

HAPPY HOLIDAYS
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If you enjoy pages 6–8 in this issue, thank Monica Cataldo and her students at East Derry Memorial in New Hampshire. Ms. Cataldo wrote to us, suggesting an article on Bill Amend, who writes and draws the popular *FoxTrot* comic strip. Many of the strips over the years have incorporated math in a fun way. Ms. Cataldo said how she has laminated several of these strips and displayed them in her classroom, and that her students always love them. So we reached out to Mr. Amend, and he was more than happy to speak with us. He also hand-selected some of his favorite *FoxTrot* math strips. We hope your class loves it! And if you have an idea for a great article, let me know: MathMag@scholastic.com!

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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 Julie's Frozen Fractions	Writing fractions	• U.S. hockey player Julie Chu • 2010 Winter Olympics	• Simplest form	1, 8
FAST MATH: p. 2	Mixed skills	• TV show <i>Hannah Montana</i> • Teen's 14,528 monthly texts	• Identifying polygons; histograms; money \times ; unit prices; etc.	1, 3, 4, 5, 6, 7, 8, 9, 10
MATH FOR YOUR DAILY LIFE: p. 4 Chipmunk Shopping!	Money +, -, \times	• Online shipping costs • Alvin and the Chipmunks	• Reading a chart • Measures: cost per pound	1, 4, 6, 9, 10
MATH AT WORK: p. 6 Comics Computation	Mixed skills	• Career: cartoonist • <i>FoxTrot</i> comics	• Fibonacci series; square roots; circle geometry; interior angles	1, 2, 3, 4, 6, 7, 8, 9
PROBLEM SOLVING: p. 9 Brain Twisters	Problem solving: using logic	• NBA stars LeBron and Shaq • <i>Twilight</i> 's Kristen Stewart	• Guess-and-check • Visual discrimination	1, 2, 6, 7, 8
SPORTS BY THE NUMBERS: p. 10 Victory in Vancouver	Reading a chart	• Hockey box scores • U.S. women's hockey team	• Elapsed time • Reading for detail	1, 4, 5, 8, 9, 10
PRACTICE TEST: p. 12 Least Common Cousins	Least common multiple	• Standardized test practice	• Whole number \times , + • Factors vs. multiples	1, 8
MATH WIZ COMICS: p. 14 Deep in Lowest Terms	Simplifying fractions	• Comic strips as a literacy tool	• Greatest common factor • Whole number +	1, 2, 8
STAR WRAP: back page Justin Mixes It Up	Mixed numbers to improper fractions	• Singer Justin Bieber	• Whole number +, \times	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 1/11 ISSUE...

MATH FOR YOUR DAILY LIFE: Just in time for post-holiday sales, singer Sean Kingston tells us how to avoid being fooled by misleading ads.

STATISTICS: Our **double-line graph** shows the participation of boys and girls in high school sports since the Title IX law went into effect.

MID-YEAR SKILLS REVIEW: Our popular crossnumber puzzle is back!

MATH AT WORK: Learn how a bike fitter **measures angles** to customize bikes for different-style riders.

...AND MUCH, MUCH MORE!

SUPPLEMENT TO SCHOLASTIC MATH



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TEACHING TIPS

PAGES 2 – 3

Fast Math

HistogramMMM: Students should remember that the intervals in a histogram cannot overlap or have a gap.

Tons of Teen Texts: Hopefully students can use mental math to double 14,528 and then multiply by 0.1. Discuss that dividing by 5 is also another strategy to find the cost of the text messages. (\$0.20 is $\frac{1}{5}$ of a dollar)

Spotlight on...Breje: Since you only want to know which has a cheaper unit price, a second strategy for this problem is to purchase 6 liters of each size bottle and compare which purchase is less. (Three 2-liter bottles cost \$4.50 and two 3-liter bottles cost \$3.54, so the 3-liter bottle is a better buy.)

PAGES 4 – 5

Chipmunk Shopping

Review with students how the shipping is calculated by doing an example. For instance, if you purchase a pair of shoes and a book, shipping is \$3.99 (the higher of the two per-shipment charges) plus \$.99 per item \times 2 items = \$5.97. Since there is a fair amount of reading, having a partner will be helpful for students to be able to check their comprehension of what they have read.

PAGES 6 – 8

Comics Computation

Students could work on problem 3 with a partner from home (older sibling, parent, neighbor).

PAGE 9

Brain Twisters

One approach to the uniform numbers is to call one AB and the other BA. Thinking about place value and adding 5 to each number you get the following:

$$\text{LeBron: } 10A + B + 5$$

$$\text{Shaq: } 10B + A + 5$$

If Shaq's sum is two times LeBron's sum, we have to double LeBron's sum to make them equal. Solve:

$$2(10A + B + 5) = 10B + A + 5$$

$$20A + 2B + 10 = 10B + A + 5$$

$$19A + 5 = 8B$$

If $A = 1$, $B = 3$, so the two uniform numbers are 13 (LeBron) and 31 (Shaq). Students might try trial and error from the outset without an algebraic equation. Have students share their strategies for solving each puzzle.

PAGES 10 – 11

Victory in Vancouver

It would be helpful to have a

sample box score before looking at the example in the article. Box scores can be found at www.nhl.com. These box scores include the type of shot that was made for the goal (i.e. slapshot). Remind students that there are three 20-minute periods when they think about when the goals or penalties took place.

PAGES 14 – 15

Deep in Lowest Terms

It is very common for students to confuse factors and multiples. If students have done the practice test on pages 12–13, remind them that the greatest common factor divides evenly into each number, versus each number dividing evenly into it. These two articles should both be assigned for that reason.

BACK PAGE

Justin Mixes It Up

Students may remember that to change a mixed number to an improper fraction, it is necessary to do a multiplication problem and then add. Make sure that students understand why they are doing these steps. Multiplying the denominator by the whole number portion changes the whole number to a fraction using the same denominator.

EXTENSION ACTIVITIES

COVER

Julie's Frozen Fractions

Is the answer that $\frac{1}{3}$ of the forwards are left-handed unusual? To find out, have students research the percent of people that are left-handed.

PAGES 2 – 3

Fast Math

Critic's Corner: Hannah Montana: I like to have students make a vocabulary list of words that begin with the same

prefixes as all the polygons. We use a different sheet for each prefix. Example: Decagon (10-sided): decade, decathlon, decimeter; Triangle (3-sided): triathlon, tricycle, tripod, etc.

PAGES 14 – 15

Deep in Lowest Terms

Ask students if it is possible for the GCF and LCM to be the same for two numbers. (No.) Note that if a and b are two numbers such that a is a factor of

b , then $\text{GCF}(a, b) = a$ and the $\text{LCM}(a, b) = b$. Example: $\text{GCF}(4, 8) = 4$ and $\text{LCM}(4, 8) = 8$.

BACK PAGE

Justin Mixes It Up

Students should be able to sketch a visual model to show why $2\frac{3}{4} = \frac{11}{4}$.

Teaching tips and extension activities written by Laurie Boswell

Laurie is a teacher and the headmaster of Riverside School in Lyndonville, Vermont.

ISSUE SKILLS REVIEW # 6

For use with the December 14, 2009, issue of Scholastic *MATH* Magazine.

Fill in the circle of the correct answer, or write the correct answer in the answer box.

1 Which of the following charges might you need to consider when making an online purchase?

- Ⓐ Cost of the item
- Ⓑ Per-shipment shipping charge
- Ⓒ Per-item shipping charge
- Ⓓ Different shipping charges based on speed of delivery
- Ⓔ All of the above
- Ⓕ Electrical charge if computer is struck by lightning

2 An online shopping site is selling a mini stereo system that weighs 29 pounds for \$99. The per-shipment charge for electronics is \$4.99, and the per-item charge is \$0.59 per pound. What will be the total cost to order the stereo?

3 Which of the following would you not find in a hockey box score?

- Ⓐ Who scored
- Ⓑ Who committed penalties
- Ⓒ Rebounds
- Ⓓ Who passed to the scorers

4 Julie Chu scores a goal at 17:23 into the third period. (Periods are 20 minutes long.) How much time remains in the period?

5 The LCM of two numbers is the...

- Ⓐ smallest number that is a multiple of both numbers.
- Ⓑ lowest common denominator.
- Ⓒ smallest number that is a factor of both numbers.
- Ⓓ loudest-colored mittens.

6 What is the LCM of 9 and 15?

7 To simplify a fraction to lowest terms, you divide the numerator and denominator by their...

- Ⓐ LCM.
- Ⓑ GCF.
- Ⓒ LCD.
- Ⓓ LMNOP.

8 What is $\frac{65}{91}$ in simplest form?

9 What is a mixed number?

- Ⓐ A number with only two factors: 1 and itself
- Ⓑ A fraction where the numerator is greater than the denominator
- Ⓒ A number with both whole number and fractional parts
- Ⓓ An iPod playlist in which you've taken your favorite numbers from several different albums

10 Write $6\frac{4}{11}$ as an improper fraction.

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