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and other features that will help make the magazine even more useful for small- and whole-group work.

Turn to page T2 to see what bonus Teacher's Edition and online activities go with each article.

Mathematically yours,

Matt Friedman

Matt Friedman, Editor

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Issue Dates:	9/11	10/11	11-12/11	1/12	2/12	3/12	4/12	5-6/12
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CONTENT AND SKILLS GUIDE

Difficulty Level: ★ = Easy ★★ = On-Level ★★★ = Challenging

PAGE	ARTICLE DIFFICULTY LEVEL	PRIMARY SKILL	COMMON CORE STATE STANDARDS (CCSS)*	NCTM STANDARDS**
Cover	Woof + Wheels = Wow! ★★	Computation +, ÷	NBT	1, 2
2-3	Numbers in the News ★	Mixed skills	NBT, MD	1, 4, 6, 7, 9
4-5	Stadi-YUM! ★★	Money +, -	MD, NBT	1, 9
6-7	"Sum" Amazing Animals ★★	Mental math, compensation (+, -)	NBT	1, 7, 8
8-9	Nielsen Numbers ★	Word forms of numbers	NBT	1, 7, 8, 9,
10-11	Diary of a Duck ★★	Guess and check	OA, NBT	1, 6, 7, 8
12-13	Time for Math ★	Telling time to the quarter hour	MD	1, 4, 8
14-15	Robot to the Rescue! ★★	Issue skills review	NBT, MD	1, 4, 6, 8, 9
16	Multiply With McClain ★★	Multiplying 2-digit #'s by 1-digit #'s	NBT	1
T4	Counting Up Change ★★	Making change (4-5 ext.)	NBT, MD	1, 2, 8, 10
T5	Diary of a Duck ★★	Guess & check chart (10-11 strat.)	OA, NBT	1, 6, 7, 8
T6	Hurray for Arrays! ★★	Multiplying with arrays (16 ext.)	NBT	1, 10

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*CCSS

OA: Operations & Algebraic Thinking
 NBT: Nos. & Operations in Base Ten
 NF: Nos. & Operations—Fractions
 MD: Measurement and Data
 G: Geometry

**NCTM Standards

- Number and Operations
- Algebra
- Geometry
- Measurement
- Data Analysis & Probability
- Problem Solving
- Reasoning and Proof
- Communication
- Connections
- Representation

YOUR STUDENTS CAN WIN A DYNAMATH T-SHIRT!

Ask your students to be on the lookout for interesting events or places that they'd like *DynaMath* to feature in "Numbers in the News." Have them mail a copy of, or a Web link to, their news idea. If we use it in the magazine, they'll win a *DynaMath* T-shirt. Mail entries to the address at the top of this page.



Extend Your *DynaMath* Lessons!

At www.scholastic.com/dynamath, you get a whiteboard-ready version of each issue!

Click on vocabulary and math instructions to blow them up for your class.

Plus, differentiate, expand, and extend this issue's activities with these resources in the Teacher's Edition and at our Web site!




Page Number: Article Title Skill Covered	Related Resources and Where to Find Them
2–3: <i>Numbers in the News</i> Mixed skills	ONLINE EXCLUSIVE: More “Numbers in the News”! • The latest “Numbers in the News” updated each week!
4–5: <i>Stadi-YUM!</i> Subtracting money amounts	T4 AND ONLINE: Extension activity • Adding bills and coins to get an exact amount
6–7: “ <i>Sum</i> ” <i>Amazing Animals!</i> Using compensation (+, –)	ONLINE EXCLUSIVE: Instructional video • “Using compensation” demonstration
8–9: <i>Nielsen Numbers</i> Word forms to ten millions	ONLINE EXCLUSIVES: Differentiated activities • BASIC (★): Word forms to hundred thousands • ADVANCED (★★★): Decimal word forms
10–11: <i>Diary of a Duck</i> Problem solving: guess and check	T5 AND ONLINE: Guess-and-check strategy page • Project this page on your whiteboard for small-group or whole-group work!
12–13: <i>Time for Math!</i> Telling time to the quarter hour	ONLINE EXCLUSIVES: Differentiated activities BASIC (★): Telling time ADVANCED (★★★): Elapsed time
14–15: <i>Robot to the Rescue</i> Issue skills review	ONLINE EXCLUSIVE: Bonus practice test
16: <i>Multiply With McClain</i> Multiply 2-digit numbers by 1-digit numbers	T6 AND ONLINE: Warm-up activity • Multiplication with arrays ONLINE EXCLUSIVE: Interactive version of the activity

Visit www.scholastic.com/dynamath for all these features, a searchable archive of this year's online content, and new daily KenKen puzzles!

SKILLS PAGE Problem of the Day

Name _____

Try one of these quick exercises each day as a fast, fun way to start your math lesson!

DAY 1 Which of these expressions does not have a value of 36? 6×6 7×8 4×9	DAY 2 What multiplication problem is shown by this array? 00000000 00000000	DAY 3 Andy has twice as many hats as Brian. Together they have 42 hats. How many hats does each boy have?	DAY 4 List two words to describe this shape. <div style="text-align: center;">  </div>	DAY 5 What number must be added to 65 to get a sum of 100?
DAY 6 Joe collected \$.45 one day, \$.34 the next day, and \$.15 the next day. How much more does he need to have a sum of \$1.00?	DAY 7 Gabby ate 12 baby carrots. Beth ate half as many. How many total baby carrots did they eat?	DAY 8 What number am I? ✓ I have 3 different digits, all even. ✓ My digits are in order from greatest to least. ✓ My digits' sum is 12.	DAY 9 A movie is 84 minutes long. But Jeremy missed the first 15 minutes! How much of the movie did Jeremy get to see?	DAY 10 Which of these two values is greater? \$.20 or \$.02
DAY 11 If each triangle = 5, what is the total value of this picture? 	DAY 12 Cassie has 5 coins with a total value of 56¢. Which coins does she have?	DAY 13 What written form of a number (less than 10) has the same number of letters as the value of its name?	DAY 14 Fill in the blank to make the equation true. $25 + \underline{\quad} = 40 + 10$	DAY 15 What are the next two terms in this pattern? 1, 2, 2, Y, 3, X, <u> </u>, <u> </u>
DAY 16 How many total legs are on 3 ducks and 4 dogs?	DAY 17 Fill in the missing digits in these numbers to make the equation true. The same digit fills in all of the spaces. $1_5 + 10_ = 2_8$	DAY 18 How many days in September have a 4 in the date?	DAY 19 Add 3 lines of equal lengths to this square to make 2 squares and a rectangle. 	DAY 20 ✓ 1, 2, 6, and 10 each has 3. ✓ 4, 5, and 9 each has 4. ✓ 3, 7, and 8 each has <u> </u> .

TEACHERS: Make one copy per student, or assign one problem each day to start your math lesson!

**EXTENSION ACTIVITY:
 USE WITH PAGES 4-5**

Name _____

Counting Up Change

On pages 4 and 5, you learned how to add and subtract money amounts. But you didn't figure out which bills and coins you should get to have the right change. Here's one way: Counting up change!

What to Do

List coins and bills you can use to make correct change. Try to use the fewest coins and bills possible, as in the example below.

Example: Jana buys a puzzle for \$3.03. She pays with a \$5 bill. What change should she get?

- ✓ Begin by saying the total cost: \$3.03.
- ✓ Count out pennies to reach the nearest nickel: $\$3.03 + 2 \text{ cents} = \3.05
- ✓ Add dimes to reach the nearest quarter: $\$3.05 + 2 \text{ dimes} = \3.25
- ✓ Add quarters to reach the nearest dollar: $\$3.25 + 3 \text{ quarters} = \4.00
- ✓ Finally, add bills: $\$4.00 + 1 \text{ dollar} = \5.00

Note: You won't need all steps for all problems.

1. Dan buys a game for \$7.32. He pays with \$10.

A. How many pennies should he get back?

.....

B. How many nickels should he get back?

.....

C. How many dimes should he get back?

.....

D. How many quarters should he get back?

.....

E. How many dollars should he get back?

.....

2. A yo-yo costs \$2.37. Troy pays for one with a \$5 bill. What combination of bills and coins should he get back?

.....

3. Ellie pays for a \$6.45 calculator with a \$10 bill. What combination of bills and coins should she get back?

.....

4. Hunter pays for a \$12.81 T-shirt with a \$20 bill. What combination of bills and coins should he get back?

.....

SUPERMATH

Yolanda buys a new pair of shoelaces. She pays with a \$5 bill. Her change is 1 penny, 3 dimes, 1 quarter, and 2 dollars. How much do the shoelaces cost?

.....



Diary of a Duck

On pages 10 and 11, Dave and Didi Duck are headed south. Solve the problems they face along the way. Use the charts below to organize the information for each guess you make. We've filled in some of the empty boxes to get you started. Happy flying!

1. I packed my bag.

Shirts	Shorts	Sum	Difference
		28	
		28	
		28	
		28	

2. We planned our trip.

Didi	Dave	Sum	Difference
		16	
		16	

3. I slept in the pool.

Motel	Pool	Sum	Difference

4. Some of us got lost.

Michigan	Ohio	Sum	Difference

5. I got sick in Ducky Land.

Didi	Dave	Sum	Dave ÷ Didi



SUPERMATH: We made it!

Didi	Dave	Uncle Joe	Sum	Difference: Dave - Didi	Difference: Joe - Didi

**WARM-UP ACTIVITY:
 USE WITH PAGE 16**

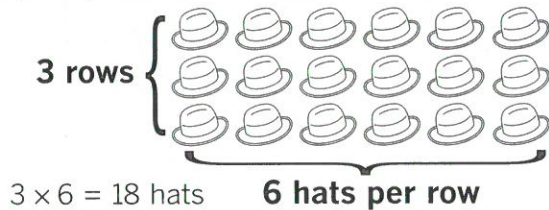
Name _____

Hurray for Arrays!

Multiplication can let you count groups of items quickly!

Imagine you work in a factory that makes hats. Now imagine 3 rows of hats with 6 hats in each row. Imagine 4 rows of hats with 5 hats in each row. How can you count them all?

Items that are arranged in rows are arranged in arrays. For example, 3 rows with 6 hats in each row make an array of 3 by 6. Multiply to quickly find the total number of hats in the array:



What to Do

Use multiplication to find the number of items in each problem's array.

1.



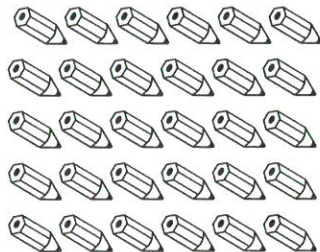
A. What multiplication problem can you write to find the number of stars in the array?

.....

B. How many stars are in the array?

.....

2.



A. What multiplication problem can you write to find the number of pencils in number **2**?

.....

B. How many pencils are in the array?

.....

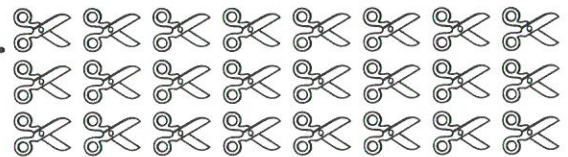
3.



How many airplanes are in the array?

.....

4.



How many scissors are in this array?

.....



On a separate piece of paper, draw a different array with the same total number of scissors as in problem **4**.

ANSWER BANK (For student-edition answers, turn to page T8.)

PAGE T3: PROBLEM OF THE DAY

- DAY 1:** 7×8
DAY 2: 7×2 or 2×7
DAY 3: Andy has 28 hats; Brian has 14 hats.
DAY 4: Answers include: square, rectangle, rhombus, parallelogram, and quadrilateral.
DAY 5: 35
DAY 6: \$.06
DAY 7: 18 baby carrots
DAY 8: 642
DAY 9: 69 minutes
DAY 10: \$.20
DAY 11: 20
DAY 12: 1 quarter, 3 dimes, and 1 penny
DAY 13: four
DAY 14: 25
DAY 15: 4, W
DAY 16: 22 legs
DAY 17: $135 + 103 = 238$
DAY 18: 3 days (September 4, 14, and 24)
DAY 19: Here is one possible answer:
DAY 20: 5 (number of letters in the word form of each number)

PAGE T4: COUNTING UP CHANGE!

- 1a.** 3 pennies **3.** 1 nickel, 2 quarters, 3 \$1 bills
1b. 1 nickel **4.** 4 pennies, 1 nickel, 1 dime,
1c. 1 dime 2 \$1 bills, 1 \$5 bill
1d. 2 quarters **SUPERMATH:** \$2.44
1e. 2 \$1 bills
2. 3 pennies, 1 dime, 2 quarters, 2 \$1 bills

PAGE T5: DIARY OF A DUCK

Guesses will vary. Students can complete each chart's "Sum" column based on the information given in the question. They should also know in which of the first two columns the greater number belongs. See page T8 for final answers.

PAGE T6: HURRAY FOR ARRAYS!

- 1a.** 2×4 or $4 \times 2 =$ total stars **1b.** 8 stars
2a. 5×6 or $6 \times 5 =$ total pencils **2b.** 30 pencils
3. 54 airplanes
4. 24 scissors
SUPERMATH: Answers will vary. Students should draw rectangular arrays with one of these orientations: 1 by 24, 2 by 12, 4 by 6, 6 by 4, 8 by 3, 12 by 2, or 24 by 1.

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ANSWER BANK (For Teacher's Edition answers, see previous page.)

COVER: WOOF + WHEELS = WOW!
11 miles per hour

PAGES 2-3: NUMBERS IN THE NEWS

Welcome to DynaMath: 128 pages
Step on It: 750 miles
Ride 'Em Cowgirl: 900 pounds
Nutty Number: 8 million more
KenKen Corner:

5+	2	3+
3	2	1
3+	3	2
2	4+ 1	3

PAGES 4-5: STADI-YUM!

- 1a. \$5.00 – \$3.50 = change
- 1b. \$1.50
2. \$6.35
3. \$4.05
4. \$3.00
5. \$2.15

SUPERMATH: 5 Slamburgers

PAGES 6-7: "SUM" AMAZING ANIMALS

- | | |
|-------|-------------------------|
| 1. 31 | 5. 200 |
| 2. 5 | 6. 212 |
| 3. 54 | 7. 3,700 |
| 4. 48 | SUPERMATH: 1,584 |

PAGES 8-9: NIELSEN NUMBERS

1. one million, nine hundred sixty-three thousand
 2. 1,213,000
 3. six hundred forty-one thousand
 4. one million, eighty-four thousand
 5. 23,046,000
- SUPERMATH:** five hundred one thousand more people

PAGES 10-11: DIARY OF A DUCK

- | | |
|---------------|---------------|
| 1a. 15 pieces | 1b. 13 pieces |
| 2a. 10 stops | 2b. 6 stops |
| 3a. 23 ducks | 3b. 13 ducks |
| 4a. 15 ducks | 4b. 9 ducks |
| 5a. 9 rides | 5b. 3 rides |
- SUPERMATH:** Dave: 5 hours; Didi: 2 hours; Uncle Joe: 6 hours

PAGES 12-13: TIME FOR MATH

- 1a. 5:30
- 1b. half past five or five-thirty
2. "past ten"
3. eight forty-five; fifteen minutes to 9; a quarter to nine



SUPERMATH: 6:45 a.m.; a quarter to seven a.m., fifteen minutes to seven a.m., or six forty-five a.m.

PAGES 14-15: ROBOT TO THE RESCUE!

- | | | |
|------|------|--------------------|
| 1. C | 5. C | 8. 56,000,000 |
| 2. A | 6. B | 9. 11 minutes late |
| 3. B | 7. | 10. |
| 4. B | | |

PAGE 16: MULTIPLY WITH MCCLAIN

1. A 2. B 3. B 4. A 5. B 6. B



This answer key as well as solutions for all of the online activities listed on page T2 are at the teacher tab of www.scholastic.com/dynamath.

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