

Student Learning Outcomes for Math 111 (Current Feb 2017):

Course Goal # 1: Represent numbers and operations with models.

SLO 1: Use visual models, including physical objects, drawings of counts, lengths, and area, number lines, and symbols to represent numbers and operations, and flexibly move between representations.

SLO 2: Explain the relationship between contexts and the appropriate mathematical operations.

Course Goal # 2: Identify and use the deeper structures of arithmetic.

SLO 1: Analyze and perform multiple methods for doing addition, subtraction, multiplication, and division.

SLO 2: Analyze student work, assess the validity of arguments, and identify mathematical misconceptions in mistakes.

SLO 3: Describe and use the relationships between operations to represent and solve problems.

SLO4: Describe and use strategies for mental computation and estimation using fact families, the structure of base-ten numbers, and the properties of arithmetic.

Course Goal # 3: Explain concepts in arithmetic.

SLO 1: Explain procedures for doing addition, subtraction, multiplication and division with base-10 numbers using correct mathematical terminology and notation.

SLO 2: Explain procedures for doing addition, subtraction, and multiplication with fractions using correct mathematical terminology and notation.

SLO 3: Explain why the commutative and associative properties of addition and multiplication and the distributive property of multiplication over addition make sense.

SLO 4: Explain how estimation and rounding work using models and correct mathematical terminology and notation.