

Adult Basic Education (ABE)

Level III Mathematics

Mathematics 2102A

Surface Area/Drawing and Design/Volume and Capacity

Study Guide

Resource: *Math at Work 11*. McGraw-Hill Ryerson. 2012. ISBN 13:978-125901237-2.

Level III General College Profile Mathematics (General)

Mathematics 1102A: Consumerism and Travel/Measuring Length/Measuring Area

Mathematics 1102B: Getting Paid/Angles

Mathematics 1102C: Pythagorean Relationship/Trigonometry

Mathematics 2102A: Surface Area/Drawing and Design/Volume and Capacity

Mathematics 2102B: Interpreting Graphs/Banking and Budgeting

Mathematics 2102C: Slope/Right Triangles and Trigonometry

Mathematics 3102A: Measurement and Probability/Data/Linear Relationships

Mathematics 3102B: Real-Life Decisions/Properties of Figures

Mathematics 3102C: Transformations/Trigonometry



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General Information

Introduction

Mathematics 2102A when completed with **Mathematics 2102B and C** is equivalent to the Newfoundland and Labrador senior high school **Mathematics 2202 (Applied)** course. Students must have successfully passed **Mathematics 1102C** in order to do this course.

Resources

The student resource for this course is: *Math at Work 11*. McGraw-Hill Ryerson. 2012. ISBN 13:978-125901237-2.

Your instructor may also supplement with other resources at his/her discretion.

Study Guide

This Study Guide is intended to make it possible for you to work independently in ABE. You may be able to work on your own for certain periods of time. All students doing this course in Newfoundland and Labrador use this Study Guide. Please ensure your instructor is aware of your progress in this Study Guide. Ask your instructor for assistance whenever you feel you need help.

The Study Guide is organized in two columns:

Required Work This column provides a list of all the work required to be completed for the course. Your instructor may supplement with additional items or make small changes to the required work as deemed appropriate.	Notes This column provides additional information that will help you complete the required work.
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Recommended Evaluation

Written Notes (Including all the Required Work)	10%
Assignments	30%
Tests/Quizzes	60%
Total	100%

Instructors have the discretion to make minor changes to this evaluation scheme.

Unit 1: Surface Area

Required Work	Required Notes
1. Complete Get Ready, pages 4-5.	
2. Read pages 6-8, and then complete 1-8, pages 9-10.	
3. Read page 11, and then complete 1-6, page 12.	Define rectangular prism, net, triangular prism and surface area, cylinder, diameter and radius.
4. Complete 1-8, pages 13-14.	
5. Read pages 15-18, and then complete 1-7, pages 19-20.	
6. Read page 21, and then complete 1-9, pages 22-23.	
7. Complete 1-7, page 24.	
8. Read page 27, and then complete 1-6, pages 28-29.	
9. Read page 30, and then complete 1-5, pages 31-32.	Define slant height.
10. Read page 33, and then complete 1-5, pages 34-35.	Define square based pyramid.
11. Read page 36, and then complete 1-6, page 37.	
12. Complete 1-11, pages 38-39.	

Unit 1: Surface Area

Required Work	Required Notes
13. Read pages 43-44, and then complete 1-6, page 45.	Define cone.
14. Read page 46, and then complete 1-5, pages 47-48.	Define sphere.
15. Complete 1-6, pages 48-49.	
16. Complete Skill Check, pages 50-51.	
17. Assignment #1: Complete Test Yourself, pages 52-53.	This assignment will be graded and is part of the course evaluation.
18. Test #1: Your instructor will give you Test #1.	

Unit 2: Drawing and Design

Required Work	Required Notes
1. Complete Get Ready, pages 58-59.	
2. Read pages 62-63, and then complete 1-7, pages 64-65.	Define scale and scale drawing.
3. Read pages 66-67, and then complete 1-7, pages 68-69.	
4. Complete 1-7, pages 70-71.	
5. Read pages 72-75, and then complete 1-10, pages 76-77.	Define orthographic drawing. <i>The Geometer's Sketchpad</i> is available online.
6. Read pages 78-80, and then complete 1-6, page 81.	Define isometric drawing.
7. Complete 1-8, pages 82-83.	
8. Read pages 86-87, and then complete 1-7, pages 88-89.	
9. Read pages 91-92, and then complete 1-6, pages 93-94.	Define exploded view diagram.
10. Complete 1-6, page 95.	
11. Complete Skill Check, pages 96-97.	
12. Assignment #2: Complete Test Yourself, pages 98-99.	This assignment will be graded and is part of the course evaluation.

Unit 2: Drawing and Design

Required Work	Required Notes
13. Test #2: Your instructor will give you Test #2.	

Unit 3: Volume and Capacity

Required Work	Required Notes
1. Complete Get Ready, pages 104-105.	
2. Read pages 108-109, and then complete 1-14, pages 110-111.	Define Volume.
3. Read pages 112-113, and then complete 1-7, pages 114-115.	
4. Complete 1-10, pages 116-117.	
5. Read pages 118-120, and then complete 1-9, pages 121-122.	Define capacity.
6. Read page 123, and then complete 1-3, page 124.	
7. Complete 1-9, pages 126-127.	
8. Read page 130, and then complete 1-11. Pages 131-132.	
9. Read page 133, and then complete 1-7, pages 134-135.	
10. Complete 1-6, page 136.	
11. Read pages 138-139, and then complete 1-7, pages 140-141.	
12. Complete 1-7, pages 142-143.	
13. Complete Skill Check, pages 144-145.	

Unit 3: Volume and Capacity

Required Work	Required Notes
<p>14. Assignment #3: Complete Test Yourself, pages 146-147.</p> <p>15. Test #3: Your instructor will give you Test #3.</p> <p>16. Final Exam: Your instructor will give you the Final Exam on the entire course.</p>	<p>This assignment will be graded and is part of the course evaluation.</p>