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Truckee Meadows Community College

Reno, Nevada

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Mathematics Assessment

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Mathematics Curriculum Before Calculus is in Transition.

- **Mathematics, possibly more than any other discipline, is under scrutiny by the public.**
- **"faculty must help their students think critically, learn how to learn, and find motivation for the study of mathematics in appreciation of its power and usefulness" (p. xii, AMATYC, 1995)**

Classroom Faculty are challenged to:

- "help their students think critically,
- learn how to learn,
- find motivation for the study of mathematics
- have an appreciation of its power and usefulness" (p. xii, AMATYC, 1995)

American Mathematical Association of Two-Year Colleges

Crossroads in Mathematics

- ***Standards for Introductory College Mathematics Before Calculus***
- **"establish standards for**
- **and make recommendations about**
- **two-year college and lower-division mathematics programs below the level of calculus"**

guidelines for mathematics education

- The challenge now is to synthesize and incorporate these exciting Standards into our courses.
- We then must assess student outcomes based on those standards.
- How can we show student achievement of those standards?

As we implement these Standards into the curriculum:

- *assess their effectiveness*
- *measure the success of those changes*

The Standards are in three categories:

- **Standards for Intellectual Development**
- **Standards for Content**
- **Standards for Pedagogy**

STANDARDS FOR INTELLICTUAL DEVELOPMENT

Standard 1-1: Problem Solving	**Standard 1-2: Modeling**
Standard 1-3: Reasoning	**Standard 1-4: Connecting with Other Disciplines**
Standard 1-5: Communicating	**Standard 1-6: Using Technology**
Standard 1-7: Developing Mathematical Power	

BLOOM'S TAXONOMY OF LEARNING

- 6. Evaluation
- 5. Synthesis
- 4. Analysis
- 3. Application
- 2. Comprehension
- 1. Knowledge

In each classroom, we have a mixture of learning styles

- *We also have our teaching style*
- *The assessments that are presented in this book are varied in style*
- *In this way, we can see the best performance by each of our students some of the time.*

True Colors™ classifies learners into four colors based on how they prefer to learn

- Green learners prefer to work independently
- Gold Learners do best when content is structured
- Blue learners feel best in interactive atmospheres
- Orange learners perform well in competition

This workbook is intended to address changes in learning objectives

and their related assessments.