

MATERIAL COVERED:

The Math 8 WNCP course follows the Western and Northern Canadian Protocol, and is divided into two major parts:

1. Number Operations
 - Square roots and the Pythagorean Theorem
 - Integers
 - Fractions
 - Percent, ratio, and rate
2. Graphing, Probability & Geometry
 - Linear equations and graphing
 - Data analysis and probability
 - Measuring prisms and cylinders
 - Tessellations

TEXTBOOK:

The course uses the following text: *Math Links*, McGraw-Hill, (ISBN 0-07-097338-5)

EVALUATION:

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 take only once, so studying before them is essential to doing well. Your final mark for the course is based 60% on mastery tests and 40% on cumulative tests.

GOAL

The goal of this unit is to become familiar with square roots and the Pythagorean Theorem.

OBJECTIVES

A while completing this unit you'll investigate the following topics and practice working with:

- Determining the square of the number.
- Determining the square root of a perfect square.
- Determining the approximate square of a non-perfect square root.
- Developing and applying the Pythagorean Theorem.

WHAT TO DO IN THIS UNIT

1. This unit uses **Chapter 3** in your textbook.
2. Read and follow the example problems at the beginning of each section in the table below, then do the practice problems listed. Be sure to check off each section as you complete it.

✓	Chapter	Practice by doing the following questions:
	3.1	p. 85 #5–19, 22, 24
	3.2	p. 92 #4–6, 8–15, 17, 21
	3.3	p. 99 #4–11, 13, 15, 16
	3.4	p. 104 #3–11, 13, 15
	3.5	p. 110 #3–8, 10–13
	Review	p. 112 #1–11, 12–16

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

GOAL

The goal of this unit is to increase your skills with integers and integer operations.

OBJECTIVES

While completing this unit you'll investigate the following topics and practice working with:

- Multiplying and dividing integers.
- Using the proper order of operations with integers.
- Solving problems involving integers.

WHAT TO DO IN THIS UNIT

1. This unit uses **Chapter 8** in your textbook.
2. Read and follow the example problems at the beginning of each section in the table below, then do the practice problems listed. Be sure to check off each section as you complete it.

✓	Chapter	Practice by doing the following questions:
	8.1	p. 291 #5– 11, 13–18
	8.2	p. 297 #4–14, 16, 17, 19–21, 26
	8.3	p. 304 #3–11, 14, 16
	8.4	p. 310 #5–13, 15, 18
	8.5	p. 315 #4–9, 11–15, 18, 20, 23
	Review	p. 318 #1–9, 11, 13, 15, 17, 20

3. When you are ready, ask your teacher for the Unit 2 Test. Remember, you must get 80% to pass, so studying hard is essential.

GOAL

The goal of this unit is to increase your skills in completing operations with fractions.

OBJECTIVES

While completing this unit you'll investigate the following topics and practice working with:

- Estimating the products and quotients of fractions and mixed numbers.
- Multiplying and dividing fractions by whole numbers or other fractions.
- Multiplying and dividing mixed numbers.
- Using the proper order of operations when dealing with fractions.

WHAT TO DO IN THIS UNIT

1. This unit uses **Chapter 6** in your textbook.
2. Read and follow the example problems at the beginning of each section in the table below, then do the practice problems listed. Be sure to check off each section as you complete it.

✓	Chapter	Practice by doing the following questions:
	6.1	p. 202 #4–9, 11, 12, 15, 17
	6.2	p. 208 #4, 5, 7–12
	6.3	p. 214 #3–11, 13–15
	6.4	p. 220 #4–12, 14–16, 20
	6.5	p. 227 #5–13, 15–17, 20, 23
	6.6	p. 234 #4–13
	Review	p. 236 #1–3, 6–11, 13, 15, 20, 24

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

GOAL

The goal of this unit is to increase your skills with percent, ratio, and rate problems.

OBJECTIVES

While completing this unit you'll investigate the following topics and practice working with:

- Solving problems involving percents greater than or equal to 0%.
- Solving problems involving ratios.
- Solving problems involving rates.

WHAT TO DO IN THIS UNIT

1. This unit uses **Chapters 4 & 2** in your textbook.
2. Read and follow the example problems at the beginning of each section in the table below, then do the practice problems listed. Be sure to check off each section as you complete it.

✓	Chapter	Practice by doing the following questions:
	4.1	p. 128 #4–9, 11–14
	4.2	p. 135 #4–14, 16, 18–21
	4.3	p. 142 #3–9, 11–14, 16
	4.4	p. 148 #4–14
	2.1	p. 51 #5–15, 17, 20
	2.2	p. 60 #4–12, 14, 17
	2.3	p. 67 #4–6, 8–11, 14, 16–20, 22
	Review	p. 151 #1–3, 6, 9, 11, 12, 16
	Review	p. 70 #1–6, 9, 11, 13, 15, 16

3. When you are ready, ask your teacher for the Unit 4 Test. Remember, you must get 80% to pass, so studying hard is essential.
4. Review your work from Units 1–4 in preparation for Cumulative Test #1. Ask your teacher for it when you are ready. You may only write it once, so study hard in order to do a good job on it.

GOAL

The goal of this unit is to develop your skills in solving and graphing linear equations.

OBJECTIVES

While completing this unit you'll investigate the following topics and practice working with:

- Modelling and solving problems using linear equations.
- Solving equations using models, pictures, and symbols.
- Graphing and analyzing two-variable linear relations.

WHAT TO DO IN THIS UNIT

1. This unit uses **Chapter 6** in your textbook.
2. Read and follow the example problems at the beginning of each section in the table below, then do the practice problems listed. Be sure to check off each section as you complete it.

✓	Chapter	Practice by doing the following questions:
	9.1	p. 337 #4–10, 12–17
	9.2	p. 348 #4–10, 13, 16, 18, 20
	9.3	p. 357 #5–12, 14, 16, 17, 22
	10.1	p. 376 #5–8, 11–20, 22, 26
	10.2	p. 385 #3–7, 9–14, 17
	10.3	p. 392 #4–8, 10–14, 16
	10.4	p. 398 #4–10, 12, 14
	Review	p. 360 #1–8, 13, 14
	Review	p. 400 #1–10, 13–15, 17, 18, 21

3. When you are ready, ask your teacher for the Unit 5 Test. Remember, you must get 80% to pass, so studying hard is essential.

GOAL

The goal of this unit is to increase your skills with data analysis and calculating probabilities.

OBJECTIVES

While completing this unit you'll investigate the following topics and practice working with:

- Critiquing ways in which data is presented.
- Solving problems that involve the probability of independent events.

WHAT TO DO IN THIS UNIT

1. This unit uses **Chapter 7** in your textbook.
2. Read and follow the example problems at the beginning of each section in the table below, then do the practice problems listed. Be sure to check off each section as you complete it.

✓	Chapter	Practice by doing the following questions:
	1.1	p. 13 #4–10, 12–14
	1.2	p. 23 #4–10, 12–16, 19
	1.3	p. 32 #4–8, 10–12
	11.1	p. 416 #3–10, 12
	11.2	p. 423 #3–10, 13, 15, 16
	11.3	p. 432 #4–7, 9–12, 14, 16
	Review	p. 36 #1–6, 8–10, 12
	Review	p. 436 #1–10, 12, 15

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

GOAL

The goal of this unit is to increase your skills with measuring and visualizing prisms and cylinders.

OBJECTIVES

While completing this unit you'll investigate the following topics and practice working with:

- Drawing and constructing nets of 3-D objects.
- Determining the surface area of prisms and cylinders.
- Determining the volume of prisms and cylinders.
- Solving basic problems involving prisms and cylinders.

WHAT TO DO IN THIS UNIT

1. This unit uses **Chapters 5 & 7** in your textbook.
2. Read and follow the example problems at the beginning of each section in the table below, then do the practice problems listed. Be sure to check off each section as you complete it.

✓	Chapter	Practice by doing the following questions:
	5.2	p. 173 #3–7, 9, 12
	5.3	p. 180 #3–8, 10, 11, 13
	5.4	p. 186 #3–6, 8–11
	7.1	p. 250 #3–7, 10–13
	7.2	p. 258 #4–12, 15, 17, 19, 20, 22
	7.3	p. 265 #4–9, 11–14
	7.4	p. 273 #3–9, 11, 12, 16–18
	Review	p. 188 #10, 11, 13–19
	Review	p. 276 #1–12, 14–16, 19

3. When you are ready, ask your teacher for the Unit 7 Test. Remember, you must get 80% to pass, so studying hard is essential.

GOAL

The goal of this unit is to increase your skills drawing different views of 3-D objects and tessellations.

OBJECTIVES

While completing this unit you'll investigate the following topics and practice working with:

- Recognizing and drawing different views of objects.
- Identifying shapes that will tessellate.
- Creating tessellations using transformations.
- Identifying tessellations in the environment.

WHAT TO DO IN THIS UNIT

1. This unit uses **Chapters 5 & 12** in your textbook.
2. Read and follow the example problems at the beginning of each section in the table below, then do the practice problems listed. Be sure to check off each section as you complete it.

✓	Chapter	Practice by doing the following questions:
	5.1	p. 168 #3–7, 9
	12.1	p. 450 #4–6, 10
	12.2	p. 455 #3–6, 8, 9
	12.3	p. 459 #3, 4, 8, 9
	12.4	p. 464 #4–7, 9
	Review	p. 188 #7, 8
	Review	p. 466 #1–6, 8, 12

3. When you are ready, ask your teacher for the Unit 8 Test. Remember, you must get 80% to pass, so studying hard is essential.
4. Review your work from Units 5–8 in preparation for Cumulative Test #2. Ask your teacher for it when you are ready. You may only write it once, so study hard in order to do a good job on it.

Congratulations! You've finished Math 8!