

**Core Competencies Assessment 2007-2008: Area II Courses**  
**Eastern New Mexico University -- Mathematics –General Education Competencies**

<b><u>State Competencies</u></b> (Learning Outcomes Being Measured)	<b><u>Assessment Procedures</u></b> <b>Math 113 Mathematical Explorations</b>	<b><u>Assessment Results</u></b> T = Target A = Acceptable U = Unacceptable	<b><u>How Results Will Be Used To Make Improvements</u></b>	<b><u>(Optional)</u></b> Recommendations/Goals/ Priorities
<b>1. Students will display, analyze, and interpret data.</b> Students should: 1a, Discriminate among different types of data displays for the most effective presentation.				<i>Students interpreted this to mean graphs in the topologic sense (vertices and arcs). The instructor interpreted this to mean statistical data displays, topics that would be discussed in Math 114.</i>
1b. Draw conclusions from the data represented.	An extra credit problem on the last exam of the semester was assessed. See attached for problem and rubric.	Target: 10 Acceptable: 11 Unacceptable: 14		<i>This competency would be better assessed earlier in the semester. Since this was an optional problem, many students did not attempt it.</i>
1c. Analyze the implication of the conclusion to real life situations.	An extra credit problem on the last exam of the semester was assessed. See attached for problem and rubric.	Target: 8 Acceptable: 2 Unacceptable: 25	The validity of a mathematical idea/method should be extended to more than the current topic.	<i>This competency would be better assessed earlier in the semester. Since this was an optional problem, many students did not attempt it.</i>
<b>2. Students will demonstrate knowledge of problem-solving strategies.</b> Students should: 2a. For a given problem, gather and organize relevant information.				
2b. Choose an effective strategy to solve the problem.	An extra credit problem on the last exam of the semester was assessed. See attached for problem and rubric.	Target: 10 Acceptable: 10 Unacceptable: 15	Additionally, emphasis might be placed on development of student strategies.	
2c. Express and reflect on the reasonableness of the solution to the problem.	An extra credit problem on the last exam of the semester was assessed. See attached for problem and rubric.	Target: 7 Acceptable: 8 Unacceptable: 20	<i>As much emphasis should be placed on the logic of the solution as on the solution itself.</i>	

**Core Competencies Assessment 2007-2008: Area II Courses**  
**Eastern New Mexico University -- Mathematics –General Education Competencies, cont'd**

<u><b>State Competencies</b></u> (Learning Outcomes Being Measured)	<u><b>Assessment Procedures</b></u> <b>Math 113 Mathematical Explorations</b>	<u><b>Assessment Results</b></u> T = Target A = Acceptable U = Unacceptable	<u><b>How Results Will Be Used To Make Improvements</b></u>	<u><b>(Optional)</b></u> Recommendations/Goals/ Priorities
<b>3. Students will construct valid mathematical explanations.</b> Students should: Use mathematics to model and explain real life problems.	Problem on the last exam was used to assess this competency. See attached for problem and rubric.	Target: 25 Acceptable: 8 Unacceptable: 2		
<b>4. Students will display an understanding of the development of mathematics.</b> Students should: Recognize that math has evolved over centuries and that our current body of knowledge has been built upon contributions of many people and cultures over time.	An extra credit item on the last test of the semester was used to assess this competency. See attached for problem and rubric.	Target: 18 Acceptable: 6 Unacceptable: 11	Currently, students are required to write three 2-page papers during the semester. They are given a choice of biographies or current application topics. They submit them to me, but in the future, should be shared with other students.	
<b>5. Students will demonstrate an appreciation for the extend, application, and beauty of mathematics.</b> Students should: Recognize the inherent value of mathematical concepts, their connection to structures in nature, and their implications for everyday life. End—Area II Other Math	This item was not assessed this semester.			

Area II-Algebra Assessment completed by \_\_\_\_\_  
*Signature*

Ms. Kim Luna  
*Printed Name*

575-562-2368  
*Phone*

May, 2009  
*Date*