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# INTRODUCTION

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The focus of *Fifth-Grade Math Minutes* is math fluency—teaching students to solve problems effortlessly and rapidly. The problems in this book provide students with practice in key areas of fifth-grade math instruction, including

- two- and three-digit addition and subtraction
- multiplication
- division
- graphing
- rounding
- decimals
- measurement
- fractions
- percents
- angles
- perimeter, area, and volume

Use this comprehensive resource to improve your students' overall math fluency, which will promote greater self-confidence in their math skills as well as provide the everyday practice necessary to succeed in a testing situation.

*Fifth-Grade Math Minutes* features 100 “Minutes.” Each Minute consists of ten classroom-tested problems for students to complete in one minute. Each Minute includes questions of varying degrees of difficulty, integrating problem-solving and basic math skills. This unique format offers students an ongoing opportunity to improve their own fluency in a manageable, nonthreatening format. The quick, one-minute format combined with instant feedback makes this a challenging and motivational assignment students will look forward to each day. Students become active learners as they discover mathematical relationships and apply acquired understanding to the solution of realistic problems in each Minute.

# HOW TO USE THIS BOOK



*Fifth-Grade Math Minutes* is designed to be implemented in numerical order. Students who need the most support will find the order of skills as introduced most helpful in building and retaining confidence and success. For example, the first time that students are asked to identify a geometric figure, possible answers are provided. Eventually, students are asked to name a geometric figure without the support of multiple-choice answers.

*Fifth-Grade Math Minutes* can be used in a variety of ways. Use one Minute a day for warm-up activities, bell-work, review, assessment, or a homework assignment. Keep in mind that students will get the most benefit from their daily Minute if they receive immediate feedback. If you assign the Minute as homework, correct it in class at the beginning of the day.

If you use the Minutes as a timed activity, place the paper facedown on the students' desks, or display it as a transparency. Use a clock or kitchen timer to measure one minute. Encourage students to concentrate on completing each problem successfully and not to dwell on problems they cannot complete. At the end of the minute, have students stop working. Then, read the answers from the answer key (pages 108–112), or display them on a transparency. Have students correct their own work and record their score on the Minute Journal reproducible (page 6). Then, have the class go over each problem together to discuss the solution(s). Spend more time on problems that were clearly challenging for most of the class. Tell students that difficult problems will appear on future Minutes and they will have other opportunities for success.



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Teach students strategies for improving their scores, especially if you time their work on each Minute. Tell students to

- leave more time-consuming problems for last
- come back to problems they are unsure of after they have completed all other problems
- make educated guesses when they encounter problems they are unfamiliar with
- rewrite word problems as number problems
- use mental math wherever possible

Students will learn to apply these strategies to other timed-test situations.

The Minutes are designed to improve math fluency and should not be included as part of a student's overall math grade. However, the Minutes provide an excellent opportunity for you to see which skills the class as a whole needs to practice or review. This knowledge will help you plan the content of future math lessons. A class that consistently has difficulty with reading graphs, for example, may make excellent use of your lesson in that area, especially if they know they will have other opportunities to achieve success in this area on future Minutes. Have students file their Math Journal and Minutes for that week in a location accessible to you both. Class discussions of the problems will help you identify which math skills to review. However, you may find it useful to review the Minutes on a weekly basis before sending them home with students at the end of the week.

While you will not include student Minute scores in your formal grading, you may wish to recognize improvements by awarding additional privileges or offering a reward if the entire class scores above a certain level for a week or more. Showing students that you recognize their efforts provides additional motivation to succeed!



# MINUTE JOURNAL

NAME \_\_\_\_\_

MINUTE	DATE	SCORE	MINUTE	DATE	SCORE	MINUTE	DATE	SCORE	MINUTE	DATE	SCORE
1			26			51			76		
2			27			52			77		
3			28			53			78		
4			29			54			79		
5			30			55			80		
6			31			56			81		
7			32			57			82		
8			33			58			83		
9			34			59			84		
10			35			60			85		
11			36			61			86		
12			37			62			87		
13			38			63			88		
14			39			64			89		
15			40			65			90		
16			41			66			91		
17			42			67			92		
18			43			68			93		
19			44			69			94		
20			45			70			95		
21			46			71			96		
22			47			72			97		
23			48			73			98		
24			49			74			99		
25			50			75			100		

# SCOPE AND SEQUENCE



<i><b>SKILL</b></i>	<i><b>MINUTE IN WHICH SKILL FIRST APPEARS</b></i>
Numbers to Hundred Thousands . . . . .	1
Multiplication Facts . . . . .	1
Number Sense/Place Value . . . . .	1
Time . . . . .	1
Divisibility Rules . . . . .	1
Graphs/Tables . . . . .	1
Standard Measurement . . . . .	1
Fact Families (addition/subtraction) . . . . .	2
Fractions . . . . .	2
Geometric Figures (sides, faces, edges, vertices) . . . . .	2
Patterns . . . . .	2
Geometric Shapes (plane and solid figures) . . . . .	3
Division Facts . . . . .	3
Metric Measurement . . . . .	4
Numbers to Hundred Billions . . . . .	5
Addition (two and three digits) . . . . .	5
Subtraction (two and three digits) . . . . .	6
Prime and Composite Numbers . . . . .	6
Properties of Addition . . . . .	6
Dividing with Remainders . . . . .	8
Rounding Whole Numbers . . . . .	8
Expanded Notation . . . . .	11
Column Addition . . . . .	14
Properties of Multiplication . . . . .	18
Parallel/Perpendicular . . . . .	18
Money . . . . .	18
Temperature . . . . .	20
Subtraction (four digits or greater) . . . . .	21
Addition (four digits or greater) . . . . .	22
Rounding Decimals . . . . .	23
Algebra (use of variables) . . . . .	23
Fact Families (multiplication/division) . . . . .	24
Comparing and Ordering Decimals . . . . .	24
Symmetry . . . . .	26
Congruent/Similar Figures . . . . .	28
Adding/Subtracting Decimals . . . . .	29
Perimeter . . . . .	34
Angles . . . . .	39
Multiplying Decimals . . . . .	42
Finding Distance Traveled . . . . .	49
Equivalent Fractions . . . . .	50
Circles . . . . .	50
Percent . . . . .	56
Area . . . . .	58
Fractions (add, subtract, mixed, reciprocals) . . . . .	61
Ratio . . . . .	67
Volume . . . . .	68
Least Common Multiple/Multiples/Greatest Common Factor . . . . .	69
Multiplying Fractions . . . . .	69
Improper Fractions/Mixed Numbers . . . . .	71
Positive and Negative Integers . . . . .	72
Fractions (lowest terms) . . . . .	72
Area of a Triangle . . . . .	75
Graphing Coordinates . . . . .	81



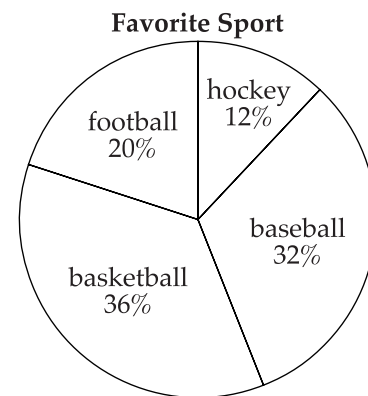
# MINUTE 1

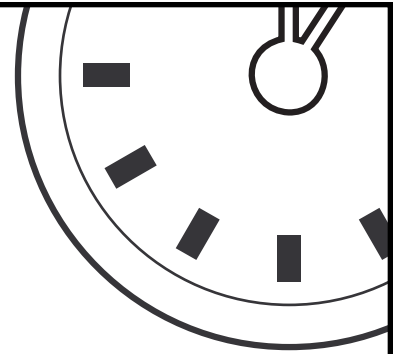
NAME \_\_\_\_\_

1. For 902,798, write the digit in the hundreds place. \_\_\_\_\_
2.  $6 \times 2 =$  \_\_\_\_\_
3. Can 351 be evenly divided by 2? Circle: Yes or No
4.  $80 \div 8 =$  \_\_\_\_\_
5. Write the time 3 hours after 9:00 p.m. \_\_\_\_\_

Use the circle graph to complete questions 6–8.

6. What percentage of people prefer baseball? \_\_\_\_\_
7. What two sports together equal the same percentage as baseball? \_\_\_\_\_ and \_\_\_\_\_
8. Which sport has the greatest percentage? \_\_\_\_\_
9. How many sides does a rectangle have? \_\_\_\_\_ sides
10. 1 foot = \_\_\_\_\_ inches



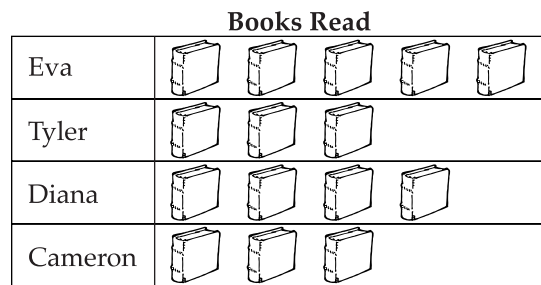



# MINUTE 2

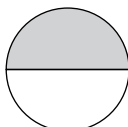
NAME \_\_\_\_\_

Use the pictograph to complete questions 1–3.

- How many books did Eva read? \_\_\_\_\_ books
- How many more books did Eva read than Diana? \_\_\_\_\_ books



(Each  equals 5 books.)

- Two students read the minimum number of books.  
How many books did they each read? \_\_\_\_\_ books
- $77 \div 7 =$
- How many sides does a pentagon have? \_\_\_\_\_ sides
- Write the missing family fact.  
 $6 + 8 = 14$   
 $14 - 8 = 6$   
 $14 - 6 = 8$   
 \_\_\_\_\_
- The value of the underlined digit in 326,619 is 3 hundred thousand.  
Circle: True or False
- Write a fraction for the shaded part. \_\_\_\_\_ 
- 1 minute = \_\_\_\_\_ seconds
- 0, 3, 6, 9, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_