

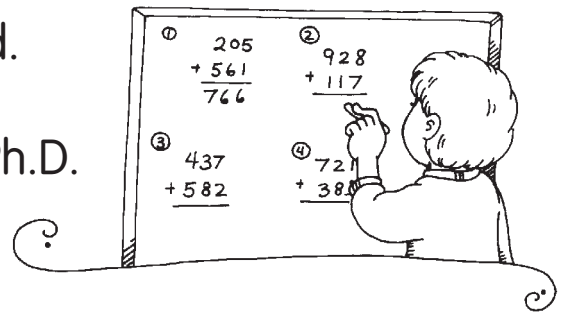
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# Keys to Math Success

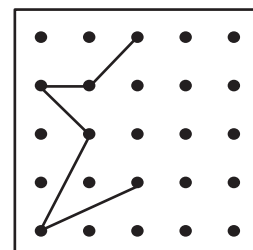
## Grades 3-4

"Fun" Standard-Based Activities to Boost Math Skills  
of Struggling and Reluctant Learners

by  
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and  
Leland Graham, Ph.D.



illustrated by  
Janet Armbrust

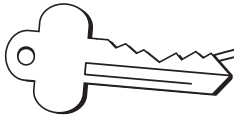


*Publisher*

Key Education Publishing Company, LLC  
Minneapolis, Minnesota

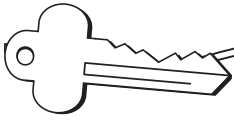
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# Introduction
















Welcome to the *Keys to Math Success* series! Each resource book found in this series is designed to boost and reinforce math skills. All of the included math activities, games, and puzzles will provide good practice for all students, but will be especially useful for those students who are struggling, slightly below average, or for those students who do not seem to be interested in math. The activities will engage these young learners and help them to discover that math can really be fun!

Teachers and parents will find that the presentation of the activities will also help students to succeed. There is some repetition of skills, which reinforces learning; the reproducible activity pages are not overly crowded with too many math problems, which can frustrate students; and the concepts are presented in a clear and student-friendly format. This will make learning about math concepts a fun and successful experience for the children!

Each book offers questions and activities based on the curriculum standards specified by the National Council of Teachers of Mathematics (NCTM). All of the content standards (number and operations, algebra, geometry, measurement, and data analysis and probability) and the process standard of problem solving are incorporated in the activities. At the conclusion of each chapter is a math posttest. Each test has questions and problems that are based on standardized tests, which will help students gain experience and confidence in testing and will increase test scores.

*Keys to Math Success* is a wonderful resource that may be used for a variety of purposes, such as independent student or classroom work, or may be used at home with parental involvement. These books will quickly become a treasured resource that will help motivate even the most reluctant of math students!

The following math skills are covered in *Keys to Math Success*:

-  addition
-  subtraction
-  multiplication
-  division
-  place value
-  algebraic thinking
-  geometry
-  fractions
-  measurement
-  time
-  money
-  data analysis
-  probability
-  problem solving
-  test-taking skills



## What's the Standard?

**Directions:** Think about each expanded or written form below.

On the blank, write the letter of the standard form that matches it.

Examples of standard, expanded and written forms:

Standard form: 3,725

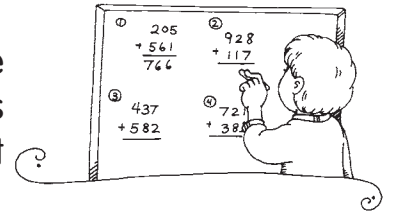
Expanded form:  $3000 + 700 + 20 + 5$

Written form: three thousand, seven hundred, twenty five

- |  |              |
|--|--------------|
| _____ 1. three hundred, eighty-two             | A. 2,409     |
| _____ 2. seventy-six                           | B. 1,515     |
| _____ 3. $100 + 10 + 5$                        | C. 5,000,302 |
| _____ 4. two thousand, four hundred, nine      | D. 10,211    |
| _____ 5. $400,000 + 40,000 + 8,000 + 100 + 10$ | E. 115       |
| _____ 6. five million, three hundred, two      | F. 382       |
| _____ 7. $3,000 + 100 + 80 + 2$                | G. 328       |
| _____ 8. five hundred thirty thousand, two     | H. 76        |
| _____ 9. $1,000 + 500 + 10 + 5$                | I. 11,210    |
| _____ 10. $900 + 60 + 3$                       | J. 5,555     |
| _____ 11. ten thousand, two hundred, eleven    | K. 963       |
| _____ 12. eleven thousand, two hundred, ten    | L. 3,182     |
| _____ 13. $300 + 20 + 8$                       | M. 530,002   |
| _____ 14. $5,000 + 500 + 50 + 5$               | N. 448,110   |

## Add'em Adam!

**Directions:** Solve the following problems. Remember to add the ones column first, the tens next, and then the hundreds column. Finally, on the last row of problems, do not forget to add the thousands column.



|   |   |   |   |
|---|---|---|---|
| 1.<br>$\begin{array}{r} 405 \\ +255 \\ \hline \end{array}$    | 2.<br>$\begin{array}{r} 322 \\ +252 \\ \hline \end{array}$    | 3.<br>$\begin{array}{r} 446 \\ +564 \\ \hline \end{array}$    | 4.<br>$\begin{array}{r} 774 \\ +123 \\ \hline \end{array}$    |
| 5.<br>$\begin{array}{r} 338 \\ +164 \\ \hline \end{array}$    | 6.<br>$\begin{array}{r} 471 \\ +219 \\ \hline \end{array}$    | 7.<br>$\begin{array}{r} 926 \\ +68 \\ \hline \end{array}$     | 8.<br>$\begin{array}{r} 575 \\ +416 \\ \hline \end{array}$    |
| 9.<br>$\begin{array}{r} 314 \\ +463 \\ \hline \end{array}$    | 10.<br>$\begin{array}{r} 338 \\ +555 \\ \hline \end{array}$   | 11.<br>$\begin{array}{r} 888 \\ +118 \\ \hline \end{array}$   | 12.<br>$\begin{array}{r} 353 \\ +449 \\ \hline \end{array}$   |
| 13.<br>$\begin{array}{r} 4575 \\ +2128 \\ \hline \end{array}$ | 14.<br>$\begin{array}{r} 5222 \\ +1638 \\ \hline \end{array}$ | 15.<br>$\begin{array}{r} 6218 \\ +2074 \\ \hline \end{array}$ | 16.<br>$\begin{array}{r} 2444 \\ +5155 \\ \hline \end{array}$ |