

# MATH 020 - Prealgebra

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<b>MyMathLab:</b>	Higgins39063
<b>Class Time and Room Number:</b>	M/W 11:00 – 1:27pm      JM211
<b>Office Hours:</b>	M/W 1:30-2:30      JW150B

## Course Materials:

- Textbook:                    Martin-Gay, *Prealgebra*, 6<sup>th</sup> edition  
Math 020 Course-Pack
- Software:                    MyMathLab (packaged with new textbooks in JCC bookstore)
- Calculator:                    Any basic calculator is sufficient for this course. ***Please note that the calculator on your cell phone or laptop will not be permitted.***
- Other Materials:            Three Ring Binder (for the course-pack)  
Loose Leaf Paper (Three Hole Punched)  
Pencils with Erasers (not pens)  
Colored Pencils are useful

## Course Requirements

**Tests/Final Exam:** There will be three, closed book tests and a final exam. You may not use notes, but you may use a calculator after Chapter 5. Tests will cover the material covered in class and on the homework. You should make every effort to be present for every test day. However, if you must miss a test, it is your responsibility to contact me ***before the test is given in class*** to arrange for a make-up test. If you fail to make arrangements in advance of the test date/time, you will be given a zero for the test.

**Homework:** The only way to learn math is to do math: this is not a spectator sport! The graded portion of your homework in this class will be done online in a program called MyMathLab. There will be an online homework assignment corresponding to each section of the text that we will cover. You may attempt your MyMathLab homework an unlimited number of times before you submit it, as long as you complete it by its due date. That means that it is possible for you to receive full credit on each assignment as long as you are willing to put in the time and effort. The amount of homework available in MyMathLab may not always be enough for you to master every topic. If this is the case, please use the Study Plan in My Math Lab for extra practice.

When doing your homework, I would suggest the following:

Do the homework in MyMathLab. If there is a problem that gives you trouble, try these ideas:

- Use one of the help features within MyMathLab. A few of those features are:
  - Ask My Instructor: This feature emails me the exact problem you are working on, with any specific notes you want to make. I can email you back any help that I can provide. I also often bring these problems in to do at the next class session.
  - Help Me Solve This: This feature gives you step-by-step hints.
  - View An Example: This features walks you through a worked out example similar to the problem you are working on.
  - Textbook Pages: This feature brings up the precise pages in your text that deal with the topic you are working on.
  - Video/Animation: For some problems/topics there are videos or animations to view.
- Print out the problem and either bring it to class with you to ask during the Question and Answer period at the beginning of class, or bring it with you to my office during my scheduled office hours.

**Classwork:** These assignments will be completed in class, usually in groups.

**Late Work:** Homework cannot be completed after the due date. Classwork may not be made up for any reason.

**Extra Credit Policy:** There will be no opportunities for extra credit. Your grade is based on your performance in class, not on extras.

**Finance Project:** Details about this project will be given to you on a handout later in the term.

**Attendance Policy:** In order to adequately learn the material needed to pass this course students are expected to attend and participate in class. Any student that misses a total of 4 or more classes will automatically have a 1.0 as the highest grade they can achieve out of this course.

**Please Note: Successfully Completing MATH 020 Requires Both Of The Following:**

- ☆ There are three competency exams throughout this course: one each on integers, fractions, and decimals. You may use no notes or calculators on the competency exams. All students must pass all competency exams. **Any student who does not pass all competency exams will receive a grade no higher than 1.0 for the course, regardless of the grades received on the regular coursework.** See details below on “Competency Exams”. Please note that the lowest “passing grade” is a 2.0. Students who receive less than a 2.0 cannot use this class as a prerequisite for any other class, nor will the class count as credit towards a degree or certificate.
- ☆ Students must successfully complete the required coursework in addition to the competency exams. Your grade will depend on your performance on this required coursework. Attendance alone does not guarantee a passing grade; you must achieve a passing grade by earning sufficient points on required coursework.

## Competency Exams in MATH 020

◆ ***What is a competency exam?***

A competency exam is a pass/fail test covering one of three topics: integers, fractions, and decimals. Students must complete each of the three competency exams without a calculator and without notes. The exams are designed to test a basic level of skill in each of these areas.

◆ ***Why does MATH 020 require competency exams?***

The math department at JCC believes that when students fail to master any one of the three areas covered by the competency exam, their ability to succeed in later math courses, and also courses in other departments which require MATH 020, is compromised. Competency exams are designed to encourage students to continue to practice and learn in these areas until the desired level is achieved.

◆ ***How do the competency exams affect my grade? What if I fail a competency exam?***

In order to get a passing grade (2.0 or above) in MATH 020, you MUST pass all three competency exams. If you have not passed one or more of the competency exams by the end of the course, the highest grade you can receive is a 1.0 (although if your earned grade is lower than 1.0, the lower grade will be given).

If you fail a competency exam, you have the opportunity to retake that exam (using a different version) three times. You are strongly encouraged to review, study, and get help from a tutor or your instructor before you attempt to retake a competency exam. If you do not pass after the third retake attempt, you will not be able to pass MATH 020 this semester.

◆ ***How can I prepare for a competency exam?***

You will be given a review sheet to guide you in studying for each of the competency exams. Your instructor may also do additional review in class.

◆ ***How are the competency exams scored?***

Each competency exam consists of ten questions. The first eight questions are single-concept problems, and are worth two points each, with no partial credit given for wrong answers, or answers for which the student has not shown the correct supporting work to get to the solution. The last two questions are multi-step problems, and are worth four points each, with partial credit available according to a pre-determined grading rubric. There are 24 points available on each competency exam (8@2 pts each, 2 @4 pts each). In order to pass a competency test, you must earn a minimum of 18 points on the test.

## Student Outcomes and Grading

### Math 020 Core Course Objectives

Students completing Math 020 – Prealgebra should be able to:

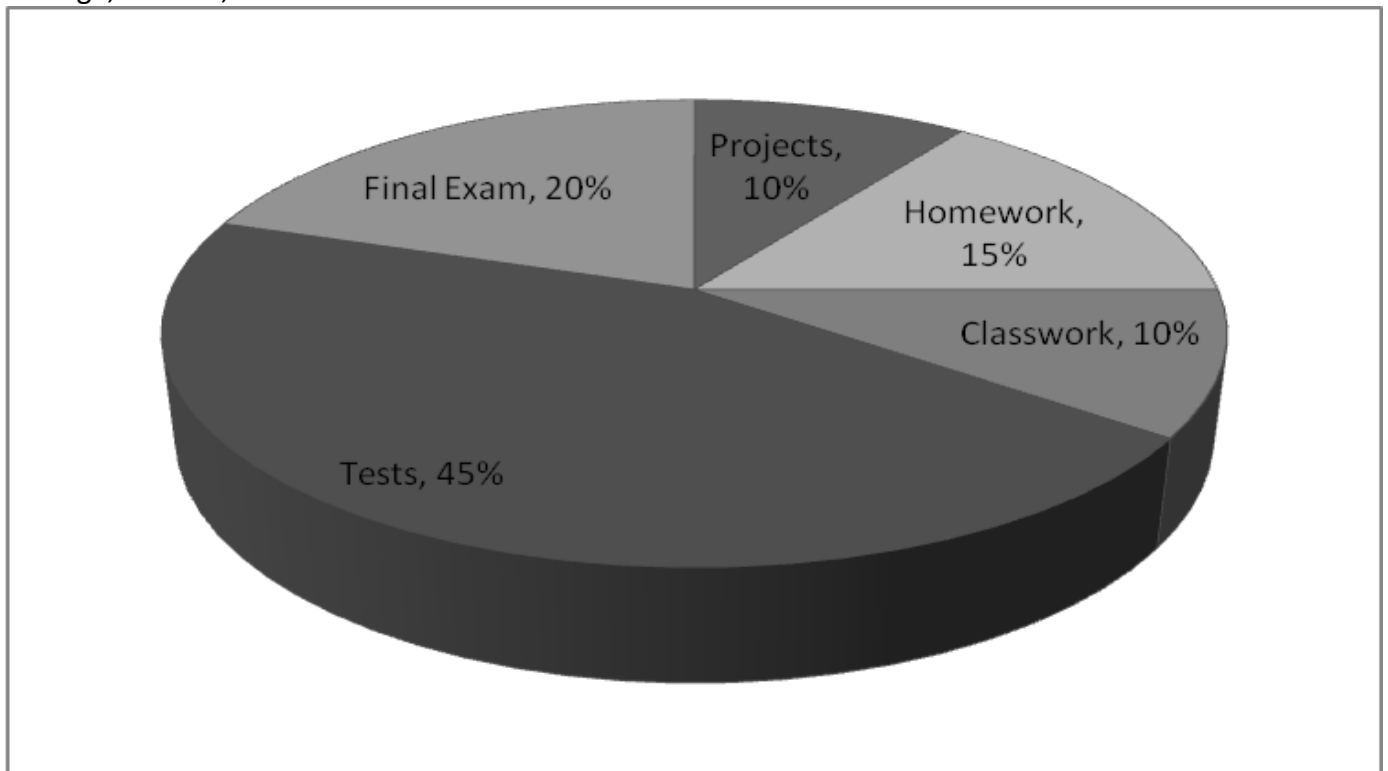
- Arithmetic of fractions, decimals and signed numbers
- Mathematics of ratio, proportion, percentage
- Mathematics of geometry and measurement
- Interpretation of graphs and some statistics
- Algebraic operations on linear expressions/ solve linear equations

### Math 020 Associate Degree Outcomes

The Board of Trustees has determined that all JCC graduates should develop or enhance certain essential skills while enrolled in the college. The Associate degree outcomes addressed in this class are:

- Computational skills and understanding appropriate to the program of study.
- Critical thinking and problem solving.

**Determination of Final Grades:** If you pass the three competency exams, then your final grade will be calculated as a weighted average as shown in the circle graph below. If you do not pass the three competency exams, then your final grade will be either the grade calculated using the weighted average, or a 1.0, whichever is lower.



Course: Math 010  
 Text: *Prealgebra, 6th edition*  
 Author: Elayn Martin-Gay

\*Note: This schedule is *tentative*. Attend class regularly to keep up on changes!\*

Day	Algebra Topic	
1	*	Pre-test
	*	Review of Chapter 1 Material:
	*	Sections 1.1 - 1.6
2	*	Introduction to MML
	1.7	Order of Operations
	2.1	Introduction to Integers
3	2.2	Adding Integers
	2.3	Subtracting Integers
4	2.4	Multiplying and Dividing Integers
	2.5	Order of Operations with integers
5	1.8	Introduction to Variables, Algebraic Expressions, and Equations
	3.1	Simplifying Algebraic Expressions
	*	<b>Review for Competency Exam on Integers</b>
6	*	<b>Competency Exam on Integers</b>
	2.6, 3.2	Addition and Multiplication Properties of Equality
	3.3	Solving Linear Equations
7	3.3	Solving Linear Equations (continuation)
	3.4	Linear Equations and Problem Solving
8	3.4	Linear Equations and Problem Solving (continuation)
	*	<b>Review for Exam 1 (Chapters 1, 2 and 3)</b>
9	*	<b>Exam 1 (Chapters 1, 2 and 3)</b>
	4.1	Introduction to Fractions and Mixed Numbers
10	4.2	Factors and Simplest Form
	4.3	Multiplying and Dividing Fractions
11	4.4	Adding and Subtracting Like Fractions
	4.5	Adding and Subtracting Unlike Fractions
12	4.6	Complex Fractions and Order of Operations (with fractions)
	4.7	Operations on Mixed Numbers
	*	<b>Review for Competency Exam on Fractions</b>

Day	Algebra Topic	
13	*	<b>Competency Exam on Fractions</b>
	5.1	Introduction to Decimals
	5.2	Adding and Subtracting Decimals
14	5.3	Multiplying Decimals; Circumference of a Circle
	5.4	Dividing Decimals
15	5.5	Converting Between Fractions and Decimals; OoO
	5.6	Solving Algebraic Equations Containing Decimals
	5.7	Decimal Applications: Mean, Median and Mode
16	*	<b>Review for Exam 2 and Decimals Competency Exam</b>
	*	<b>Competency Exam on Decimals</b>
17	*	<b>Exam 2 (Chapters 4, 5)</b>
	6.1	Ratios and Rates
18	6.2	Proportions
	6.3	Proportions and Problem Solving
19	6.5	Congruent and Similar Triangles
	6.4	Square Roots and Pythagorean Theorem
20	7.1	Percents, Decimals, Fractions (continuation)
	7.2	Solving Percent Problems with Equations
21	7.4	Applications of Percent
	7.5	Further Applications of Percent: Tax, Commission, Discount
	7.6	Further Applications of Percent: Simple Interest
22	8.1	Reading Pictographs, Bar Graphs, Histograms, Line Graphs
	8.2	Reading Circle Graphs
23	8.3	Rectangular Coordinate System and Paired Data
	*	<b>Review for Exam 3 (Chapters 6, 7, 8)</b>
24	*	<b>Exam 3 (Chapters 6, 7, 8)</b>
	9.1	Lines and Angles
25	9.2	Perimeter
	9.3	Area
26	9.3	Volume and Surface Area
27	9.4 – 9.7	Measurement: American System
28	9.4 – 9.7	Measurement: Metric System
29	*	<b>Review for Final Exam</b>
30	*	<b>Final Exam</b>

Grades will be assigned using a percentage or a 4-point scale:

- 4.0 = superior work (above and beyond what was expected).
- 3.0 = work completed correctly or well
- 2.0 = mediocre work;
- 1.0 = unsatisfactory work;

The percentages for grades can be seen in the chart.

90-100	4.0
85-89	3.5
80-84	3.0
75-79	2.5
70-74	2.0
65-69	1.5
60-64	1.0
50-59	0.5
0-49	0.0

**Reminder: A grade of 2.0 or better will be accepted as a successful completion of these courses. Since these courses are prerequisites to other academic courses, a 2.0 is the minimum grade to exit. For courses that will transfer, other colleges generally accept a grade 2.0 or higher for transfer. Most financial aid, scholarships and loans require a grade of 2.0 or better.**