

Adult Basic Education

## Level II Mathematics

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# Mathematics 2013

## Decimals

## Study Guide

**Suggested Resource:** *Prism Math Blue Student Workbook (Canadian Edition).* McGraw-Hill Ryerson. 2005. ISBN 13: 978-0-07-096033-6 (10:0-07-096033-X).

**Level II Mathematics Courses**

Mathematics 2011: Whole Numbers

Mathematics 2012: Fractions

**Mathematics 2013: Decimals**

Mathematics 2014: Percents

Mathematics 2015: Interest

Mathematics 2016: Measurement

Mathematics 2017: Geometry

Mathematics 2018: Statistics and Probability

Mathematics 2019: Algebra Readiness I

Mathematics 2020: Algebra Readiness II



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## To the Student

### ***Who should do Mathematics 2013: Decimals?***

You should do this course if you need extra practice adding, subtracting, multiplying, and dividing decimals. If you completed ABE Level I, this is recommended as your third ABE Level II Mathematics course.

You do not have to complete all the Level II Mathematics courses to move into ABE Level III. The decision to do all or some of the Level II Mathematics courses will be made based on your instructor's assessment. The following will be taken into consideration in this assessment: your previous education, your CAAT (or another standardized test) result, your work experience, your future employment/post-secondary goals, your progress in Level II courses, or any other factor impacting your future success in Level III. For example, if you wish to pursue the Degree and Technical Profile (Academic) in Level III, you will likely have to complete all Level II Mathematics courses. If you intend to pursue the General College Profile (General) in Level III, you may only have to complete a selection of Level II Mathematics courses.

### ***What is the Mathematics 2013 Study Guide?***

The Study Guide describes all the work that is required for the completion of this course. It also contains references and notes to help you.

### ***How should I Use the Study Guide?***

Before beginning to do the work in this Study Guide, you will need to talk to your instructor about the course and the resources you will need. You should work through the Study Guide page by page, consulting with your instructor as you go.

### ***How is the Study Guide organized?***

The Study Guide is organized in two columns, as follows:

Required Work	Suggested Resources/Notes
This column provides a numbered list of all the work you are required to do for the course.	This column gives important information on the resources being used and some notes to help you complete the required work.

## To the Student

### Important Notes

This Study Guide is intended to make it possible for you to work independently in Adult Basic Education. If you use the Study Guide correctly, you may be able to work on your own for certain periods of time. You should always make sure that your instructor is aware of what you are doing. Feel free to ask your instructor for help and guidance at all times.

You should complete all the **Required Work** in this study guide without a calculator. A calculator can be used to check your answers, but it should not be used to simply complete the **Required Work** faster.

## Unit 1: Addition and Subtraction

Required Work	Suggested Resources/Notes
<ol style="list-style-type: none"><li>1. Read Lesson 1 on page 67 of the text, and then complete numbers 1-10 (all items).</li><li>2. Continue to read Lesson 1 on page 68 of the text, and then complete numbers 1-8 (all items).</li><li>3. Read Lesson 2 on page 69, and then complete the following:<ol style="list-style-type: none"><li>a) Numbers 1-6 (all items)</li><li>b) Solve each word problem on page 70 of the text.</li></ol></li></ol>	<ul style="list-style-type: none"><li>• Think: Identify the five answers of greatest value and five answers of least value.</li><li>• Think: How do you change fractions to decimals when the denominators are not powers of 10.</li><li>• Make sure you insert zeros as place holders as needed when adding decimals.</li><li>• Make sure you line up the decimal points when adding decimals, especially when solving the word problems.</li><li>• Ask your instructor for help if you do not fully understand each word problem.</li><li>• It may be helpful to draw a diagram for each word problem before doing calculations.</li></ul>

## Unit 1: Addition and Subtraction

Required Work	Suggested Resources/Notes
<p>4. Read Lesson 3 on page 71 of the text, and then complete the following:</p> <p>a) Numbers 1-7 ( all items)</p> <p>b) Solve each word problem on page 72 of the text.</p> <p>5. <u>Assignment #1</u>: Complete all items and word problems on pages 73-74 of the text. This assignment will be graded and is part of the official evaluation for this course.</p>	<ul style="list-style-type: none"><li>When working with a whole number and a decimal, insert a decimal point to the right of the whole number.</li><li>You should show all your calculations on the assignment. You may use a calculator to check your answers. Ask your instructor if you need any help with the assignment.</li><li>Your instructor may require you to complete additional work if you do not get a satisfactory grade on <u>Assignment #1</u>.</li></ul>

## Unit 2: Multiplication and Division

Required Work	Suggested Resources/Notes
<ol style="list-style-type: none"><li>1. Read Lesson 5 on page 75 of the text, and then complete numbers 1-7 (all items).</li><li>2. Continue with Lesson 5 on page 76 of the text, and complete numbers 1-7 (all items).</li><li>3. Read Lesson 6 on page 77 of the text, and then complete the following:<ol style="list-style-type: none"><li>a) Numbers 1-7 (all items)</li><li>b) Solve each word problem on page 78 of the text.</li></ol></li><li>4. Read Lesson 7 on page 79 of the text, and then complete the following:<ol style="list-style-type: none"><li>a) Numbers 1-4 (all items)</li><li>b) Solve each word problem on page 80 of the text.</li></ol></li></ol>	<ul style="list-style-type: none"><li>• Make sure you line up the decimal points when multiplying the same as when adding or subtracting.</li><li>• Think: How do you know where to place the decimal point in your answer?</li><li>• Think: What would happen if you multiplied a decimal by 10 000, 100 000, 1 000 000?</li><li>• Make sure you insert zeros when needed to move the decimal point.</li><li>• Ask your instructor for help if you do not fully understand each word problem.</li><li>• It may be helpful to draw a diagram for each word problem before doing calculations.</li><li>• Make sure you insert zeros when needed in the quotient.</li></ul>

## Unit 2: Multiplication and Division

Required Work	Suggested Resources/Notes
<p>5. Read Lesson 8 on page 81 of the text, and then complete the following:</p> <ol style="list-style-type: none"><li>Numbers 1-3 (all items)</li><li>Solve each word problem on page 82 of the text.</li></ol> <p>6. Read Lesson 9 on page 83 of the text, and then complete the following:</p> <ol style="list-style-type: none"><li>Numbers 1-4 (all items)</li><li>Solve each word problem on page 84 of the text.</li></ol> <p>7. <u>Assignment #2</u>: Complete all items and word problems on pages 85-86 of the text. This assignment will be graded and is part of the official evaluation for this course.</p> <p>8. <u>Review for Final Exam</u>: Complete <i>Chapter 3 Practice Test: Operations Involving Decimals</i> on page 87 of the text.</p> <p>9. <u>Final Exam</u>: Write the final exam for <b>Mathematics 2013: Decimals</b>. This exam will be very similar to the review in number 8 above.</p>	<ul style="list-style-type: none"><li>Make sure that if you move the decimal point out of the divisor, then you also move it the same number of places in the dividend.</li><li>Think: What are the steps involved when dividing a decimal by a decimal.</li><li>You should show all your calculations on the assignment. You may use a calculator to check your answers. Ask your instructor if you need any help with the assignment.</li><li>Your instructor may require you to complete additional work if you do not get a satisfactory grade on <u>Assignment #2</u>.</li><li>Only write the final exam for this course if you fully understand the material contained in the review.</li></ul>