: p. 10 Giant Leap for Women	Multi-step problems	• Ski jump scoring • Stars of U.S. women's team	• Whole number $+$, $-$, \times , \div • Reading for detail	1, 2, 6, 8, 9
MATH AT WORK: p. 12 Katy's Currency	Exchange rates	• Careers in travel guides • Currency for different countries	• Money $+$, \times , \div • Reading a chart	1, 4, 5, 8, 9, 10
MATH WIZ COMICS: p. 14 Don't Call Them "Acute"!	Geometry: classifying angles	• Comic strips as a literacy tool	• Vocab: acute, obtuse, right • Drawing angles	1, 3, 4, 8
STAR WRAP: back page Purdy Cool Reciprocals	Fraction/mixed number reciprocals	• TV's <i>Gigantic</i> • Actress Jolene Purdy	• Simplifying fractions	1, 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

DON'T MISS OUR JANUARY 31 ISSUE...

MATH FOR YOUR DAILY LIFE: As the weather gets colder, superstar Justin Bieber helps us understand the **wind-chill index**.

STATISTICS: Album sales are down, and the music industry is worried. Our **stacked bar graph** compares physical and digital sales over several years.

MATH IN LITERATURE: Our annual "CalcuLIT" feature is back as we present more problems from popular fiction and nonfiction titles.

SPORTS: The NBA's **effective field goal percentage** statistic.
...AND MUCH, MUCH MORE!

SUPPLEMENT TO SCHOLASTIC MATH



Periodicals Category
Association of
Educational Publishers



THIS PRODUCT
IS PRINTED ON
RECYCLED PAPER.

TEACHING TIPS

COVER

BTR MPG!

Some students will be able to compute the answer with paper and pencil. Have them share their strategy.

PAGES 2 – 3

Fast Math

Critic's Corner: No Ordinary Family: Students will need to convert from decimal hours to minutes. Remind students of dimensional analysis:

$$962.5 \text{ miles} \times \frac{1 \text{ hour}}{350 \text{ miles}} \times \frac{60 \text{ minutes}}{1 \text{ hour}}$$

StorMMMs: Some of your students may not know the dimensions of a football field. Have one of the football fans in your class explain the error. Remind your students to submit MMMs, Critic's Corner ideas, and puzzles. They can access the forms at www.scholastic.com/math.

Hanging Around: Before students read this article, you could play Hangman and try out JAZZ.

PAGES 4 – 5

Maslow: Never Slow

Discuss with students the additional costs of owning a car beyond the cost of the car. What costs are students aware of before reading the article? Ask students to share their knowledge of the additional costs. In some situations there is an additional fee of parking the car if you live in an area where parking is not easily available, like in a city. There are other maintenance expenses that are not mentioned in the table. These include tires (mounting and balancing), alignments, filters, and so on.

PAGES 6 – 7

One Year Ago In Haiti

Ask if students have studied earthquakes and magnitude scales in earth science.

PAGES 8 – 9

MATH in Jeopardy

To add a fun element to this activity, group students and play as a whole class. Groups could have 2, 3, or 4 students. Display questions on a document camera or overhead projector. Each group answers and on the word "Go" each group does a reveal of their answers using a small whiteboard or by holding up an index card with A, B, or C written on it. Each team keeps a tally of their score.

PAGES 10 – 11

Giant Leap for Women

Discuss the two elements that enter into the score for a ski jumper: distance and style. Try a sample jump on a K100 hill, where the meter value is 1.8. Assume Sophie Germain jumped 104.6 meters and her style score was 58. What is her combined score?

PAGES 12 – 13

Katy's Currency

Ask if any students have traveled

to a location where they needed to exchange money, and have them share their experiences. Do students know of other types of currency not mentioned in this article?

How to use exchange rates is very important when you travel. Using a calculator will be helpful in these problems. Try two warm-ups: How many yen will you receive for \$100? 12.8 United Kingdom pounds is how many U.S. dollars?

PAGES 14 – 15

Don't Call Them "Acute"!

Open the classroom door to a right angle with reference to the wall. Move the door to an obtuse angle position and an acute angle position reviewing the vocabulary. Point to other angles around the classroom and ask students to classify the type of angle.

BACK PAGE

Purdy Cool Reciprocals

Students often think of reciprocals as fractions that have been "flipped," but they forget the formal definition which says that the product of reciprocals is 1. Show how this works with an example. Also explain that reciprocals are needed when dividing by a fraction (you multiply by its reciprocal instead).

For a list of
ONLINE RESOURCES
related to this issue, visit:
www.scholastic.com/math/links

EXTENSION ACTIVITIES

COVER

BTR MPG!

Twenty miles per gallon is better than some automobiles! Have students research to find a few vehicles with lower gas mileage than 20 miles per gallon.

PAGES 2 – 3

Fast Math

Hanging Around: If your students are interested in the news, remember that we post a new question each week at www.scholastic.com/math/news. Encourage your students to answer in the comments and they could be our Winner of the Week!

PAGES 4 – 5

Maslow: Never Slow

Mention to students that many insurance companies give a discount for students who earn good grades.

PAGES 6 – 7

One Year Ago in Haiti

Share graph paper with students where the y-axis has a *logarithmic scale*. You can do a Web search to find this graph paper. Work with your science colleague to develop a graphing exercise to plot the energy related with different earthquakes.

If students are interested in continued Haiti relief efforts, have them check this issue's links at www.scholastic.com/math/links.

PAGES 8 – 9

MATH in Jeopardy

As a further review, have students come up with their own *Jeopardy*-style questions in each category. Or assign different categories to students based on the specific skills you've covered in class, and base a class game on the questions students write!

PAGES 10 – 11

Giant Leap for Women

If students are not familiar with Sophie Germain (1776-1831) from the Teaching Tips, have them do some research. She was a French mathematician best known for her work in number theory.

Have a class debate about whether female ski jumpers should be allowed to compete at the Olympics.

PAGES 14 – 15

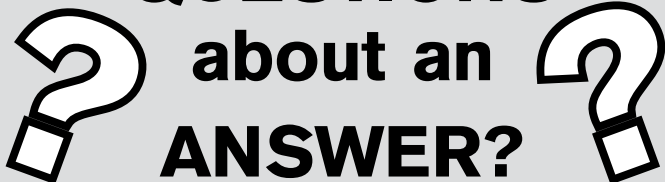
Don't Call Them "Acute"!

Angles greater than 180° are common as skateboarders and snowboarders know. Ask students what a 720° angle means and many will know it is two revolutions. A reflex angle is greater than 180° .

Teaching tips and extension activities
written by Dr. Laurie Boswell

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QUESTIONS about an ANSWER?



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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:
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