

**Math 169 Mathematics for Elementary Teachers II (CRN #30863 ; Spring 2009 TuTh 1:05-3:10 Class)**

Textbook : *A Problem Solving Approach to Mathematics for Elementary School Teachers* , 9<sup>th</sup> Ed. (Billstein, Libeskind & Lott)

1<sup>st</sup> Assignment Sheet R. Everest [A] = All ; [O] = Odd ; [E] = Even ; [m3] = multiplies of three ; etc.

Class Date TB Section(s)		Problems	Topic
Thurs 2/19	Intro & Problem Solving	<p>Introduction//Syllabus</p> <ul style="list-style-type: none"> <li>* Read syllabus ; read &amp; bookmark : <a href="http://www.citruscollege.edu/reverest">http://www.citruscollege.edu/reverest</a> &amp; <a href="http://www.matheverest.com">http://www.matheverest.com</a></li> <li>* Get supplies , including textbook, MyMathLab student access code ( our Course ID # is <b>everest45492</b> ) , graph paper, compass, protractor &amp; a pair of 6-sided dice</li> <li>* MyMathLab.com Registration ... go to <a href="http://www.mymathlab.com">http://www.mymathlab.com</a></li> <li>* Begin to think about Statistics Project topic &amp; to formulate Statistics Project problem statement</li> <li>* Go over Problem Solving Rubric</li> <li>* “Arrange The Cubes” group work (time permitting)</li> </ul>	n/a Collaborative Work Grading Rubrics
Tues 2/24	8.1	<p><b>8.1 : 2 , 4 , 7 , 8 , 11, 12 , 15 , 18 , 21</b> (for pt. c construct a histogram, not a bar graph [this is a matter of semantics, as I know what the textbook meant, but theoretically it is called a histogram , since we are graphing numerical [not categorical] data that has been organized in to a grouped frequency table ) , <b>22-28 [A] , 31 , 34 , 36 , 37 , 41</b></p> <p>MyMathLab.com Registration</p>	Statistical Graphs
Thurs 2/26	8.2	<p><b>8.2 : 1, 3-5 [A] , 7-10 [A] , 12, 15, 16, 20-24 [A] , 26, 28-31 [A] , 33-36 [A] , 37-46 [A] (but skip #40), 50, 52, 53, 55 ;</b> <b>look at data in #59 &amp; #60 ; 62, 64,</b></p> <p>MyMathLab.com Registration <i>03/02/09, is the “Last Day For Refund” Deadline</i></p>	Measures of Central Tendency (Mean, Median, Mode & Midrange) & Variation (IQR, MAD, Standard Deviation)
Tues 3/3	8.3 & Rvw. For MT#1	<p><b>Sherrill Paulus (Service Learning Coordinator) visits</b></p> <p><b>8.3 : 2-8 [A] (but skip #6) , 11-16 [A] (but skip #13) , 19, 25, 29, 31, 33</b></p> <p><b>Strongly recommended : Look at Chapter 8 Review on pp. 565-8</b></p> <p><b><a href="#">MML8 (MyMathLab.com Ch. 8 HW)</a> due by 11:59pm on <b>Wed. night, 3/4/09</b></b></p>	Abuses of Statsics & Graphical Data & Review for MT #1 (Ch. 8)
<b>Thurs 3/5</b>	<b>MT#1</b>	<p><b>T E S T # 1 (Ch. 8)</b></p> <ul style="list-style-type: none"> <li>* Pass The Pigs Handout – Go to : <a href="http://www.fontface.com/games/pigs">http://www.fontface.com/games/pigs</a></li> <li>* Read the following two webpages: <a href="http://www.metamath.com/lswb/dvclearn.htm">http://www.metamath.com/lswb/dvclearn.htm</a> <a href="http://www.metamath.com/lswb/fourls.htm">http://www.metamath.com/lswb/fourls.htm</a> then...</li> <li>* Take and print out results for Learning Styles Quiz @ : <a href="http://www.metamath.com/multiple/multiple_choice_questions.html">http://www.metamath.com/multiple/multiple_choice_questions.html</a></li> </ul> <p><i>03/09/09, is the “Last Day To Add” &amp; the “No Record” Deadline</i></p>	
Tues 3/10	7.1	<b>7.1 : 1, 2, 5, 6, 9, 10, 11, 13, 14, 15, 18, 19, 21, 22, 25, 26, 27, 29, 31, 33, 34</b>	Fundamentals of Probability
Thurs 3/12	7.2	<b>7.2 : 1, 3, 5, 7b, 8, 9, 11, 14, 17, 18, 19, 21, 22, 24, 26, 29, 33, 37, 38, 40, 46</b>	Multistage Experiments, Tree Diagrams & Geometric Probabilities

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2<sup>nd</sup> Assignment Sheet

R. Everest

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etc.

Class Date	TB Section(s)	Problems	Topic
Tues 3/17	7.3	<p><b>7.3 : 1, 4, 7, 8</b> (see ex 7-11) ,</p> <p><b>9</b> (&amp; finish right side of tree diagram H/O [handout] where Team B wins the first game, on a separate sheet of paper) ,</p> <p><b>10</b> (Use Random # Table 7-3 [p. 469]; use “0” – “7” for a successful free throw, and an “8” or “9” for a failure; that is a missed free throw. Look at blocks of 2 digits #s. If 1<sup>st</sup> # is 0-7, “count” it &amp; evaluate 2<sup>nd</sup> # for 1 or 2 points in total. If 1<sup>st</sup> # is an “8” or “9” count 0 points. Skip to next 2 digit # for the next “one&amp;one” simulation) ,</p> <p><b>11</b> (see H/O , where I used “Block A” from Random # Table 7-3 [p. 469], which went from 36422 to 50452. If your last name starts with an A-E , use Block B, which goes from 07443 to 81421. If your last name starts with an F-J , use Block C, which goes from 16825 to 91385. If your last name starts with a K-P , use Block D, which goes from 13366 to 91140. If your last name starts with a Q-T , use Block E, which goes from 49807 to 45372. If your last name starts with a U-Z , use Block F, which goes from 03222 to 23950.) ,</p> <p><b>12</b> (see H/Os ; Do ten more simulations [on graph paper] with hexahedral [6-Sided] Dice) , <b>13, 14, 17(a, c &amp; d) , 20, 21</b></p>	Simulations in Probability
Thurs 3/19	7.3 (con’t) & 7.4	<p>In-Class Simulations (# 17 [modified] &amp; #18 [Roulette] &amp; #21 [with 6-sided, 8-Sided &amp; 12-Sided dice] from Section 7.4)</p> <p><b>7.4 : TB : 2-12 [E] , 13, 16, 17, 18, 22, 23, 25, 27, 32</b></p>	More Simulations, Odds, Conditional Probability & Expected Value
Tues 3/24	7.5 & Rvw for MT#1	<p><b>7.5 : 3-10 [A] ; 12, 15, 17 (see ex 7-20) , 18, 19,</b></p> <p><b>20</b> (extend to non-personalized California plates [seven characters; the first is a # from “1” to “7” , then three letters, then three numbers “0” to “9” , where repetition is allowed for both] ) ,</p> <p><b>21</b> (extend to California SuperLotto where 6 numbers are picked, the first five numbers are picked from the numbers “1” to “47” [repetition is <u>not</u> allowed] , then a single bonus number, which is picked from the numbers “1” to “27” [but repetition from one of the first five numbers is allowed] ) ,</p> <p><b>22 , 24 , 25 , 27 , 28 , 29 , 33 , 36-41 [A]</b></p> <p><b>Strongly recommended : Look at Chapter 7 Review on pp. 498-499</b></p> <p><b>MML7 (MyMathLab.com Ch. 7 HW) due by 11:59pm on Wed., 3/25/09</b></p>	Expected Value Simulations & Using Permutations and Combinations in Probability
Thurs 3/26	MT#2 & Start 9.1	<p><b>TEST # 2 (Ch. 7)</b></p> <p><b>9.1 : 1-8 [A]</b></p> <p><b>Bring compasses &amp; protractors for circle graphs next class period...</b></p>	MT#2 (Ch. 7) & Basic Geometric Notions
Tues 3/31	Finish 9.1	<p><b>9.1 : 9, 12</b> ( TYPO ... book says to find <math>m \angle BOC</math> in part (d) , but it is applicable to part (e) ) , <b>13, 14</b> (see diagram below pt. (c) for help) , <b>15, 17-21 [A] , &amp; the two TIMSS problems on the top of p. 588</b></p> <p><b>Reminder to bring Geometric Tools, from now on, in this class!</b></p>	Basic Geometric Notions
Thurs 4/2	9.2	<p><b>9.2 : 1 (c-d) , 3</b> (justify with a diagram) , <b>4-7 [A], 8, 9(c-e), 11, 13, 19, three TIMSS problems (a-c) on p. 599</b> (in the right column, after problem # 20)</p>	Polygons

Tues 4/7	9.3 & Rvw for MT#3	<p><b>9.3 : 2, 3, 5(b), 7-10 [A], 11(b), 14, 15, 17, 18, 20, 21, 23 (b-e), 24-28 [A], 31, 32</b> (see Theorem 9-3 for help), <b>33, 35</b>, the two TIMSS &amp; NAEP problems after #44 on p. 614</p> <p><b>Strongly recommended : Look at Chapter 9 Review on pp. 639-641</b></p>	More about Angles & Review for MT #3
Thurs 4/9	MT#3 & Start 9.4	<p><b>More Review for MT#3</b></p> <p><b>( Short) TEST # 3 (Section 9.1 – 9.3)</b></p> <p><b>9.4 : 1, 3, 6, 7</b></p> <p><b><i>04/11/09, is the “W” Deadline</i></b></p>	<p>Rvw. For MT#3</p> <p>MT#3 (9.1-9.3)</p> <p>Intro to Geometry in Three Dimensions</p>
4/13 - 4/17		<p><b>SPRING BREAK</b></p> <p><b>Properly collect Statistics Project Data over Spring Break</b></p> <p>Work on <b>MML9 (MyMathLab.com Ch. 9 HW)</b>, which is due by 11:59pm on <b>Sun., 4/12/09</b></p> <p><b><i>Reminder to bring Geometric Tools, from now on, in this class!</i></b></p>	<b>ENJOY !</b>

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Tues 4/21	Finish 9.4	<b>9.4 : 8</b> (use dot paper... available off Documents Section of Mr. E's website @ : <a href="http://www.citruscollege.edu/apps/docs.asp?Q=434">http://www.citruscollege.edu/apps/docs.asp?Q=434</a> ) , <b>10, 13, 14, 16, 17, 18, 23, 28, 36-40</b> [A] , first NAEP problem after #40 on p. 627  <i>Reminder : From now on, bring your Geometric Tools to class everyday...</i>	Geometry in Three Dimensions
Thurs 4/23	n/a 10.1 prep App. III (Read pp. 911-913)	<b>Triangle Inequality Worksheet (start in class &amp; finish at home)</b> <b>Constructions</b> <b>GSP Introduction : Appendix III Lab 1 (pp. 913-916)</b> <b>[Geometer's SketchPad (GSP) is loaded on the desktop computers in the Mathematics Building Computer Lab in MA 129]</b>	Triangle Inequality Theorem, Constructions, Geometer's SketchPad (GSP)
Tues 4/28	10.1	<b>10.1 : 1-5</b> [A] <b>7 , 10 , 11 , 13</b> (see pp. 656-7) , <b>14 , 16 , 119 , 21</b>  <b>Math Computer Lab (MA 129) Work :</b> <b>Appendix III GSP Labs 2 &amp; 3 (pp. 916-918)</b> <b>&amp; Statistics Project Proposal Reviews</b>	Congruence Through Constructions , Similarity, Triangle Inequality Theorem, SSS & SAS cases, GSP
Thurs 4/30	10.2	<b>10.2 : 3, 9, 10, 12, 17, 18, 20, 22, 25, 33, 35, 40, 41</b>	Other Congruence Properties, ASA & AAS cases, SSA ambiguity
Tues 5/5	10.3	<b>10.3 : 4, 9, 12, 20, 22, 29, 30, 36, 41</b> <b>&amp; TIMSS question (bottom right corner of p. 680)</b>	Other Constructions (Parallel & Perpendicular Lines, Angle Bisectors)
Thurs 5/7	10.4 & GSP Lab	<b>10.4 : 2 , 4 , 8 , 9 , 10 , 19 , 25 , 27 , 29 , 30</b> <b>&amp;</b> <b>Math Computer Lab (MA 129) Work :</b> <b>GSP : incenter, circumcenter, centroid &amp; Equilateral Triangle (3 Points of Concurrency)</b>	Similar Triangles & Similar Figures, AA(A) case, Proportionality, Midsegment Theorem, GSP
<b>Tues 5/12</b>	Ch. 10 Test Rvw.  &  More GSP Lab	<i>Stats Projects Due today</i>  <b>In-class :</b> * <b>TIMSS (p. 695)</b> * <b>Tech. Corner (p. 681) Central &amp; Inscribed Angle (by hand)</b> * <b>Questions From the Classroom (p. 729) : 1-11 [O]</b>  <b>Outside (if sunny) :</b> * <b>Shadow / Unknown height Lab (finish calculations at home)</b>  <b>Math Computer Lab (MA 129) Work :</b> * <b>Central &amp; Inscribed Angle Construction w/ GSP (see Tech Corner)</b> * <b>Pentagon &amp; Hexagon Construction w/ GSP</b>  <b>Homework :</b> * <b>Ch. 10 Review (pp. 731-3) 1-14 [A] (but skip 7) &amp; 15 (a &amp; b)</b>	More Constructions, Ch. 10 Test Review, Indirect Measurements, GSP

<b>Thurs 5/14</b>	<b>MT#4 &amp; Unusual Measurement Lab &amp; Start 11.1</b>	<b>Test # 4 (Chapter 10)  Unusual Measurement Lab (<i>In Class</i>)  11.1 : 1-6 [A]</b>	<b>MT#4 (10.1-10.4) &amp; Unusual Measurement Lab, Linear Measurement</b>
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Class Date	Section(s)	Problems	Topic
Tues 5/19	11.1 & Discovering $\pi$	11.1 : 7-14 [A] ; 17 , 19 , 23 , 26 , 27 , 29 , 40 , 41  <b>Various Circles' Circumferences vs. Diameters Relationship Study</b> <i>(Instructor Note : Bring Strings) ... <math>\pi</math></i>  Start Conversions Table & formulae Cheatsheet	Linear Measurement, Dimensional Analysis, English & Metric Systems, Perimeter, Circumference, Arc Length
Thurs 5/21	11.2 & Geoboard Work	11.2 : 2-5 [A] ; 7 (b, d, & f) ; 11 , 12 , 16 , 17 , 21 (a-c) ; 22 , 26 , 28a , 29 , 40 , 59 ; Challenge Problem(s) : 27 & 28b & <b>Geoboard &amp; Dot Paper Work (In-class) ... (Instructor Note : Bring Geoboards/Rubberbands, [Geo]Dotpaper, Geoboard Paper)</b>	Areas of Polygons & Circles, Units of Area, Land Measure, Area Formulas
Tues 5/26	11.3 & More Geoboard Work	11.3 : 2, 4-7 [A]; 9-15 [O]; 18 , 19 , 23 , 25 , 29 , 36 , 39 , 41 , 51(a-c) & <b>More Geoboard &amp; Dot Paper Work (In-class) ... (Instructor Note : Bring Geoboards/Rubberbands, [Geo] Dotpaper, Geoboard Paper)</b>	Pythagorean Theorem, Distance Theorem, Special (45°/45° & 30°/60°) Right Triangles
Thurs 5/28	11.4 & Geoboard Concepts Rvw.	11.4 : 1-6 [A] ; 9 , 12 , 14 , 17 , 20 , 24 , 26 , 29 , 31 , 38 , 41 , 43 ; Challenge Problem(s) : 7 & 27 & <b>Go over Geoboard Work again &amp; Brain Teaser (inside purple box on p. 780) ... (Instructor Note : Bring toilet paper rolls)</b>	Surface Areas & Related Formulas (Right Prism, Cylinder Pyramid, Cone, Sphere), Analogies
Tues 6/2	GSP Work Due  &  11.5	<b>GSP WORK DUE</b> (on Jumpdrive or via e-mail attachment) ( ❶ incenter/angle bisectors, ❷ circumcenter/perpendicular bisectors, ❸ centroid/medians, ❹ Equilateral Triangle (Points of Concurrency – angle bisectors, perpendicular bisectors, medians, and altitudes are all the same and thus all intersect at the same point) , ❺ Central & Inscribed Angle Relationship, XC : Extra Credit : Pentagon & Hexagon Construction)  11.5 : 1-15 [A] (but skip 8 & 12) ; 20 , 22 , 23 , 26 , 31 , 32 , 35 , 36 , 39 , 42-49 [A] ; 57 & TIMSS problem (bottom right corner of p. 820)	GSP Work Due & Volume Formulas (Right Prism, Cylinder Pyramid, Cone, Sphere), Conversion between English & Metric Units, More Dimensional Analysis, Capacity, Mass & Temperature
Thurs 6/4	<b>Tesselations Lab &amp; Final Exam Rvw.</b>	<b>Intro to Transformations (Translations, Rotations &amp; Reflections)</b> <b>Regular, Semi-Regular &amp; Aperiodic Tesselations (Tilings) of the Plane</b>  Measurement Word Search (H/O)  <b>MML11 (MyMathLab.com Ch. 11 HW) due by 11:59pm on Sunday, 06/07/09</b>	Transformations & Tesselations & Final Exam Review
Tues 6/9	<b>Chs. 1-11 Cumulative Final Exam</b>	(CRN # 30863 Spring 2009 Math 169) Comprehensive <b>FINAL EXAM : Tuesday, June 9, 2009, 1:00 pm - 3:00 pm</b>	<b>Chapters 1-11 (Cumulative Exam)</b>

