Math Resource Center STUDENT STUDY GUIDE

MTH 20 - BASIC MATH REVIEW

VARIABLE CREDIT (1, 2, or 3)

I have enrolled for _____ credits of Math 20, computer registration number (CRN)_____.

REQUIRED TEXT: <u>Basic College Mathematics</u>, 11th Edition, by Marvin Bittinger

Addison-Wesley Publishing Company + MyMathLab On-Line Access Code

SUPPLEMENTARY RESOURCES:

- 1. Get help from the tutors that are available in the MRC Tutoring Room 163.
- 2. Use the quiet study room if Room 163 is too noisy.
- 3. Check out individual math topic Videos from the Reception Counter staff.
- 4. Refer to the "Student's Solutions Manual" by Judith Penna if you get stuck.
- 5. Take Practice Tests before the graded tests. Go to the MRC Reception Counter, Room 169.

OVERVIEW OF COURSE:

Credit	Chapter and Topic	Test covers
1 st credit	Chapter 1 - Whole Numbers	Test 1: Ch 1
	Chapters 2 & 3 - Fractions & Mixed Numbers	Test 2: Ch 2 & 3
2 nd credit	Chapter 4 - Decimal Notation	Test 3: Ch 4
	Chapters 5 & 6 - Ratio, Proportion, Percent & Interest	Test 4: Ch 5 & 6
3 rd credit	Chapter 7 - Data, Graphs, and Statistics	Test 5: Ch 7
	Parts of Chapters 8 & 9 - Measurement & Geometry	Test 6: Ch 8 & 9

NOTE: In this course you must be able to ADD, SUBTRACT, MULTIPLY, and DIVIDE WITHOUT THE USE OF A CALCULATOR

CALCULATOR: Using a calculator in Math 20 is optional. We encourage you to do most of your work in this course by hand (to reinforce basic skills) THEN use a calculator to check your work. You need to provide your own scientific calculator. Several exams do not allow use of a calculator.

HINTS FOR SUCCESS and HOW TO DO YOUR HOMEWORK:

- 1. Establish a regular daily schedule for doing your math homework and stick with it.
- 2. Try to do your work in the Math Resource Center where tutor help is available when you need it.
- 3. Try to stay on schedule to meet your <u>suggested</u> "On Schedule" test dates.
- 4. Use the tutors and video tapes.
- 5. Follow the Lesson/Homework Assignment guide on the following pages.
- 6. <u>Before starting on the assigned homework</u>, study the text discussion & examples, and work margin exercises for practice.
- Neatly work homework problems on your own paper. Try to <u>do them without looking at</u> <u>examples or a solutions manual</u>. You must show each step of your solution. Then grade yourself. Try to fix your mistakes and then get tutor help or refer to the Student's Solutions Manual.
- 8. Finally, take your completed homework assignment and *Study Guide* to a tutor to verify completion and receive their stamp of approval.

HOW TO BE PREPARED & TAKE EXAMS IN THIS COURSE:

- 1. Complete your homework and check it as described above in "Hints for Success."
- 2. After all the assigned work has been checked by a tutor, we suggest you try to work the *Chapter Test* in the text without looking at any solved problems. Grade it and get help if needed. Now you are almost ready to take the graded test.
- 3. With your *tutor stamped Study Guide* go to the Reception Counter and ask for a *Practice Module Test*. Since the only difference between practice and graded tests is that your score on the practice test will not count, taking a practice test gives you a realistic, objective check of your skill level without affecting your grade for the course. Work each question on the test like you did in your homework, showing each step. You are allowed to take more than one practice test, if you so choose. When your practice test score is above 80%, you should be ready to take the graded exam.
- 4. Once you have completed Steps 1, 2, and 3 you are ready to take the *Graded Module Test*. Go to the Reception Counter, show your *Study Guide*, and check in to take the test for a grade. Relax, take your time, show your work, and demonstrate what you have learned. We want you to earn a score of 80% or better before you test on material from the next set of homework assignments.

NOTE:

Homework will receive a date stamp from a tutor only if it is done <u>neatly</u> with <u>step-by-step solutions</u> shown.

All graphing should be done using graph paper.

A PAGE OF ANSWERS WITHOUT WORK SHOWN WILL NOT BE ACCEPTED.

BEST WISHES & GOOD LUCK !!

Whole Numbers & Fractional Notation CREDIT #1:

Student Name: _____

Procedure Quiz Completed: ________(Date stamp by Tutor)

You must show sten-by-ster	solutions (not	iust a list of answe	ers) to receive (redit for your	work.
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LESSON	HOMEWORK	Date Stamp from
Chapter & Section	ASSIGNMENT	tutor when completed
Read Hints for Success on p.2 of your Study Guide		
Chapter 1 – Whole Numbers		
1.1 Standard Notation	Odd 1-45	/ /
1.2 Addition	Odd 1-31	/ /
1.3 Subtraction	Odd 1-61	/ /
1.4 Multiplication	Odd 1-49	/ /
1.5 Division	Odd 1-71	/ /
1.6 Rounding and Estimating; Order	Odd 1-81, 87 & 89	/ /
1.7 Solving Equations	Odd 1-69	/ /
1.8 Applications and Problem Solving	Odd 1-69	/ /
1.9 Exponential Notation and Order of Operations	Odd 1-81	/ /
Read <i>How to be Prepared & Take Exams</i> on p.2 of		
your Study Guide		
Ch. 1 Practice Test: score date:	Take Test #1	Suggested Test Date:
Ch. 1 Graded Test: score date:	(no calculator allowed)	
Tutor comments:		
Chapter 2 – Fraction Notation: Mult. & Div.		
2.1 Factorizations	Odd 1-69, 77-87	/ /
2.2 Divisibility	Odd 1-15, 25-37	/ /
2.3 Fractions and Fraction Notation	Odd 1-79, 83	/ /
2.4 Multiplication and Applications	Odd 1-51	/ /
2.5 Simplifying	Odd 1-65	/ /
2.6 Multiplying, Simplifying, & Applications	Odd 1-67	/ /
2.7 Division and Applications	Odd 1-59	/ /
Chapter 3 - Fraction Notation & Mixed Numerals		
3.1 Least Common Multiples	Odd 1-31, 45-59	/ /
3.2 Addition and Applications	Odd 1-59	/ /
3.3 Subtraction, Order & Applications	Odd 1-11, 25-73	/ /
3.4 Mixed Numerals	Odd 1-75	/ /
3.5 Addition & Subtraction Using Mixed Numerals	Odd 1-75	/ /
3.6 Multiplication & Division Using Mixed Numerals	Odd 1-59	/ /
3.7 Order of Operations; Estimation	Odd 1-61	/ /
Chapters 1-3 Cumulative Review, p.213	Odd 1-43	/ /
Ch 2& 3 Practice Test: score date:	Take Test #2	Suggested Test Date:
Ch 2& 3 Graded Test: scoredate:	(no calculator allowed)	
Tutor comments:		
		End of Credit #1

LESSON	HOMEWORK	Date Stamp from
Chapter & Section	ASSIGNMENT	tutor when completed
Read Study Tips on p. 9, 14, 19, 21, 29, 62, 76		
Chapter 4 – Decimal Notation		
4.1 Decimal Notation: Order & Rounding	Odd 1-101	/ /
4.2 Addition & Subtraction	Odd 1-67	/ /
4.3 Multiplication	Odd 1-71	/ /
4.4 Division	Odd 1-87	/ /
4.5 Converting from Fraction to Decimal Notation	Odd 1-95	/ /
4.6 Estimating	Odd 1-37	/ /
4.7 Applications & Problem Solving	Odd 1-75	/ /
Chapter 4 Review Exercises, start on p.287	Odd 1-71	/ /
Read Study Tips on p.96, 121, 182		
Ch 4 Practice Test: score date:	Take Test #3	Suggested Test Date:
Ch 4 Graded Test: scoredate:	(no calculator allowed)	
Tutor comments:		
Read <i>Study Tips</i> on p.234, 248, 256, 275, 299, 303,		
511, 525, 555. Chanter 5 Detic & Dropention		
Chapter 5 – Kauo & Proportion	011151	
5.1 Introduction to Ratios		
5.2 Rates & Unit Prices	$\begin{array}{c} Odd \ I\text{-}4I \\ Odd \ I \ G \end{array}$	
5.5 Proportions 5.4 Applications of Dremartians	Odd 1-07	
5.4 Applications of Proportions	Odd 1-45	
5.5 Geometric Applications	Odd 1-37	
Chapter 5 Review Exercises, start on p.340	Odd 1-29	/ /
Charter (Demont Net-time		
Chapter 6 – Percent Notation	044172	
6.1 Percent Notation	Odd 1-73	
0.2 Percent & Fraction Notation	Odd 1-93	
6.3 Solving Percent Problems Using Percent Eqns.	Odd 1-45	
6.4 Solving Percent Problems Using Proportions	Odd 1-45	
6.5 Applications of Percent	Odd 1-51	
6.6 Sales Tax, Commission, and Discount	Odd 1-55	
6. / Simple & Compound Interest	Odd 1-45	
Chapter 6 Review Exercises, start on p.412	Odd 1-29, 30, 31, 32	/ /
Ch 5& 6 Practice Test: score date:	Take Test #4	Suggested Test Date:
Ch 5& 6 Graded Test: score date:	Calculator Use OK	
Tutor comments:		
		End of Credit #2

You must show step-by-step solutions (not just a list of answers) to receive credit for your work.

CREDIT #3: Data, Graphs, & Statistics, Measurement, and Geometry

You must show step-by-step solutions (not just a list of answers) to receive credit for your work.

LESSON (Chapter/Section)	HOMEWORK	Date Stamp from	
Chapter 7 Data Granks & Statistics			
7 1 Averages Medians and Modes	Odd 1-29	/ /	
7.2 Tables and Pictographs	Odd 1-39		
7 3 Bar Graphs and Line Graphs	Odd 1-53		
7.4 Circle Graphs	Odd 1-13		
Chapters 1-7 Cumulative Review, p.465	Odd 1-9: 10: Odd 11-	, ,	
	23; All 24-37	/ /	
Ch 7 Practice Test: score date:	Take Test #5	Suggested Test Date:	
Ch 7 Graded Test: score date:	Calculator Use OK	Suggesten Test Date.	
Tutor comments:			
Chapter 8 - Measurement			
We suggest you watch the "Unit Conversion" video.			
8.1 Linear Measures: American Units	Odd 1-47	/ /	
8.2 Linear Measures: The Metric System	Odd 1-65	/ /	
8.3 Converting Between American and Metric Units	Odd 1-21, 23, 29, 31	/ /	
8.4 Weight and Mass, Medical Applications	Odd 1-73	/ /	
8.5 Capacity; Medical Applications	Odd 1-63	/ /	
8.6 Time and Temperature	Odd 1-61	/ /	
Chapter 8 Review Exercises, start on p.515	Odd 1-43	/ /	
Memorize Key Terms and Formulas, p.512			
Read <i>Study Tips</i> on p.469, 481, 528			
Chapter 9 - Geometry			
9.1 Perimeter	Odd 1-33		
9.2 Area	Odd 1-51, 57, 63, 65		
9.3 Circles	Odd 1-39	/ /	
9.6 Square Roots and the Pythagorean Theorem	Odd 1- 53, 59, 61	/ /	
Chapters 1-9 Cumulative Review, start on p.587	All 3-14, 16, 18, All		
	19-24, All 26-34	/ /	
Memorize those terms and formulas on p.576 that were			
used in your homework from Ch. 9.			
Ch 8/9 Practice Test: score date:	Take Test #6	Suggested Test Date:	
Ch 8/9 Graded Test: score date:	Calculator Use OK		
Tutor comments:		End of Credit #3	

CONGRATULATIONS!!!

You have now completed the 3 credit Math 20 Course.

Most people keep a dictionary around the house for reference. It might be a good idea for you to also keep your <u>Basic Mathematics</u> book as a reference.