West Los Angeles College
SLO Addendum

Course Name and Number   MATH 215

Course Title   PRINCIPLES OF MATHEMATICS I

Course Objectives (as stated in the Course Outline of Record)

1. Recognize valid and invalid uses of inductive and deductive reasoning

2. Employ multiple approaches to non-routine problems, e.g. in geometry, number theory and logic

3. Use mathematical notation to define sets and perform operations on them

4. Construct truth tables, establish equivalence, test the validity of a logical argument

5. Use algebraic formulas in geometrical, business, financial and scientific contexts

6. Appreciate the historical development of mathematics within different social contexts

Course SLO	Assessment Method	Criterion Level
One sentence that describes a major piece of knowledge, skill, or ability that students can demonstrate by the end of the course *Finish the sentence, "At end of the course, the successful student will be able to… "*	Major assignment, project or test used to demonstrate or apply outcome *Remember to have a mix of qualitative and quantitative assessment methods.*	Reflects satisfactory performance on the SLO • *At least X percent of students achieve this course SLO.* • *All students achieve at least the Y level on this SLO.* • *At least X percent of students achieve the Y level on this course SLO.*
1. Recognize valid and invalid uses of inductive and deductive reasoning. See example questions below.	Students will answer questions embedded on a final exam. A scantron scanner will be used to access the results for each of the relevant questions.	Each question will be answered correctly by 55 % of students.
2.		
3.		
4.		

Mapping to Program SLO and Institutional SLOs
Please indicate with an "X" in the appropriate boxes below, the Course SLO mapping to the corresponding Program and Institutional SLO(s).

Course SLO	Program SLO												Institutional SLO								
	1	2	3	4	5	6	7	8	9	10	11	12	A	B	C	D	E	F	G	H	I
#1	X		X		X								X								
#2																					

#3																		
#4																		

Course SLO Acknowledgements
Draft prepared by Matthew Robertson

Division Chair – Matthew G Robertson   Date

SLO Coordinator   Date

Dean   Date

Curriculum Committee Chair   Date

Academic Senate President   Date

VP of Academic Affairs (initial) and College President   Date

1. In order to prove something, we usually use either INDUCTIVE or DEDUCTIVE reasoning. (See P.2-9) **Give an example of INDUCTIVE reasoning from your own experiences**.

In exercises 2-7, construct a Venn diagram to determine the validity of the given argument.

2. 1. All contact sports are dangerous.
    2. Hockey is a contact sport.

    Therefore, hockey is dangerous.

3. 1. All contact sports are dangerous.
    2. Hockey is not dangerous.

    Therefore, hockey is not a contact sport.

4. 1. All loaded guns are dangerous.
    2. This gun is dangerous.

    Therefore, this gun is loaded.

In exercises 8-12, try to establish a correct conclusion to the following premises. Use Venn diagrams to help you.

6. 1. All nurses are sensitive people.
    2. All sensitive people are underpaid.

7. 1. Some architects are musicians.
    2. All architects are engineers.

8. 1. Real men don't eat quiche.
    2. Oscar Meyer eats quiche.

1. Classify the following argument: 1. Real men don't eat quiche.
                                      2. Arnold Schwarzenegger is a real man.

                                      Therefore, Arnold Schwarzenegger doesn't eat quiche.

    a) Inductive
    b) Deductive, Affirming the Antecedent
    c) Deductive, Denying the Consequent
    d) Invalid

2. Classify the following argument: 1. Real men don't eat quiche.
                                      2. Oscar Meyer eats quiche

                                      Therefore, Oscar Meyer isn't a real man.

    a) Inductive
    b) Deductive, Affirming the Antecedent
    c) Deductive, Denying the Consequent
    d) Invalid