

Rationale:

The Workplace Mathematics 10 program is designed to prepare you for the mathematical understandings and critical-thinking skills required for successful entry into the work force and the majority of trades, and prepares you for Workplace Mathematics 11.

Material Covered:

The Workplace Mathematics course is divided into four main sections:

Money and Graphs

- Earning money
- Using graphs

Measurement

- Metric and Imperial measurements
- Surface area
- Volume

Angles and Trigonometry

- Angles
- Trigonometry

Statistics and Probability

- Central tendency
- Experimental probability

Textbook:

The course uses the workbook texts

Mathematics for Apprenticeship and Workplace 10. (ISBN 978-0-17-650271-3, Nelson)

Mathematics for Apprenticeship and Workplace 11. (ISBN 978-0-17-650416-8, Nelson)

Notebook:

Your notebook should be neatly organized, as this will help you study for tests. Label the unit and topic headings clearly at the top of the page. Answer questions fully, so that the information makes sense and can be used later for studying. Show which page the information comes from so you can look it up again easily.

Grading:

This course works on a mastery system. You must pass the mastery tests in each unit to the 80% level before you can go on. In addition, there are cumulative tests from time to time. These are tests you can only take once, so studying before them is essential to do well. Your final class mark for the course is based 60% on the mastery unit tests and 40% on the cumulative tests.

Goal:

The goal of this unit is learn of the ways income is earned and to calculate the ways income is paid.

Objectives:

By the end of this unit you should be able to:

- Identify ways of earning income
- Calculate hourly wages, including overtime
- Calculate commission income
- Calculate piecework income
- Calculate net income

What to Do in this Unit:

- This Unit uses **Chapter 1** in the *Mathematics for Apprenticeship and Workplace 10* workbook.
- Read and follow the example problems at the beginning of each section, then do the practice problems listed for each section in the table below. Be sure to tick off each section as you complete it.

Chapter 1		
	Getting Started	All questions
	1.1	All questions
	1.2	All questions
	1.3	All questions
	1.4	All questions
	Mid-Chapter Review	All questions
	1.5	Omit!
	1.6	All questions
	1.7	All questions
	1.8	All questions
	1.9	Omit!
	Chapter Review	All questions

- When you are ready ask your teacher for the Unit 1 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

Goal:

The goal of this unit is to improve your skills working with and interpreting graphs.

Objectives:

By the end of this unit you should be able to:

- Create bar, histogram, line, and circle graphs using manual and technological methods.
- Interpret bar, histogram, line, and circle graphs.

What to Do in this Unit:

- This Unit uses **Chapter 2** in the *Mathematics for Apprenticeship and Workplace 11* workbook.
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

Chapter 2		
	Getting Started	All questions
	2.1	All questions
	2.2	All questions
	2.3	All questions
	2.4	Omit!
	Mid-Chapter Review	All questions
	2.5	All questions
	2.6	All questions
	2.7	All questions
	Chapter Review	All questions

- When you are ready ask your teacher for the Unit 2 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.
- Go over your work from Units 1 and 2 in preparation for Cumulative Test #1. When you are ready to write it, ask your teacher. Remember, this test is one chance only, so do your best.

Goal:

The goal of this unit is to increase your skills working with linear measurements in the metric and Imperial systems.

Objectives:

By the end of this unit you should be able to:

- Use Imperial and metric units for length
- Estimate and measure length
- Determine the midpoint of a line
- Express Imperial units as metric
- Express metric units for Imperial

What to Do in this Unit:

- This Unit uses **Chapter 2** in the *Mathematics for Apprenticeship and Workplace 10* workbook.
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

Chapter 2		
	Getting Started	All questions
	2.1	All questions
	2.2	All questions
	2.3	All questions
	Mid-Chapter Review	All questions
	2.4	All questions
	2.5	All questions
	2.6	Omit!
	2.7	All questions
	Chapter Review	All questions

- When you are ready ask your teacher for the Unit 3 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

Goal:

The goal of this unit is to increase your skills with using nets and calculating surface area.

Objectives:

By the end of this unit you should be able to:

- Relate nets to surface area.
- Calculate the surface area of prisms, cylinders, pyramids, cones, and spheres.
- Estimate surface area.
- Understand how dimension changes affect surface area.

What to Do in this Unit:

- This Unit uses **Chapter 3** in the *Mathematics for Apprenticeship and Workplace 11* workbook.
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

Chapter 3		
	Getting Started	All questions
	3.1	All questions
	3.2	All questions
	3.3	All questions
	Mid-Chapter Review	All questions
	3.4	All questions
	3.5	All questions
	3.6	All questions
	3.7	Omit!
	Chapter Review	All questions

- When you are ready ask your teacher for the Unit 4 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

Goal:

The goal of this unit is to increase your skills at calculating the volume and capacity of various geometric shapes.

Objectives:

By the end of this unit you should be able to:

- Calculate the volume of prisms, cylinders, pyramids, cones, and spheres.
- Calculate the volume of composite objects.
- Estimate volume.
- Understand how dimension changes affect volume.
- Determine capacity, and solve capacity problems.
- Estimate capacity.

What to Do in this Unit:

- This Unit uses **Chapter 4** in the *Mathematics for Apprenticeship and Workplace 11* workbook.
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

Chapter 4		
	Getting Started	All questions
	4.1	All questions
	4.2	All questions
	4.3	All questions
	4.4	All questions
	4.5	All questions
	Mid-Chapter Review	All questions
	4.6	All questions
	4.7	Omit!
	4.8	All questions
	4.9	All questions
	4.10	All questions

- When you are ready, ask your teacher for the Unit 5 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.
- Go over your work from Units 3—5 in preparation for Cumulative Test #2. When you are ready to write it, ask your teacher. Remember, this test is one chance only, so do your best.

Goal:

The goal of this unit is to increase your skills with angles.

Objectives:

By the end of this unit you should be able to:

- Estimate, measure, and describe angles
- Bisect and replicate angles
- Classify lines and angles
- Understand the relationships between parallel lines and transversals
- Calculate angles

What to Do in this Unit:

- This Unit uses **Chapter 5** in the *Mathematics for Apprenticeship and Workplace 10* workbook.
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

Chapter 7		
	Getting Started	All questions
	7.1	All questions
	7.2	All questions
	7.3	All questions
	7.4	All questions
	Mid-Chapter Review	All questions
	7.5	Omit!
	7.6	All questions
	7.7	All questions
	7.8	Omit!
	Chapter Review	All questions
	Getting Started	All questions
	7.1	All questions

- When you are ready ask your teacher for the Unit 6 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

Goal:

The goal of this unit is to increase your skills with the Pythagorean Theorem and trigonometry.

Objectives:

By the end of this unit you should be able to:

- Use the Pythagorean Theorem to determine side lengths of right angle triangles
- Define the sine (sin), cosine (cos) and tangent (tan) ratios
- Use the trigonometric ratios to determine the side lengths of right angle triangles
- Use the trigonometric ratios to determine the measure of angles within right angle triangles
- Solve problems that involve right triangles and trigonometric ratios

What to Do in this Unit:

- This Unit uses **Chapter 8** in the *Mathematics for Apprenticeship and Workplace 10* workbook.
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

Chapter 8		
	Getting Started	All questions
	8.1	All questions
	8.2	All questions
	8.3	All questions
	Mid-Chapter Review	All questions
	8.4	All questions
	8.5	All questions
	8.6	All questions
	8.7	All questions
	8.8	Omit!
	Chapter Review	All questions

- When you are ready ask your teacher for the Unit 7 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.
- Go over your work from Units 6—7 in preparation for Cumulative Test #3. When you are ready to write it, ask your teacher. Remember, this test is one chance only, so do your best.

Goal:

The goal of this unit is to increase your skills with calculating and using measures of central tendency.

Objectives:

By the end of this unit you should be able to:

- Describe when you would use mean, median, or mode.
- Define what an outlier is in a set of values.
- Calculate the mean for a set of data.
- Calculate the median for a set of data.
- Calculate the mode for a set of data.

What to Do in this Unit:

- This Unit doesn't use either textbook.
- Ask your teacher for the Unit 8 Worksheet and do all the practice problems there.

- When you are ready ask your teacher for the Unit 8 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

Goal:

The goal of this unit is to increase your skills with probability.

Objectives:

By the end of this unit you should be able to:

- Express probabilities
- Make predictions
- Compare probability and odds
- Calculate theoretical and experimental probability
- Find expected values

What to Do in this Unit:

- This Unit doesn't use either textbook.
- Ask your teacher for the Unit 9 Worksheet and do all the practice problems there.
- When you are ready ask your teacher for the Unit 9 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.
- Go over your work from Units 8—9 in preparation for Cumulative Test #4. When you are ready to write it, ask your teacher. Remember, this test is one chance only, so do your best.
- **Congratulations! You've finished Math 10 Workplace!**