Material Covered:

The Mathematics course is divided into two main sections:

Number Operations
- Square Roots, Perfect Cubes, Cube Roots and the Pythagorean Theorem
- Operations and Fractions
- Percents, Ratios and Rates

Analyzing Data, Linear Relationships, and Finances
- Linear Equations and Graphing
- Data Analysis and Probability
- Measuring Prisms and Cylinders
- Drawing 3D Objects
- Financial Literacy

Textbook:

The course uses the textbook: *Math Makes Sense 8,* Pearson, (ISBN 0-32-149651-5).

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 to become familiar with perfect squares, perfect cubes, square and cube roots, and the Pythagorean Theorem.

Objectives

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

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

What to Do in this Unit

- This unit uses **Chapter 1** in your textbook and the Unit 1 Worksheet.
- Ask your teacher for the **Unit 1 Worksheet**.
- 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		
	1.1	p.8 #4 – 12, 15, 18, 19, 21
	1.2	p.15 #5 – 16, 19, 22
	1.3	p.20 #3 – 8, 11, 12
	1.4	p.25 #4 – 6, 8 – 14, 16, 19, 23
	1.5	p.34 #3 – 9, 13 – 14
	1.6	p.43 #3, 4, 6 – 10, 12, 14
	1.7	p.49 #4 – 11, 13, 15, 17, 19, 21, 22
	Review	p.54 #2, 4– 7, 10 – 14, 18 – 22, 25, 27
	Unit 1 Worksheet	Complete the Unit 1 Worksheet

- 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 increase your skills in completing operations with fractions.

Objectives

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

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

What to Do in this Unit

- This unit uses **Chapter 3** in your textbook and the Unit 2 Worksheet..
- Ask your teacher for the **Unit 2 Worksheet.**
- 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 3		
	Unit 2 Worksheet	Complete the Unit 2 Worksheet
	3.1	p. 109 #5 – 11, 14 – 17, 20, 22
	3.2	p. 113 #5, 6, 8, 10 – 13, 15, 16
	3.3	p. 118 #4 – 9, 11, 12, 15, 18
	3.4	p. 125 #4 – 9, 11 – 14, 16, 17, 19
	3.5	p. 132 #3 – 6, 8 – 11, 14
	3.6	p. 139 #4 – 12, 14, 16
	3.7	p. 145 #4 – 13
	3.8	p. 151 #3 – 10, 12, 14
	3.9	p. 155 #4 – 10
	Review	p. 159 #1, 3– 7, 11, 12, 14, 15, 19, 23, 28, 29

- 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.

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 and rates.

What to Do in this Unit

- This unit uses **Chapter 5** in your textbook.
- 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 5		
	5.1	p.230 #6–16, 19–21
	5.2	p.246 #4–8, 10–19
	5.3	p.252 #3–11, 13–17, 19, 20
	5.4	p.260 #4–11, 13–18, 20
	5.5	p.266 #4–9, 11, 14, 16
	5.6	p.274 #5–10, 12, 13, 15–17
	5.7	p.284 #4–13, 15–17, 19
	5.8	p.291 #4–10, 12–16, 18
	5.9	p.298 #4–16, 18, 19
	5.10	p.303 #5–14, 16, 18
	Review	p.308 #1–7, 9, 10, 12, 15, 18, 20, 23, 27, 29, 32

- 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.

- Go over your work from Units 1, 2, & 3 in preparation for Cumulative Test #1. When you are ready to write it, ask your teacher. Remember, this test is one chance only, so study hard and do your best.

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

- This unit uses **Chapter 6** in your textbook.
- 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 6		
	6.1	p.324 #5–9, 11–15
	6.2	p.331 #5–13
	6.3	p.336 #3–13
	6.4	p.342 #4, 7, 8, 11–16, 18, 19
	6.5	p.347 #4–15, 17
	6.6	p.356 #4–12, 14
	6.7	p.363 #4–9, 11, 12, 14
	Review	p.371 #1, 3–8, 10–19, 21, 22

- 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 develop your skills in analyzing data and working with 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.
- Measures of Central Tendency

What to Do in this Unit

- This unit uses **Chapter 7** in your textbook and the Unit 5 Worksheet.
- Ask your teacher for the **Unit 5 Worksheet.**
- 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 7		
	7.1	p.387 #3–12
	7.2	p.399 #3–11, 14–17
	7.3	p.411 #3–13, 15
	7.4	p.420 #4–11, 13, 16
	Review	p.424 #1–10, 13, 14
	Worksheet	Complete Unit 5 Worksheet

- 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.

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

- This unit uses **Chapter 4** in your textbook.

- 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 4		
	4.1	p.174 #4–11, 14
	4.2	p.180 #3–7, 9, 11
	4.3	p.186 #4–7, 9–11, 13, 14–16
	4.4	p.191 #4–11, 14, 15
	4.5	p.198 #4–7, 9–12, 14, 17
	4.6	p.205 #3–8, 10–14
	4.7	p.212 #4–6, 8–12, 15, 16
	4.8	p.218 #4–6, 8–13, 15, 17
	Review	p.223 #1–4, 6, 9–12, 14, 15

- 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 geometry skills drawing 3D figures.

Objectives

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

- Recognizing and drawing different views of 3D objects.
- Sketching front, top, left and right side views of objects.

What to Do in this Unit

- This unit uses **Chapter 8** in your textbook.

- 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 8		
	8.1	p.437 #4-6, 8-10, 12-14
	8.2	p.444 #3-8, 11

- 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.

Goal
The goal of this unit is to increase your financial literacy skills.

Objectives
While completing this unit you'll investigate the following topics and practice working with:
- Calculating the unit price.
- Determining the best buy by comparing unit prices.
- Using coupons and rebates to reduce the final cost of a purchase.

What to Do in this Unit
- Ask your teacher for the Unit 8 Worksheet. Read the explanations and examples and do the practice problems in it.

- 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.

- Go over your work from Units 4-8 in preparation for Cumulative Test #2. When you are ready to write it, ask your teacher. Remember, this test is one chance only, so study hard and do your best.

- **Congratulations! You've finished Math 8!**