

## **Definitions of Proficiency Levels for Math Developmental Education FY 10**

### **Math Outcome 1: Apply mathematics in context using appropriate problem solving skills.**

**Mastery:** The student can recognize a problem, develop a correct mathematical model to solve the problem, and find the correct solution to the problem.

**Proficient:** The student can recognize a problem, develop a reasonable mathematical model to solve the problem, but cannot find the correct solution to the problem.

**Emerging:** The student has minimal understanding of solving a problem.

### **Math Outcome 2: Choose and manipulate formulas.**

**Mastery:** The student can recognize a problem, choose the correct mathematical formula to solve the problem, and find the correct solution to the problem.

**Proficient:** The student can recognize a problem, choose a reasonable mathematical formula to solve the problem, but cannot find the correct solution to the problem.

**Emerging:** The student has minimal understanding of solving a problem.

### **Math Outcome 3: Create and interpret graphical representation.**

**Mastery:** The student can create and interpret graphical representation.

**Proficient:** The student can either create graphical representation or interpret it, but not both.

**Emerging:** The student has minimal understanding of creating and interpreting graphical representation.

### **Math Outcome 4: Perform operations on mathematical structures, which may include real, complex, matrix, function space.**

**Mastery:** The student can choose the correct mathematical process for solving the problem and find the correct solution to the problem.

**Proficient:** The student can choose the correct mathematical process for solving the problem but cannot find the correct solution to the problem.

**Emerging:** The student has minimal understanding of the correct process for solving the problem.

## **Math Outcome 6: Demonstrate an understanding of geometric concepts.**

**Mastery:** The student can recognize the geometry of a problem, label the geometric figure appropriately, and create the correct equation, and find the correct solution to the problem.

**Proficient:** The student can recognize the geometry of a problem, label the geometric figure appropriately, and create the correct equation, but cannot find the correct solution to the problem.

**Emerging:** The student has minimal understanding of the geometry of the problem.

## **Math Outcome 7: Gain appreciation of the nature and uses of mathematics.**

**Positive Attitude:** Answered survey questions positively.

**Neutral:** Answered survey questions neutrally.

**Negative Attitude:** Answered survey questions negatively.

## **Math Outcome 8: Communicate using the language of mathematics.**

**Mastery:** The student can communicate in a clear and precise manner using the language of mathematics.

**Proficient:** The student's mathematical communication does not obscure meaning; however, there are some mathematical language errors.

**Emerging:** The student's mathematical language obscures meaning.