December 1, 2001

Colleagues:

The document that follows was originally designed to be printed in landscape orientation at 100% size. I give one of these outlines to each student. We are each on a strict Xerox "clicks" budget at my school so I decided to save some clicks by printing the document in portrait orientation at 75% size. One other advantage of this portrait orientation is that the outline can be read without turning your binder sideways. This size is still readable, but only just. If you don't have to conserve clicks and want to print at full size, but cannot manipulate this file into that shape, you can email me and I will send you my full size version (gzak@pacificcoast.net). I have set the headers to not appear on the first page of this document, so you may want to adjust that parameter if you tweak this and use it.

This is the outline I am using at Reynolds Secondary School in Victoria for the Ma8 course. We are a semestered 8-12 school. Typically our first semester has about 88 or 89 useable class periods and our second semester has about 84 or 85 (not counting early dismissals for parent teacher interviews, FSA tests, accreditation surveys, assemblies, course selection classes, suicide awareness classes, careers day, earthquake drills, fire drills, false alarms, assemblies, report card distribution, yearbook distribution, textbook distribution, textbook collection, fees collection, locker allocation, locker inspection, locker cleanout, semester turnaround day, or the first 2 days of school in September as instructional time for mathematic). Math classes meet once each day for 80 minutes on Monday to Thursday and for 60 minutes on Friday.

In general I do one row of the outline per day. I usually have to double up on some rows, but exactly where really depends on the nature of the class, which varies greatly from year to year. I also use puzzle sheets from "Pre-Algebra with Pizzazz" and "Algebra with Pizzazz" by Steve and Janis Marcy, available from most educational supply houses. I also use "Geometer's SketchPad" software with some students.

Feel free to transmogrify any aspect of this outline.

Enjoy!

Gary Zak

√	Section, Title, & Topics	Assignment	Date	Score

Math 8 - Outline of Assignments

N.B. ("nota bena", Latin for "note well")

The chart that follows outlines the **minimum** assignments that you should do to get to the level of mathematical understanding that the Ministry of Education says you should have by the end of grade 8. These are the assignments that I will count for your letter grades. There is much, much more in the text than these minimums, however. I strongly urge you, if you have the time in class or at home to read and try as much as you can of the other stuff, usually entitled "Getting Started", "Learning Together", Technology", "Connecting...", etc.

Do not start the questions until you have understood the ideas from having listened in class and read the text, including the examples. Your job is to understand the math ideas involved there. You should do the problems to see how well you understood the ideas. Ask for the teacher's help or a desk partner's help when an example is unclear, not just when you are stuck on a question.

Assignments are due the period following the lesson date. In many cases you will need to ask questions the following period about the previous period's assignment. Therefore there will be no late penalty. However, if you leave completion of assignments longer than a couple of days, you will just keep falling further and further behind and get discouraged and fail and lose the chance to make big bucks as an adult mathematician.

Use the "√" column to keep track of completed work. Enter your assignment mark and test scores as you get your work back so you will have a record of marks from which you can calculate your grade at any time.

Always read the text section noted in the "Section, Topic, and Title" column before starting the questions. When there is a range of numbers specified in the "Assignments" column (eg. #1 - 12), you are to do the **even numbered questions** in that range (for the example just mentioned, you would do #2, 4, 6, 8, 10, 12) unless otherwise specified. At the end of most assignments there is a list of "Challenge" questions, marked with a "C:". These are questions that the authors of the text think are the toughest. You do not have to do these **unless they are listed in the original assignment**. Students who like a challenge should try **all** of the "Challenge" questions, however.

The optional **BONUS** assignments are listed at the end of this outline.

Checklist for getting full marks on assignments:

first and last name in top right hand corner of top page?	full description (assignment, page, and question numbers) at top?
done readably on non-ripped looseleaf paper?	question numbers in margins? two columns maximum?
all pages in order? stapled together neatly?	multi-step questions in style of examples in text or your notes?
multi-step work shown in same area of page as answer?	no significant erasures?
all questions marked with a tick, cross, or question mark?	all questions finally corrected and completed?

Abbreviations you could get on an assignment:

N.C.Y.	no credit yet - find out what I'm giving you a chance to fix, fix it, and hand it in again for credit
S.A.W.	show all work - for questions that have more than one step I expect you to show how you got your answer. If you used a calculator, fine, but show me what you did on the calculator by labelling the numbers you write down. If you used a graphing calculator, show a sketch and window sizes, and label the curves.
M.C.R.	mark, correct, and resubmit
N.F.	not finished - I may just give you a low mark or I may hand it back and give you a chance to finish it
S.N.	section number - you didn't note what chapter and section it is

√	Section, Title, & Topics	Assignment		Date	Score
	Chapter 1 - Number Connections				
	1.1 Exponents	p.4 #2 - 36, 40, 44	C: #41 - 43		
	1.2 Integral Exponents	p.7 #1 - 20			
	1.4 Scientific Notation: Large Numbers 1.5 Scientific Notation: Small Numbers	p.10 #1 - 32 p.11 #1 - 30			
	1.6 Rational Numbers	p.16 #1 - 50, 53, 54	C: #57 - 59		
	1.7 Problem Solving: Use a Data Bank	p.18 #1 - 14			
	1.8 Ratios 1.9 Percents	p.20 #1 - 20 p.25 #2 - 36, 40	 C: #40		
	1.10 Ratios, Fractions, Decimals, and Percents	p.27 #1 - 34	C: #35, 36		
	1.11 Squares and Square Roots	p.31 #1 -26, 17, 28	C: #29 -31		
	1.12 Problem Solving: Sequencing the Operations	p.35 #1 - 12			
	Review	p.36 #2 - 82			
	Test on Chapter 1 (half a period)				
	Chapter 2 -Operations with Rational Numbers				
	2.1 Problem Solving: Solve a Simpler Problem	p.45 #1 - 12			
	2.2 Adding Fractions 2.3 Subtracting Fractions	p.49 #1 - 32 (all) p.51 #1 - 32 (all)	C: #31, 33 C: #30 - 32		
	2.4 Problem Solving: Work Backward	p.53 #2 - 10			
	2.5 Multiplying Fractions	p.57 #1 - 36 (all)	C: #36 - 40		
	2.6 Dividing Fractions	p.59 #1 - 24 (all)	C: #21 - 23		
	2.7 Multiplying Rational Numbers 2.8 Dividing Rational Numbers	p.64 #1 - 30 (all) p.67 #1 - 36 (all)			
	2.9 Adding and Subtracting Rational Numbers	p.70 #1 - 36 (all), 32 - 38	C: #39		
	2.10 Problem Solving: Make Assumptions	p.72 #2 - 10	C: #9, 10		
	Review	p.74 #1 - 64			
	Test on Chapter 2 (half a period)				
	Chapter 3 - Ratio and Rate				
	3.1 Problem Solving: Guess and Check	p.83 #2 - 16	C: #16		
	3.2 Equivalent Ratios and Proportion	p.85 #1 - 34			
	3.3 Problem Solving: Draw and Read Graphs	p.89 #1 - 8 (all)			
	3.4 Rate 3.5 Comparing Unit Rates and Unit Prices	p.91 #1 - 24 p.93 #1 - 30	 C: #23, 24		
	3.6 Scale Drawings 3.7 Maps and Scales	p.99 #1 - 24 p.101 #1 - 10			
	3.8 Problem Solving: Use a Diagram	p.105 #1 - 12			
	Review	p.106 #1 - 39 (all)			
	Test on Chapter 3 (half a period)				
	Chapter 4 - Percent				
	4.1 Problem Solving: Use a Formula	p.115 #1 - 6	C: #5		
	4.2 Percent of a Number 4.3 Estimating with Percent: *Mental Math*	p.117 #1 34 (all), 36 p.118 #1 - 20 (all)	C: #29 - 34		
	4.4 Discount and Sale Price 4.5 PST and GST	p.119 #1 - 10 (all) p.120 #1 - 12 (all)	C: #11		
	4.6 Commission	p.121 #1 - 5 (all)			
	4.7 Problem Solving: Use Logic	p.123 #1 - 10	C: #9, 10		
	4.8 Finding the Percent 4.9 100% of a Number	p.127 #1 - 34 p.129 #1 - 19 (all), 20, 22, 24	C: #34 - 36 C: #23, 24		
	4.10 Simple Interest 4.11 Problem Solving with Percents	p.130 #1 - 10 (all) p.133 #1 - 4 (all)	C: #10		
	4.12 Problem Solving: Use a Table	p.134 #1 - 6	C: #6		
	Review	p.138 #1 - 56 (all)			
	Test on Chapter 4 (half a period)				

√	Section, Title, & Topics	Assignment		Date	Score
	Chapter 5 - Patterns and Relations				
	5.1 Variables and Expressions 5.2 Developing and Working with Formulas	p.153 #1 - 60 p.155 #1 - 8	C: #61 - 63		
	5.3 Relations as Ordered Pairs	p.157 #1 - 24	C: #25, 26		
	5.4 Graphing Ordered Pairs	p.159 #1 - 8			
	5.5 Graphing on the Coordinate Plane	p.160 #1 - 18	C: #20		
	5.6 Graphing Relations	p.162 #1 - 16	C: #17, 18		
	Review	p.166 #1 - 50			
	Test on Chapter 5 (half a period)				
	Chapter 6 - Solving Equations				
	6.1 Writing Equations	p.175 #1 - 26	C: #31 - 35		
	6.2 Solving Equations	p.177 #1 - 40	C: #41 - 46		
	6.3. Solving Equations by Addition	p.181 #1 - 48	C: #49 - 57		
	6.4 Solving Equations by Division	p.182 #1 - 32	C: #33 - 37		
	6.5 Soving Equations by Multiplication	p.183 #1 - 26	C: #27 - 33		
	6.6 Like Terms	p.186 #1 - 16			
	6.7 The Distributive Property	p.187 #1 - 26	C: #28 - 33		
	6.8 Solving Equations in More Than One Step	p.189 #1 - 42	C: #43, 44		
	6.9 Using Equations to Sove Problems	p.191 #1 - 8			
	6.10 Equations with Rational Solutions	p.193 #1 - 39	C: #41 - 50		
	Review	p.196 #1 - 68, 71, 74, 76			
	Test on Chapter 6 (half a period)				
	Chapter 7 - Measurement				
	7.1 The Pythagorean Theorem 7.2 Using the Pythagorean Theorem	p.207 #1 - 9 (all) p.209 #1 - 9 (all)	C: #10 C: #11		
	7.3 Perimeter 7.4 Perimeters of Polygons	p.211 #8 - 18 (all) p.213 #1 - 20	C: #19 C: #19 - 21		
	7.5 Circumference of a Circle	p.217 #1 - 14 (all)	C: #14, 15		
	7.6 Area of a Rectangle and a Square 7.7 Area of a Parallelogram	p.221 #1 - 14 p.223 #1 - 12	C: #15 - 17 C: #12		
	7.8 Area of a Triangle	p.227 #4 - 16	C: #16, 17		
	7.9 Area of a Circle	p.229 #1 - 16	C: #17 -19		
	7.10 Area of Composite Figures 7.11 Working with Perimeter and Area	p.231 #1 - 6 (all), 10 p.233 #2, 4, 6	C: #11 C: #5, 6		
	Review	p.238 #1 - 32 (all)			
	Test on Chapter 7 (half a period)				
	Chapter 8 - Surface Area and Volume				
	8.1 Three Dimensional Solids 8.2 Surface Areas of Polyhedra	p.247 #1 - 13 (all) p.249 #1 - 6 (all)	C: #18 C: #7, 12		
	8.3 Volumes of Prisms 8.4 Surface Area and Volume of a Cylinder	p.253 #1 - 8 (all) p.255 #1 - 6, 9	 C: #10		
	8.5 Surface Area and Volume of Composite Shapes	p.263 #1 - 10 (all)	C: #12		
	Review	p.264 #1 - 20 (all)			
	Test on Chapter 8 (half a period)				
	Chapter 9 - Geometry				
	9.1 Angle Relationships	p.275 #1 - 16 (all)	C: #21, 22		
	9.2 Parallel and Perpendicular Lines	p.277 #1 - 20 (all)	C: #21		
	9.3 Lines of Symmetry	p.279 #1 - 18	C: #20, 21		
	9.4 Triangles and Angles	p.281 #1 - 12 (all)	C: #17, 18		
	9.5 Polygons	p.285 #1 - 16 (all)	C: #19		
	9.6 Using Angle Relationships	p.289 #1 - 20 (all)			
	Review	p.304 #1 - 26 (all)			

√	Section, Title, & Topics	Assignment	Date	Score
	Test on Chapter 9 (half a period)			
	Chapter 10 - Statistics and Probability			
	10.1 Collecting Data	p.313 #1 - 4 (all)		
	10.2 Making Predictions	p.315 #1 - 5 (all)		
	10.3 Reading and Drawing Bar Graphs 10.4 Reading and Drawing Broken-line Graphs	p.321 #1 - 4 (all) p.323 #1 - 5 (all)		
	10.5 Reading and Drawing Circle Graphs 10.6 Reading and Drawing Pictographs	p.325 #1 - 5 (all) p.327 #1 - 4 (all)		
	10.7 Mean, Median, Mode, and Range	p.334 #1 - 17 (all) C: #23, 24		
	10.8 Stem-and-leaf Plots	p.337 #1 - 4 (all)		
	10.9 Box-and-whisker Plots	p.339 #1 - 3 (all)		
	10.10 Possible Outcomes 10.11 Probability	p.341 #1 - 8 (all) p.343 #1 - 6 (all)		
	10.12 Independent Events	p.349 #1 - 8 (all)		
	Review	p. 350 #1 - 11 (all)		
	Test on Chapter 10 (half a period)			
	Final Review	p. 142, 143, 568, 269, 354, 355		
	Final Exam			

	Bonus Assignments			
	To get bonus marks you can do the following assignments over the semester. Bonus marks will cause your overall percentage to go up, often resulting in a higher letter grade than you would normally get just from your test, assignment, and quiz scores, especially if you were very close to the higher letter grade to begin with. You must show a complete solution, not just a numerical answer to get the bonus, i.e. show how you got the answer in a way that anyone reading your paper would understand what you did and why you did it. Write enough of an explanation so that your reader knows what the activity was all about. They do not have to be done in order, but make sure you label whatever you hand in with the correct bonus number.	These are not the only possible Bonus Assignments available. All through the text, usually at the end of each chapter, there are sections called "Connecting...". I will count each of the "Activities" in these sections as a bonus assignment as well.		
	Bonus 1.	p. xi #1 - 5 (all)		
	Bonus 2.	p. xii Activity 1		
	Bonus 3.	p. xii Activity 2		
	Bonus 4.	p. xiii Activity 1		
	Bonus 5.	p. xiii Activity 2		
	Bonus 6.	p. xiii Activity 3		
	Bonus 7.	p. xiv Activity 1		
	Bonus 8.	p. xiv Activity 2		
	Bonus 9.	p. xv Activity 1		
	Bonus 10.	p. xv Activity 2		
	Bonus 11.	p. xvi Activity 1		
	Bonus 12	p. xvi Activity 2		
	Bonus 13.	p. xviii Activity 1		
	Bonus 14.	p. xviii Activity 2		
	Bonus 15.	p. xix Activity 1		
	Bonus 16.	p. xix Activity 2		
	Bonus 17.	p. xx Activity 1		
	Bonus 18.	p. xx Activity 2		
	Bonus 19.	p. xxi Activity 2		
	Bonus 20.	p. xxii Activity 1 or 2		
	Bonus 21.	p. xxiii Activity 1		
	Bonus 22.	p. xxiii Activity 2		
	Bonus 23.	p.xxiii Activity 3		

√	Section, Title, & Topics	Assignment	Date	Score