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# DynaMath

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I'm excited to introduce myself as the new editor of *DynaMath* magazine. As you know, Matt Friedman's been at the helm for a long time. But he's been so devoted to learning the Common Core State Standards that the rest of the magazines are clamoring for his expertise. So we'll be sharing Matt with the other classroom magazines as he assumes the role of education editor. I know I have some big shoes to fill, and I look forward to working with you to make *DynaMath* the best it can be. Feel free to drop me a line anytime with your thoughts. I'd love to hear from you!

Best wishes,

Karina Hamalainen, Editor

[khamalainen@scholastic.com](mailto:khamalainen@scholastic.com)



Page 10: article and game

Blair Hedges/Penn State university/AP

## SKILLS AND STANDARDS

PAGE	SKILL & ARTICLE TITLE	COMMON CORE STATE STANDARD FOR MATHEMATICS	NATIONAL MATH STANDARD (NCTM)	ONLINE MATERIALS <a href="http://www.scholastic.com/dynamath">www.scholastic.com/dynamath</a>
4	READING A CIRCLE GRAPH <b>Wild About Winter</b>	<b>Measurement and Data:</b> Represent and interpret data.	<b>Data Analysis and Probability:</b> Read and analyze a circle graph.	<b>Advanced:</b> Percents <b>Video:</b> Snow monkeys
6	MULTISTEP PROBLEMS <b>4 Festivals of Fun</b>	<b>Operations and Algebraic Thinking:</b> Use the four operations with whole numbers to solve problems.	<b>Number and Operations:</b> Use the four operations with whole numbers to solve problems.	<b>Basic:</b> Two-step problems
8	ELAPSED TIME <b>Space Jumper</b>	<b>Measurement and Data:</b> Solve problems involving measurement and estimation of intervals of time.	<b>Number and Operations:</b> Count the amount of time between different events.	<b>Advanced:</b> Elapsed time
10	EQUIVALENT FRACTIONS <b>Surprises in Small Packages</b>	<b>Measurement and Data:</b> Learn how to read equivalent fractions on a ruler.	<b>Number and Operations:</b> Develop an understanding of fractions as numbers.	<b>Basic:</b> Finding equivalent fractions <b>Game:</b> Equivalent fraction matching
12	GEOMETRY <b>Stunning Snow Art</b>	<b>Geometry:</b> Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	<b>Geometry:</b> Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	<b>Basic:</b> Symmetry
14	COMPARING DECIMALS <b>Blade Runner</b>	<b>Number and Operations in Base 10:</b> Understand decimal notation for fractions, and compare decimal fractions.	<b>Number and Operations:</b> Understand decimal notation for fractions, and compare decimals.	<b>Common Core Package:</b> Video lesson, skills sheets, practice test. <b>SEE PAGE T4!</b>

## 4-5 Reading a Circle Graph WILD ABOUT WINTER

### Common Core State Standards Content Standard

- Measurement and Data

### Mathematical Practices Standard

2. Reason abstractly and quantitatively

### NCTM Standards

- Measurement
- Data analysis and probability

**OBJECTIVE:** Students will identify a circle graph and use it to understand the information that is represented.

### ACTIVATE MATH KNOWLEDGE

Explain to students that they have seen examples of pictographs and bar graphs as ways to represent information, and that there are other graphs still to learn! A circle graph is used to represent data when there are different groups of information that together make up a whole. Just as a pizza pie is a great representation of different fractions (or different slices that make up the full pie), many people use circle graphs to show different groups of information.

### READ THE ARTICLE

With the article projected, instruct students to turn to page 4 in their print issues of *DynaMath*. Read the article “Wild About Winter” as a class. Call on students to identify what the circle graph is going to represent. Have students answer the questions that follow.

### EXTEND THE LESSON

Click on the “Watch a Video” button to view a video about snow monkeys.

### ASSESS UNDERSTANDING

To download the following skills page, go to [www.scholastic.com/dynamath](http://www.scholastic.com/dynamath) and click on the orange “Skills Sheets” button.

### Differentiated Activity:

For a lesson on finding the percent of a number, download the “Wild About Winter” advanced activity.



## 6-7 Multistep Problems 4 FESTIVALS OF FUN

### Common Core State Standards Content Standard

- Operations and Algebraic Thinking

### Mathematical Practices Standard

1. Make sense of problems and persevere in solving them.

### NCTM Standards

- Algebra
- Number and Operations

**OBJECTIVE:** Students will solve multistep word problems by breaking up the problem into several small steps.

### ACTIVATE MATH KNOWLEDGE

Remind students of the importance of **determining** exactly what word problems are asking of them. Put an example problem on the board: “There are 1,000 apples in one apple crate. Three crates of apples are sent to each of five grocery stores. How many apples are sent to the grocery stores altogether?” Have students discuss the different steps they would have to take to solve the problem. Finally, call on students to help you solve the problem, step by step. (Answer:  $1,000 \text{ apples} \times 3 \text{ crates} = 3,000 \text{ apples per crate}$ .  $3 \text{ crates} \times 5 \text{ stores} = 15,000 \text{ apples}$ )

### READ THE ARTICLE

With the article projected, instruct students to turn to page 6 in their print issues of *DynaMath*. Read the article “4 Festivals of Fun” as a class. Put the example problem on the board and work through the problem as a class. Have students answer the questions that follow.

### ASSESS UNDERSTANDING

To download the following skills page, go to [www.scholastic.com/dynamath](http://www.scholastic.com/dynamath) and click on the orange “Skills Sheets” button.

### Differentiated Activity:

For a simpler activity that shows how to complete two-part problems with step-by-step instructions, download the “4 Festivals of Fun” basic activity.



Name \_\_\_\_\_

# Problem of the Day

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

<b>DAY 1</b> Charlie's car travels 500 miles in 10 hours. Brianna's car travels 100 miles in 5 hours. Whose car is faster, and by how many miles per hour?	<b>DAY 2</b> What fraction of circles is colored in? Write your answer in simplest form. <div style="display: flex; justify-content: space-around; align-items: center;"> <span>●</span> <span>●</span> <span>○</span> </div>	<b>DAY 3</b> Unscramble the "math" words below: <b>rctoniaf</b> <b>pitmyllu</b> <b>requas</b> <b>lmdicea</b>	<b>DAY 4</b> Sanjay started his art project at 11:30 a.m. He finished 3 hours and 15 minutes later. At what time did Sanjay finish his art project?	<b>DAY 5</b> Remove one number below so that the sum of the remaining numbers is 200: <b>56 82 60 24 38</b>
<b>DAY 6</b> Write the missing operations [+ , - , x , or ÷] that will make this equation true: <b>12 _ 3 _ 2 = 18</b>	<b>DAY 7</b> 2 snirks = 4 snarks 8 snarks = 1 snirl ___ snirks = 1 snirl?	<b>DAY 8</b> Each box of Val's candy has 8 pieces of candy. Each piece of candy has 4 peanuts. How many peanuts are there in 10 boxes of Val's candy?	<b>DAY 9</b> Circle the fraction that is not equivalent to the others: $\frac{1}{2}$ , $\frac{4}{4}$ , $\frac{9}{12}$ , $\frac{9}{18}$	<b>DAY 10</b> Lizzie got on a plane at 3:00 p.m. When she got off the plane 5 hours later, it was 11 p.m. How is that possible?
<b>DAY 11</b> What two-digit number am I? <input checked="" type="checkbox"/> Ones place digit is 3 times larger than tens place digit <input checked="" type="checkbox"/> Number is even	<b>DAY 12</b> List these decimal numbers from least to greatest: <b>12.37 12.703 12.073 12.037</b>	<b>DAY 13</b> If A = 2, B = 4, C = 6, D = 8, and so on, what word is written? <b>32 18 6 22 24 10</b>	<b>DAY 14</b> Which statement isn't true? <ul style="list-style-type: none"> <li>• Parallel lines never meet.</li> <li>• 2 is a prime number.</li> <li>• All rectangles are squares.</li> </ul>	<b>DAY 15</b> Fill in the blanks to continue this pattern: <b>1, 3, 6, 8, 16, 18, 36, 38,</b> _____, _____
<b>DAY 16</b> Fill in the missing numbers so that each row and column have the same sum: $\begin{array}{r} 1 \quad \quad 6 \quad 4 \\ \_ \quad 2 \quad 3 \quad \_ \end{array}$	<b>DAY 17</b> $8.67 + \underline{\quad} = 10.7$	<b>DAY 18</b> Cam has 3 bow ties, 2 hats, and 3 pairs of tap dancing shoes. How many combinations of 1 bow tie, 1 hat, and 1 pair of shoes can Cam make?	<b>DAY 19</b> What is the sum of all the numbers from 0 to 10 that have no "e" in their written form?	<b>DAY 20</b> True or false: $3,000 \times 50 = 50,000 \times 3 = 300 \times 500?$

# Practice Test: Comparing Decimals

Test your skills related to the math from the story "Blade Runner."

**1.** Which number below has the highest value?

- (A) 19.29      (C) 19.44  
 (B) 19.10      (D) 19.55

**2.** Which number below has the lowest value?

- (A) 4.99      (C) 5.10  
 (B) 4.00      (D) 5.01

**3.** Which number is *greater* than 20.50?

- (A) 20.60      (C) 20.06  
 (B) 19.45      (D) 19.80

**4.** Which number is *less* than 15.10?

- (A) 16.00      (C) 15.05  
 (B) 15.55      (D) 16.05

**5.** Which number is between 13.25 and 13.4?

- (A) 13.03      (C) 13.45  
 (B) 13.36      (D) 13.2

For questions 6 to 9, use the price list below.

Sam's Deli Price List	
Item	Cost
Mac and cheese	\$4.59
Jar of mustard	\$3.49
Jar of pickles	\$4.65
Hot dogs	\$4.99
Hot dog buns	\$3.59
American cheese slices	\$4.30

**6.** Which item costs the most?

\_\_\_\_\_

**7.** Which item costs the least?

\_\_\_\_\_

**8.** If you don't want to spend more than \$4.50 on any one item at Sam's Deli, which items can you buy?

\_\_\_\_\_

**9.** Organize the list of items sold at Sam's Deli from least expensive to most expensive:

\_\_\_\_\_

**10.** Chris told Maggie that 6.70 is less than 6.55, because when you compare the hundredths places, 0 is less than 5. Is Chris right? Explain your answer.

\_\_\_\_\_

# ANSWER BANK

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

**PAGE T5: PROBLEM OF THE DAY**

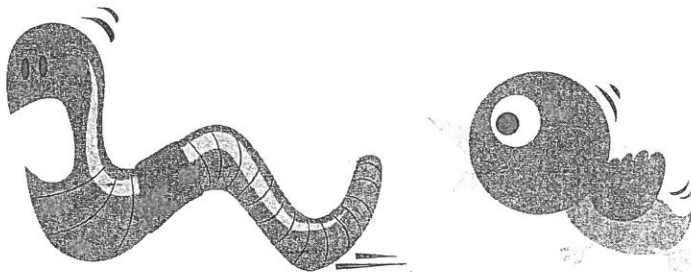
- DAY 1:** Charlie's, by 30 miles per hour  
**DAY 2:**  $\frac{1}{2}$   
**DAY 3:** fraction, multiply, square, decimal  
**DAY 4:** 2:45 p.m.  
**DAY 5:** 60  
**DAY 6:**  $12 + 3 \times 2 = 18$   
**DAY 7:** 4 snirks  
**DAY 8:** 320 peanuts  
**DAY 9:**  $\frac{4}{12}$   
**DAY 10:** Lizzie flew 3 time zones to the east.  
**DAY 11:** 26  
**DAY 12:** 12.037, 12.073, 12.37, 12.703  
**DAY 13:** "pickle"  
**DAY 14:** The statement "All rectangles are squares" is false.  
**DAY 15:** 76, 78  
**DAY 16:**    1    7    6    4  
               8    2    3    5

- DAY 17:** 2.03  
**DAY 18:** 18 combinations  
**DAY 19:** 12 (2 + 4 + 6)  
**DAY 20:** true

**PAGE T6: PRACTICE TEST:  
 COMPARING DECIMALS**

1. D    2. B    3. A    4. C    5. B  
 6. hot dogs  
 7. jar of mustard  
 8. jar of mustard, American cheese slices, hot dog buns  
 9. From least expensive to most expensive: jar of mustard, hot dog buns, American cheese slices, mac and cheese, jar of pickles, hot dogs  
 10. Chris is not right. Because you rank decimals starting with the tenths place, you can tell that 6.7 is the larger decimal.

## THE EARLY BIRD GETS THE WORM...



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# ANSWER BANK

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



To find this answer key and solutions for the online skills sheets, click the Teaching Resources tab at [www.scholastic.com/dynamath](http://www.scholastic.com/dynamath).

## COVER: MONKEYS HAVE A BALL

6 hours, 58 minutes

## PAGES 2-3: NUMBERS IN THE NEWS

### Creepy Crawly Cupcake:

Question 1: 7 grams of protein

Question 2: 39 grams of protein

**Frozen Hotel:**  $-40^{\circ}\text{F}$

**Heart Healthy:** 180 times an hour

## PAGES 4-5: WILD ABOUT WINTER

- 28%
- eating
- 24%
- About  $\frac{1}{100}$
- B
- The average kid spends about 17% of their day watching TV. A snow monkey spends 21% of its time relaxing—a little more than kids spend watching TV.

## PAGES 6-7: 4 FESTIVALS OF FUN

- 8 types of limes; 11 types of lemons
- \$300 for second place; \$600 for first place
- 21.29 seconds
- 49 feet tall
- 4,352 miles

## PAGES 8-9: SPACE JUMPER

- 1 hour, 20 minutes
- 4 hours, 16 minutes
- a. 1 hour, 51 minutes
- b. 7:47 a.m.
- 2 hours, 29 minutes
- 5 hours, 58 minutes

## PAGES 10-11: SURPRISES IN SMALL PACKAGES

- $\frac{3}{8}; \frac{6}{16}$
- $1\frac{3}{4}; 1\frac{6}{8}$
- Answers will vary.  
Possible answers:  $2\frac{1}{2}; 2\frac{2}{4}; 2\frac{4}{8}; 2\frac{8}{16}$
- $\frac{4}{1}, \frac{8}{2}, \frac{16}{4}, \frac{32}{8}, \frac{64}{16}$
- $1\frac{1}{8}, 1\frac{2}{16}$

## PAGES 12-13: STUNNING SNOW ART

- rotation
- reflection
- translation
- Answers will vary. Please accept any two shapes that are reflections of each other.
- Answers will vary.

## PAGES 14-15: BLADE RUNNER

- first round
- Kevin Borlée
- Steven Solomon
- Lalonde Gordon
- 29.57 seconds faster. By subtracting the cheetah's time from the gold medalist's time, you can find the difference between the two.

## PAGE 16: THE PUZZLE PAGE

### MATH MASTER

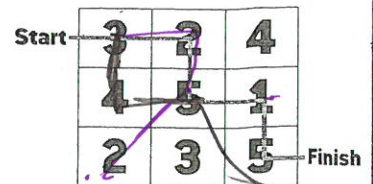
- A
- B
- C
- C
- D

### MATH BLOOPER:

Answers will vary. Josie scored three times as many baskets as Kyle, not four times. Kim is the player who actually scored four times as many baskets as Kyle.

### BRAINTEASER:

Here is the solution:



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