

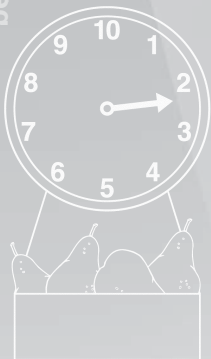
Basic Math Warm-Ups



between 20 and 24 times

rounding
to the
closest
whole
inch

about 2 pounds



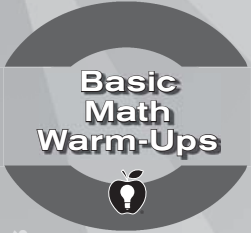
INTRODUCTION

Basic Math Warm-Ups: Rounding, Reasonableness, and Estimation is designed to provide quick practice and review opportunities for students with learning differences. Each of the 180 warm-up activities has clear and simple directions. The practice activities are written at a low reading level, making them appropriate for students in upper elementary school, middle school, and high school.

Each reproducible page covers only one skill so that students who are already struggling will not be overwhelmed. At least two activity sheets are provided to address each skill. When completing an activity, students will apply basic concepts to solve, complete, or reproduce simple math problems.

It is suggested that students keep all their completed activities in a folder labeled “Rounding, Reasonableness, and Estimation Warm-Ups.” This will allow students to easily refer to the activities when working on future warm-ups and when completing other supplemental activities. These warm-ups are designed to supplement your existing curriculum. They can also be used as pre- and post-assessments to check for students’ skill mastery.

ROUNDING, REASONABLENESS, AND ESTIMATION



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The six books in the *Basic Math Warm-Ups* series cover basic mathematics skills in number concepts; number operations; measurement; tables, graphs, and charts; rounding, reasonableness, and estimation; and fractions, decimals, and percents, as identified by the National Council of Teachers of Mathematics (NCTM). These warm-ups support the *Basic Math Practice* series and can be used independently or in conjunction with those binders. Each warm-up book provides 180 warm-ups—one for each day of the school year—that cover all of the objectives for each skill. The open-ended and multiple choice questions use varied approaches to address different modalities so that students’ different learning styles are addressed.

Basic Math Warm-Ups: Rounding, Reasonableness, and Estimation provides repeated daily practice in the basic foundation of math concepts development, which will also improve students’ confidence in their mathematical skills. These warm-ups can be used at any time for a variety of purposes. Use them as warm-ups, mini-lessons, review activities, “tickets out” to allow students to leave the classroom, or quick homework assignments. For your convenience, an answer key is provided for all of the warm-up activities.

ROUNDING, REASONABLENESS, AND ESTIMATION

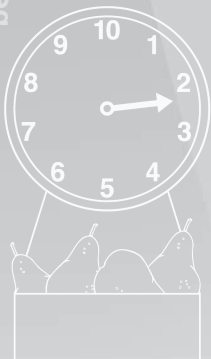
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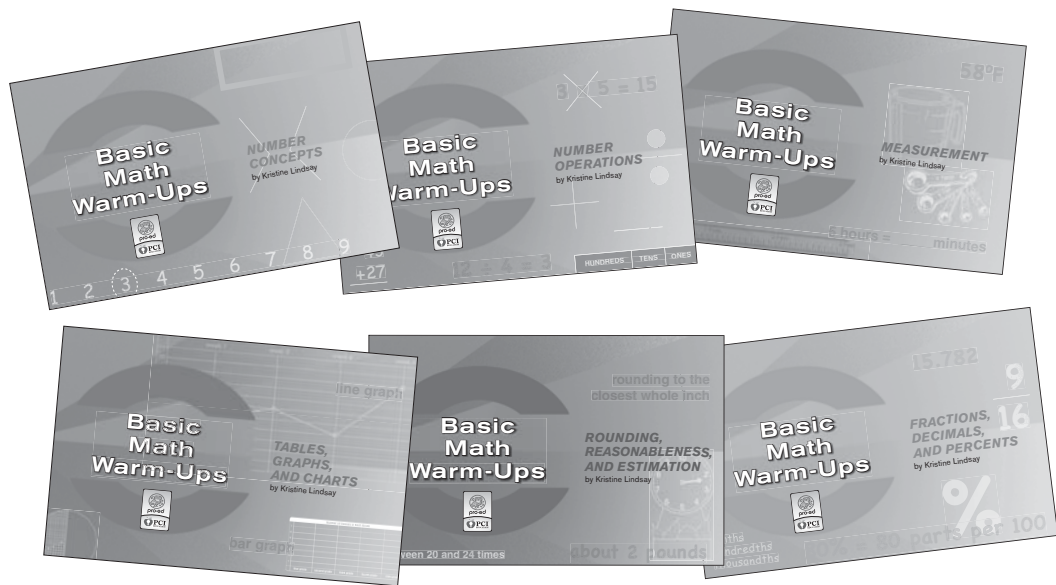
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THE BASIC MATH WARM-UPS SERIES

There are six books in the *Basic Math Warm-Ups* series. Each book includes 180 pages of practice activities.



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TWO SECTIONS

This book is divided into two sections. The first section contains 180 activities covering rounding, reasonableness, and estimation through a variety of formats. The second section is the answer key, which includes solutions for all of the activities. For some problems, the answer will read “Answers will vary.”

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ROUNDING

Directions: Look at the picture. Write the digits for the ones place and the tens place in the boxes. Then, fill in the blank to complete the sentence.

Tens	Ones

_____ tens

_____ ones

The number is _____.

1

ROUNDING, REASONABLENESS, AND ESTIMATION

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ANSWER KEY

Page 1
5 tens, 8 ones, 58

Page 2
6 tens, 3 ones, 63

Page 3
2 hundreds, 6 tens, 7 ones, 267

Page 4
1 hundreds, 3 tens, 5 ones, 135

Page 5
1) 7 thousands, 3 hundreds, 9 tens, 1 ones
2) 6 thousands, 4 hundreds, 2 tens, 8 ones

Page 6
1) 2 thousands, 4 hundreds, 0 tens, 7 ones
2) 9 thousands, 1 hundreds, 5 tens, 6 ones

Page 7
1) 3 2) 9 3) 6 4) 7

Page 8
1) 5 2) 3 3) 7 4) 6

Page 9
1) 8 2) 5 3) 6 4) 4

Page 10
1) 3 2) 9 3) 7 4) 8

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ROUNDING, REASONABLENESS, AND ESTIMATION

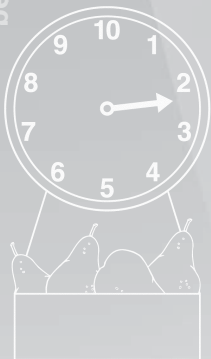
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OBJECTIVES

After students complete the activities in *Basic Math Warm-Ups: Rounding, Reasonableness, and Estimation*, they will be able to do the following:

- identify place value, including ones, tens, hundreds, and thousands
- round numbers to the tens place and the hundreds place
- round monetary amounts to the next whole dollar and ten cent amounts
- apply mathematic problem-solving strategies to everyday situations
- judge and compare the reasonableness of numerical computations and their results
- verify and interpret the reasonableness of results with respect to the original problem
- use the language of mathematics to express mathematical ideas
- estimate quantities, measurements, and computations
- complete one- and two-step problems using estimation
- determine when estimation is appropriate

ROUNDING, REASONABLENESS, AND ESTIMATION

VIII

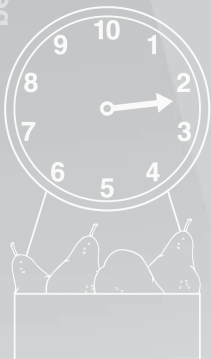
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Research has shown that segmentation, or “breaking down a task,” is an effective method to use when teaching students with learning differences. Students with special needs cannot process large amounts of information at one time. However, according to Gersten, presenting small segments of information and then immediately applying that information has been proven to be a successful teaching method (1999). The activities in the *Basic Math Warm-Ups* series do just that. They present small, sequenced bits of instruction with ample opportunities for practice. These pages are excellent supplements for any mathematics program designed to help students sharpen their mathematics skills.

Basic Math Warm-Ups: Rounding, Reasonableness, and Estimation includes multiple activities that reinforce rounding, reasonableness, and estimation in ways that make them relevant and meaningful. As Jones, Wilson, and Bhojwani note, “Practice activities are essential components of mathematics instructional programs. Students with LD will generally need more practice and practice that is better designed than students without LD, if they are to achieve adequate levels of fluency and retention” (1997). The warm-up activities included in the series have simple directions, low readability to minimize frustrations due to reading difficulties, and few problems per activity to review and reinforce understanding of the skills.

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The Principles and Standards for School Mathematics by the NCTM state that “students need to learn a new set of mathematics basics that enable them to understand how mathematical ideas interconnect and build on one another to produce a coherent whole” (2003). These warm-up activities do this by addressing rounding, reasonableness, and estimation through a variety of formats so that individual learning styles are addressed. The skills build on one another and reinforce previously learned skills. *Basic Math Warm-Ups: Rounding, Reasonableness, and Estimation* meets both state and national standards (including the National Council of Teachers of Mathematics Standards 2000 Project) regarding numbers, operations, problem solving, communication, and connections.

Gersten, R. (May 1999). “Teaching Expressive Writing to Students with Learning Disabilities.” Keys to Successful Learning Summit, Washington, D.C.

Jones, E. D., Wilson, R. & Bhojwani, S. (March/April 1997). “Mathematics Instruction for Secondary Students with Learning Disabilities.” *Journal of Learning Disabilities*, 30(2), 151–163.

National Council of Teachers of Mathematics. (2003). “Realizing the Vision.” *Principles and Standards for School Mathematics*. [Electronic version] Retrieved on June 23, 2004, from <http://standards.nctm.org/document/chapter8/index.htm>

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