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**Calumet College**

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**of Saint Joseph**

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*Calumet College of St. Joseph is a Catholic institution of higher learning dedicated to the academic, spiritual and ethical development of undergraduate and graduate students. Informed by the values of its founding religious community, the Missionaries of the Precious Blood (C.P.P.S.), the College promotes the inherent dignity of all people, social justice, an ethic of service, student empowerment, opportunity, and lifelong learning.*

*We are committed to the Five Pillars of a CCSJ Education: The CCSJ graduate will be Open to Growth, Intellectually Competent, Religious, Loving, and Committed to Doing Justice. This class, as outlined below, will help you to achieve those goals.*

## **COURSE SYLLABUS, Spring 2020**

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| <b>Course: MATH 103 B Intermediate Algebra</b> |
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| <b>Instructor Information:</b>   |   |
|--|---|
| <b>Instructor Name</b>   | Carrie Hutton   |
| <b>Office Number:</b>  | 302   |
| <b>Phone Number:</b>   | 219-473-4284  |
| <b>Email:</b>  | chutton@ccsj.edu  |
| <b>Hours Available:</b>  | <ul style="list-style-type: none"><li>• MW 7:30 AM – 10:15 AM</li><li>• MW 3:15 PM – 5:00 PM</li><li>• TR 7:30 AM – 8:30 AM</li><li>• Please note that meetings and appointments can effect these hours.</li><li>• Additional office hours are available by appointment</li></ul> |
| <b>Instructor Background:</b> B.S. Actuarial Science, Indiana University; M.S. Mathematics and Statistics, Purdue University; M.S.E. Engineering, Purdue University; Ed.D Leadership in Education, American College of Education |   |

| <b>Course Information:</b>           |   |
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| <b>Course Time:</b>                  | Tuesday and Thursday 10:15 – 11:45 AM   |
| <b>Classroom:</b>                    | TBD   |
| <b>Prerequisites:</b>                | MATH 097 with a grade of 'C' or better, or an equivalent Accuplacer score   |
| <b>Required Books and Materials:</b> | Lial, Hornsby, McGinnis <u>Intermediate Algebra</u> , 10 <sup>th</sup> edition, Pearson, 2014 ISBN: 9780321872180 |

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| <b>Learning Outcomes/ Competencies:</b>   |  |  |
| Through appropriate assessments students will demonstrate that they are able to:  |  |  |
| <p>1. <b>Remember</b> the necessary steps and procedures for manipulating, simplifying, and solving: algebraic expressions, exponents, polynomials, graphs, inequalities, absolute value, linear and quadratic expressions, systems of equations, rational expressions, and logarithms.</p> <p>2. <b>Understand</b> what each procedure, manipulation, simplification, and solution means on a conceptual level.</p> <p>3. <b>Apply</b> their understanding of algebraic expressions, exponents, polynomials, graphs, inequalities, absolute value, linear and quadratic expressions, systems of equations, rational expressions, and logarithms to solve application problems.</p> <p>4. <b>Analyze</b> problems in physics, economics, business, and biology to determine appropriate methods for solving them using algebra skills and concepts.</p> |  |  |
| <b>Course Description:</b> This course treats algebraic expressions, exponents, polynomials, graphing, inequalities, absolute value, linear and quadratic expressions, and systems of equations, applications, rational expressions, and logarithms.  |  |  |
| <b>Learning Strategies:</b>   |  |  |
| Group discussions, lecture, IXL software, and lots of practice. The objective is to promote your understanding of mathematics concepts and to enable you to apply them in a meaningful way. You are encouraged to rely on logical thinking, rather than on memorization. It is VERY important that you READ the sections of the textbook, STUDY the examples and WORK problems. <b>Active participation in class</b> and utilization of services such as the <u><a href="#">CCSI Student Success Center</a></u> will help ensure your success.  |  |  |
| It is also suggested that you utilize Khan Academy for additional help on homework outside of the classroom. <a href="http://www.khanacademy.org/math/algebra">http://www.khanacademy.org/math/algebra</a>  |  |  |
| <b>Experiential Learning Opportunities:</b>   |  |  |
| Applications of the course objectives   |  |  |

| <b>Assessments:</b>           |  |               |
|-------------------------------|--|---------------|
| <b>Exams:</b>                 | Four chapter exams (R - 2, R - 5, R - 7, R - 10) | 40 % of grade |
| <b>Cumulative Final Exam:</b> | Chapter R - Chapter 10                           | 20% of grade  |
| <b>In Class Assignments</b>   | Assigned Weekly in Class                         | 10% of grade  |

|                           |                              |               |
|---------------------------|------------------------------|---------------|
| <b>Textbook Homework:</b> | Assigned Weekly per schedule | 15 % of grade |
| <b>IXL Homework:</b>      | Assigned Weekly per schedule | 15% of grade  |

### Grading Scale:

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|--------------|-------------|-------------|
| 100 – 92: A  | 91 – 90: A- |             |
| 89 – 88: B+  | 87 – 82: B  | 81 – 80: B- |
| 79 – 78: C+  | 77 – 72: C  | 71 – 70: C- |
| 69 – 68: D+  | 67 – 62: D  | 61 – 60: D- |
| 59 and below | F           |             |

| <b>Responsibilities</b>                         |   |
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| <b>Attending Class</b>                          | <p>You cannot succeed in this class if you do not attend. We believe that intellectual growth and success in higher education occur through interaction in the classroom and laboratories. However, we do not want to penalize students for participating in college-sponsored events. When you miss class because of a college event, you must give notice of your absence in advance, and you are responsible for all missed work. Being absent doesn't excuse you from doing class work; you have <b>more</b> responsibilities to keep up and meet the objectives of this course.</p> <p style="text-align: center;"><b><i>Eighty percent of success is showing up.</i></b> -Woody Allen</p> <p>Attendance is important and is expected. You are responsible for all material covered in class, including announcements of assignments and quizzes. If you miss class, you must contact the instructor by email (chutton@ccsj.edu) within 24 hours. The instructor is more than willing to meet you halfway on this, but remember that there are TWO halves. If you are more than 15 minutes late to class, that will count as an absence. BE PRESENT, BE ON TIME.</p> |
| <b>Turning In Your Work</b>                     | <p>You cannot succeed in this class if you do not turn in all your work on the day it is due.</p> <p>Late homework is not accepted for any reason, under any circumstances. If you are absent on the day that work is due on paper, please scan it and email it to the instructor.</p>  |
| <b>Meeting Standards for Classroom Behavior</b> | <ul style="list-style-type: none"> <li>• <b>Use all the class time.</b> Come to class on time and stay in class until the end. Coming late, leaving early, and getting up during class disrupts the class and disrespects others.</li> <li>• <b>Come prepared.</b> Bring your texts, be prepared to take notes, and be able to demonstrate that you have completed the assignments for the day through your participation in class.</li> <li>• <b>Respect others.</b> Listen when your classmates and the instructor are speaking. Think about their contributions. Respond appropriately.</li> <li>• <b>Use electronic devices only for class purposes.</b> Engage with your classmates and the instructor without technological distractions.</li> </ul>  |

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| <p><b>CCSJ Student Honor Code</b></p>  | <p>This course asks students to reaffirm the CCSJ Student Honor Code:</p> <p>I, as a student member of the Calumet College academic community, in accordance with the college's mission and in a spirit of mutual respect, pledge to:</p> <ul style="list-style-type: none"> <li>• Continuously embrace <b>honesty and curiosity</b> in the pursuit of my educational goals;</li> <li>• Avoid all behaviors that could impede or distract from the academic progress of myself or other members of my <b>community</b>;</li> <li>• Do my own work with <b>integrity</b> at all times, in accordance with syllabi, and without giving or receiving inappropriate aid;</li> <li>• Do my utmost to act with commitment, inside and outside of class, to the goals and <b>mission</b> of Calumet College of St. Joseph.</li> </ul>   |
| <p><b>Using Electronic Devices</b></p> | <p>Electronic devices are out of place in the classroom. Please keep them silent and put away during class. Additionally, <b>NO ELECTRONIC DEVICES OF ANY KIND ARE TO BE USED ON QUIZZES OR EXAMS.</b></p>   |
| <p><b>Participating in Class</b></p>   | <p><b>Tests and In Class Assignments:</b></p> <ul style="list-style-type: none"> <li>• Four <u>chapter tests</u> will be given during the term and <u>one comprehensive final exam</u> during exam week.</li> <li>• You will be allowed to use one piece of paper (8 ½ x 11), one side only, of notes on your chapter tests.</li> <li>• You will be allowed to use one piece of paper (8 ½ x 11), both sides, of notes on your final exam.</li> <li>• You will be allowed to use a calculator on all exams.</li> <li>• You will NOT be allowed to use any electronic devices on an exam (i.e. phone, tablet, etc.).</li> <li>• <b>Please note that you MUST pass your exams to pass this course.</b></li> <li>• Thoughtful completion of your homework should be done to practice and prepare for your exams.</li> <li>• You are allowed to drop your lowest chapter test score (NOT final exam). There are absolutely <b>NO</b> makeup exams, for any reason so if you are absent on the day of an exam, that will be your dropped score. If you know of a planned absence in advance, you can take the exam <b>BEFORE</b> the scheduled exam date.</li> <li>• In class assignments cannot be made up, but your two lowest scores will be dropped. In class assignments will not be announced ahead of time.</li> </ul> <p><b>Written homework assignments and IXL homework assignments:</b></p> <ul style="list-style-type: none"> <li>• Homework is critical to your success in this course. The written homework and IXL homework are meant to serve as practice for the exams.</li> </ul> |

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|                                      | <ul style="list-style-type: none"> <li>Your written homework should be neat and organized. Problems should be copied from the book and all necessary work should be shown. <b>Answers without work will not be given credit.</b> All written homework from the textbook will be due when you take your exams.</li> <li><b>NO LATE HOMEWORK</b> will be accepted, for any reason, period. You are welcome to turn it in early, but never late.</li> </ul>   |
| <b>Doing Your Own Work</b>           | <p>If you turn in work that is not your own, you will be subject to judicial review by the Faculty-Student Grievance Committee. These procedures can be found in the Student Planner. The maximum penalty for any form of academic dishonesty is dismissal from the College.</p> <p>Using standard citation guidelines to document sources avoids plagiarism. You'll find guides to the major citation methods at the CCSJ Specker Library Web page at <a href="http://www.ccsj.edu/library/subjectsplus/subjects/guide.php?subject=cite">http://www.ccsj.edu/library/subjectsplus/subjects/guide.php?subject=cite</a></p> <p><b>PLEASE NOTE:</b> All papers may be electronically checked for plagiarism.</p> |
| <b>Withdrawing from Class</b>        | After the last day established for class changes has passed (see the College calendar), you may withdraw from a course by following the policy outlined in the CCSJ Course Catalog.  |
| <b>Tracking Your Progress</b>        | Your midterm grade will be available on MyCCSJ between Weeks 6 and 8. Be sure to see how you're doing and follow up with your instructor.  |
| <b>Sharing Your Class Experience</b> | Your voice matters! At the end of the term, you will have the opportunity to evaluate your classroom experience. These confidential surveys are essential to our ongoing efforts to ensure that you have a great experience that leaves you well prepared for your future. Take the time to complete your course evaluations – we value your feedback!   |

| <b>Resources</b>                |  |
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| <b>Student Success Center:</b>  | The Student Success Center provides faculty tutors at all levels to help you master specific subjects and develop effective learning skills. It is open to all students at no charge. You can contact the Student Success Center at 219 473-4287 or stop by the Library.   |
| <b>CCSJ Book Rental Program</b> | The CCSJ Book Program ensures that everyone has the right course materials on the first day of class to be successful. You pay a book rental fee each semester, and in return, receive all the materials for all your classes prior to the beginning of classes. At the end of the semester, simply return the books. For traditional students, the Book Rental Program is conveniently located in the library, where students can pick up and return their books. For students in accelerated programs and graduate programs, books will be delivered to their homes and they can return them by mail. For more information, see <a href="http://www.ccsj.edu/bookstore">http://www.ccsj.edu/bookstore</a> . <b>All books must be returned at the end of the semester or you will incur additional fees, which will be charged to your student account.</b> |
| <b>Disability Services:</b>     | Disability Services strives to meet the needs of all students by providing academic services in accordance with Americans with Disabilities Act (ADA) guidelines. If you believe that you need a “reasonable accommodation”  |

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|                                   | because of a disability, contact the Disability Services Coordinator at 219-473-4349.   |
| <b>Student Assistance Program</b> | Through a partnership with <b>Crown Counseling</b> , Calumet College of St. Joseph provides a free Student Assistance Program (SAP) to current students. The SAP is a confidential counseling service provided to students for personal and school concerns which may be interfering with academic performance and/or quality of life. The SAP counselor is available on campus once a week and off-site at the Crown Counseling offices in Crown Point or Hammond. For more information, <b>contact Kerry Knowles SAP Counselor</b> , at 219-663-6353 (office), 219-413-3702 (cell), or <a href="mailto:kerryk@crowncounseling.org">kerryk@crowncounseling.org</a> . |
| <b>CCSJ Alerts:</b>               | Calumet College of St. Joseph's emergency communications system will tell you about emergencies, weather-related closings, or other incidents via text, email, or voice messages. Please sign up for this important service annually on the College's website at: <a href="http://www.ccsj.edu/alerts/index.html">http://www.ccsj.edu/alerts/index.html</a> .   |

**I reserve the right to change this schedule at any time to meet the needs of the class.**

| Date    | Topic  | Homework Assigned   | Homework Due Date/Time                     |
|---------|--|---|--|
| 1-14-20 | Introduction to class<br>Chapter R: Review of the Real Number System | <b>IXL Algebra I:</b><br><b>A.6</b> – Square Roots<br><b>A.7</b> – Cube Roots<br><b>A.10</b> – Classify Numbers<br><b>B.2</b> – Evaluate Numerical Expressions involving Integers<br><b>B.7</b> – Evaluate Variable Expressions using Rational Numbers<br><b>H.1</b> – Properties of Addition and Multiplication<br><b>H.2</b> – Distributive Property<br><b>H.4</b> – Properties of Equality | 1-20-20 by 10 pm                           |
| 1-16-20 | Chapter 1: Linear Equations and Applications                         | <b>IXL Algebra I:</b><br><b>J.8</b> – Find the number of solutions<br><b>J.10</b> – Solve Linear Equations, Word Problems<br><b>J.11</b> – Solve Linear Equations, Mixed Review<br><b>G.1</b> – Coordinate Plane Review<br><b>H.3</b> – Simplify Variable Expressions using Properties  | 1-20-20 by 10 pm                           |
| 1-21-20 | Chapter 1: Linear Equations and Applications                         | TB p. 158 #1-34 all   | 1-30-20 at the beginning of class (Exam I) |
| 1-23-20 | Chapter 2: Linear Inequalities and Absolute Value                    | <b>IXL Algebra I:</b><br><b>K.2</b> – Write Inequalities from Graphs<br><b>K.11</b> – Graph Solutions to Advanced Linear Inequalities<br><b>K.13</b> – Write Compound Inequalities from Graphs<br><b>K.15</b> – Graph Solutions to Compound Inequalities  | 1-27-20 by 10 pm                           |

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| 1-28-20 | Chapter 2: Linear Inequalities and Absolute Value  | <b>IXL Algebra I:</b><br><b>L.2</b> – Graph Solutions to Absolute Value Equations<br><b>L.4</b> – Graph Solutions to Absolute Value Inequalities   | 2-3-20 by 10 pm   |
| 1-30-20 | <b>Exam I (Chapter R – Chapter 2)</b>              | None   | All Textbook homework is due TODAY, at the BEGINNING of class. NO LATE HOMEWORK will be accepted. |
| 2-4-20  | Chapter 3: Graphs, Linear Equations, and Functions | <b>IXL Algebra I:</b><br><b>S.4</b> – Find Slope from Two Points<br><b>S.7</b> – Slope Intercept Form, Graph an Equation<br><b>S.8</b> – Slope-Intercept Form: Write an Equation from a Graph<br><b>S.12</b> – Linear Equations: Solve for y<br><b>S.17</b> – Write Equations in Standard Form | 2-10-20-19 by 10 pm   |
| 2-6-20  | Chapter 3: Graphs, Linear Equations, and Functions | <b>IXL Algebra I:</b><br><b>S.18</b> – Standard Form, Find x- and y- Intercepts<br><b>S.19</b> – Standard Form, Graph an Equation<br><b>S.21</b> – Graph a Horizontal or Vertical Line<br><b>S.23</b> – Point-Slope Form: Write an Equation  | 2-10-20 by 10 pm  |
| 2-11-20 | Chapter 3: Graphs, Linear Equations, and Functions | <b>IXL Algebra I:</b><br><b>S.25</b> – Slopes of Parallel and Perpendicular Lines<br><b>S.26</b> – Write an Equation for a Parallel or Perpendicular Line<br><b>T.3</b> – Graph two variable inequalities<br><b>T.4</b> – Linear Inequalities Word Problems                                    | 2-17-20 by 10 pm  |
| 2-13-20 | Chapter 4: Systems of Linear Equations             | <b>IXL Algebra I:</b>  | 2-17-20 by 10 pm  |



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|         |   | <p><b>U.1</b> – Is (x,y) a Solution to the System?</p> <p><b>U.2</b> – Solve a System of Equations by Graphing</p> <p><b>U.8</b> – Solve a System of Equations using Substitution</p> <p><b>U.10</b> – Solve a System of Equations using Elimination</p> |  |
| 2-18-20 | Chapter 5: Exponents, Polynomials, and Polynomial Functions | <p><b>TB p. 348 #1-35 all</b></p> <p><b>IXL Algebra I:</b></p> <p><b>V.6</b> – Multiplication and Division with Exponents</p> <p><b>V.8</b> – Evaluate Expressions using Properties of Exponents</p>   | <p><b>2-27-20 at the beginning of class (Exam II)</b></p> <p><b>2-24-20 by 10 pm</b></p>                       |
| 2-20-20 | Chapter 5: Exponents, Polynomials, and Polynomial Functions | <p><b>IXL Algebra I:</b></p> <p><b>W.1</b> – Convert Between Standard and Scientific Notation</p> <p><b>Z.4</b> – Add and Subtract Polynomials</p> <p><b>Z.8</b> – Multiply Two Binomials</p>  | <p><b>2-24-20 by 10 pm</b></p>   |
| 2-25-20 | Chapter 5: Exponents, Polynomials, and Polynomial Functions | <p><b>IXL Algebra I:</b></p> <p><b>Z.10</b> – Multiply Polynomials</p> <p><b>GG.5</b> – Divide Polynomials by Monomials</p> <p><b>GG.6</b> – Divide Polynomials using Long Division</p>  | <p><b>3-2-20 by 10 pm</b></p>  |
| 2-27-20 | <b>Exam II (Emphasis on Chapter 3 – Chapter 5)</b>          | None   | <p><b>All Textbook homework is due TODAY, at the BEGINNING of class. NO LATE HOMEWORK will be accepted</b></p> |
| 3-3-20  | No Class – Spring Break                                     |  |  |
| 3-5-20  | No Class – Spring Break                                     |  |  |
| 3-10-20 | Chapter 6: Factoring  | <p><b>IXL Algebra I:</b></p> <p><b>AA.1</b> – GCF of Monomials</p>   | <p><b>3-16-20 by 10 pm</b></p>   |

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|         |   | <b>AA.2</b> – Factor out a Monomial<br><b>AA.7</b> – Factor by Grouping   |  |
| 3-12-20 | Chapter 6: Factoring                                | <b>IXL Algebra I:</b><br><b>AA.4</b> – Factor Quadratics with Leading Coefficient of 1<br><b>AA.5</b> – Factor Quadratics with other Leading Coefficients   | 3-16-20 by 10 pm   |
| 3-17-20 | Chapter 6: Factoring                                | <b>IXL Algebra I:</b><br><b>AA.6</b> – Factor Quadratics: Special Cases<br><b>AA.8</b> – Factor Polynomials<br><b>BB.7</b> – Solve a Quadratic Equation by Factoring  | 3-23-20 by 10 pm   |
| 3-19-20 | Chapter 7: Rational Expressions and Functions       | <b>TB p. 465 #1-30 all</b><br><br><b>IXL Algebra I:</b><br><b>GG.2</b> – Simplify Complex Fractions<br><b>GG.3</b> – Simplify Rational Expressions<br><b>GG.4</b> – Multiply and Divide Rational Expressions                                  | 3-31-20 at the beginning of class (Exam III)<br><br>3-23-20 by 10 pm                             |
| 3-24-20 | Chapter 7: Rational Expressions and Functions       | <b>IXL Algebra I:</b><br><b>GG.7</b> – Add and Subtract Rational Expressions<br><b>GG.8</b> – Solve Rational Equations<br><b>R.5</b> – Write and Solve Direct Variation Equations<br><b>R.8</b> – Write and Solve Inverse Variation Equations | 3-30-20 by 10 pm   |
| 3-26-20 | STEM FEST   |   |  |
| 3-31-20 | <b>Exam III (Emphasis on Chapter 6 – Chapter 7)</b> | None  | All Textbook homework is due TODAY, at the BEGINNING of class. NO LATE HOMEWORK will be accepted |

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| 4-2-20  | Chapter 8: Roots, Radicals, and Root Functions  | <p>TB p. 541 #1-29 all</p> <p><b>IXL Algebra I:</b><br/> <b>EE.8</b> – Simplify Radical Expressions Mixed Review<br/> <b>FF.1</b> – Evaluate a Radical Function</p>  | <p>4-23-20 at the beginning of class (Exam IV)</p> <p>4-6-20 by 10 pm</p>  |
| 4-7-20  | Chapter 8: Roots, Radicals, and Root Functions  | <p><b>IXL Algebra I:</b><br/> <b>FF.5</b> – Solve Radical Equations II</p> <p><b>IXL Algebra II:</b><br/> <b>H.6</b> – Add, Subtract, Multiply, and Divide Complex Numbers<br/> <b>M.6</b> – Simplify Expressions Involving Rational Exponents II</p>  | <p>4-13-20 by 10 pm</p> <p>4-13-20 by 10 pm</p>                            |
| 4-9-20  | Virtual Class (Easter holiday)  | <p><b>IXL Algebra I:</b><br/> <b>BB.1</b> – Characteristics of Quadratic Functions<br/> <b>BB.3</b> – Complete a Function Table: Quadratic Functions<br/> <b>BB.6</b> – Solve a Quadratic Equation Using Square Roots<br/> <b>BB.7</b> – Solve an Equation using the Zero Product Property</p> | <p>4-13-20 by 10 pm</p>  |
| 4-14-20 | Chapter 9: Quadratic Equations, Inequalities, and Functions (ONLY 9.1 and 9.2)            | <p><b>IXL Algebra I:</b><br/> <b>BB. 10</b> – Solve a Quadratic Equation by Completing the Square<br/> <b>BB. 11</b> – Solve a Quadratic Equation by using the Quadratic Formula</p>   | <p>4-20-20 by 10 pm</p>  |
| 4-16-20 | Chapter 10: Inverse, Exponential, and Logarithmic Functions (Only 10.1, 10.3, 10.4, 10.5) | <p>TB p. 694 #1-27 all, 30-33 all</p> <p><b>IXL Algebra II:</b><br/> <b>R.1</b> – Convert Between Exponential and Logarithmic Form: Rational Bases<br/> <b>R.4</b> – Evaluate Logarithms</p>   | <p>4-23-20 at the beginning of class (Exam IV)</p> <p>4-20-20 by 10 pm</p> |

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| 4-21-20 | Chapter 10: Inverse, Exponential, and Logarithmic functions |  |  |
| 4-23-20 | <b>Exam IV (Emphasis on Chapter 8 - Chapter 10)</b>         |  | All Textbook homework is due TODAY, at the BEGINNING of class. NO LATE HOMEWORK will be accepted |
| 4-28-20 | Review for Final Exam                                       |  |  |
| 4-30-20 | Final Exam  |  | Congrats! You have finished the semester!  |