#### **Symbolic Reasoning**

Core Assessment Summary Report Worksheet

| Name of Facult                     | y Member Submitting Data:  |
|------------------------------------|--|
| Course Title, C<br>were applied: _ | ourse Number, and Section of Course where the core rubrics shown below |

## **Symbolic Reasoning Core Student Learning Outcomes and Rubrics**

Please use the following outcomes and rubrics to assess student learning in your core course. Place each student into one of the categories below. You will need to report how many students fall into each category.

# **Outcome 1**: Students will be able to represent real-life problems through the use of mathematical formulas.

**Benchmark for Outcome 1:** It is expected that 70% of students will score a 3 or higher.

Exemplary (4) – The student correctly represents the real-life problem through the use of the formula.

Proficient (3) – The student misrepresents minor features of the problem through the use of the formula.

Developing (2) – The student misrepresents multiple features of the problem through the use of the formula.

Novice (1) – The student exhibits little or no understanding of the problem through the use of the formula.

No Competence (0) – Shows no ability at even the Novice level.

N/A - Did not complete assessment tool.

*In all cases, a 0 score should be assigned when student shows no ability at even the Novice level.*If students do not complete assessment tool, they will receive a score of N/A.

#### Outcome 2: Students will be able to solve problems using symbolic manipulation.

Benchmark for Outcome 2: It is expected that 70% of students will score a 3 or higher.

Exemplary (4) – The student gives the correct answer and uses the correct steps.

Proficient (3) – The student makes a calculation error causing an incorrect solution.

Developing (2) – The student makes multiple calculation errors or faulty inferences.

Novice (1) – The student exhibits little or no understanding of symbolic manipulation.

No Competence (0) – Shows no ability at even the Novice level.

N/A - Did not complete assessment tool.

In all cases, a 0 score should be assigned when student shows no ability at even the Novice level. If students do not complete assessment tool, they will receive a score of N/A.

## Outcome 3: Students will be able to interpret the meaning of mathematical representations.

Benchmark for Outcome 3: It is expected that 60% of students will score a 3 or higher.

Exemplary (4) – The student correctly and fully interprets the meaning of the mathematical representation.

Proficient (3) – The student exhibits general understanding of the meaning but misses some of the appropriate details.

Developing (2) – The student uses some of the correct terminology but fails to exhibit general understanding.

Novice (1) – The student exhibits little or no understanding of the meaning of the mathematical representation.

No Competence (0) – Shows no ability at even the Novice level.

N/A - Did not complete assessment tool.

*In all cases, a 0 score should be assigned when student shows no ability at even the Novice level. If students do not complete assessment tool, they will receive a score of N/A.* 

# Outcome 4: Students will be able to verify the validity of a mathematical argument.

Benchmark for Outcome 4: It is expected that 50% of students will score a 3 or higher.

Exemplary (4) – The student correctly identifies validity and correctly verifies his/her claim.

Proficient (3) – The student correctly identifies validity but fails to completely justify his/her claim.

Developing (2) – The student exhibits some understanding of the argument but fails to establish validity.

Novice (1) – The student exhibits little or no understanding of the mathematical argument.

No Competence (0) – Shows no ability at even the Novice level.

N/A - Did not complete assessment tool.

In all cases, a 0 score should be assigned when student shows no ability at even the Novice level. If students do not complete assessment tool, they will receive a score of N/A.

Please provide a summary description of the activity or assignment to which the faculty approved Mathematics Core rubrics were applied. In the summary, please clearly and specifically identify the course activity or assignment component that addresses each outcome (1-4).

**Please indicate a plan for action or improvement** for each outcome. If your goal was met, please answer "Goal was met, and we are monitoring this outcome."

# Please complete the requested information in the table shown below.

| Class Dept, N<br>CRN(s): |                   |     |   |   |   |   |   |                              |
|--------------------------|-------------------|-----|---|---|---|---|---|------------------------------|
|                          | Total<br>Students | N/A | 0 | 1 | 2 | 3 | 4 | Plan for action/improvement: |
| Outcome 1                |                   |     |   |   |   |   |   |                              |
| Outcome 2                |                   |     |   |   |   |   |   |                              |
| Outcome 3                |                   |     |   |   |   |   |   |                              |
| Outcome 4                |                   |     |   |   |   |   |   |                              |