**Communicating and Representing Student Self-Assessment**

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| I am able to … | | How am I doing … |
| My Mathematical Solution | … write a solution that shows my steps and gives reasons for my steps.  … provide a variety of methods to my answer. | Cold  Hot  Explain: |
| … describe my thinking with words, algebra, diagrams, graphs, and/or other forms. | Cold  Hot  Explain: |
| My Collaboration | ... use relevant mathematical vocabulary and language when describing my thinking with others in my group. | Cold  Hot  Explain: |
| … offer my ideas without fear and persevere in communicating my ideas with others. | Cold  Hot  Explain: |
| **Curricular Competency Self-Reflection** | | |
| During this activity, ***what did I do well*** with regards to communicating and representing mathematics? Please provide a specific example(s). | | |
| Based on this activity, ***what would I like to improve*** on with regards to communicating and representing mathematics? Please provide a specific example(s). | | |
| ***What can I do to improve*** my ability to communicate and represent mathematics? Please provide a specific example(s). | | |

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| **Communication Core Competency Self-Reflection** |
| Check off All the points that you have met during this activity.   * I can connect and engage with others to share and develop ideas   + I ask and respond to simple, direct questions.   + I am an active listener; I support and encourage the person speaking.   + I recognize that there are different points-of-view, and I can disagree respectfully. * I can acquire, interpret, and present information   + I can understand and share information about an idea that is important to me.   + I present information in an organized way.   + I can present information and ideas to an audience I may not know. * I can work collectively to plan, carry out, and review the activity   + I can work with others to achieve a common goal; I do my share.   + I can take on roles and responsibilities in a group.   + I can summarize key ideas and identify the ways we agree. * I support group interactions   + I give, receive, and act on feedback.   + I can recount the experience and activity and tell something I learned.   + I can represent my learning and tell how it connects to my experience and efforts. |
| During this activity, ***what did I do well*** with regard to mathematical communication? Please provide a specific example(s). |
| Based on this activity, ***what would I like to improve*** on with regards to mathematical communication? Please provide a specific example(s). |
| ***What can I do to improve*** my mathematical communication abilities? Please provide a specific example(s). |

**Appendix C**

**Formative Assessment for the Learning Activity**

Please use a highlighter to indicate the proficiency descriptors that best match your understanding of the course content and the Curricular Competency.

Indicate your level of ability based on the descriptors by highlighting one of the proficiency indicators.

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| Proficiency Indicators | Course Content: |
| Emerging | I can understand and recount the objective of the question.  I can identify the area of the course content the question is based on. |
| Developing | I can understand and identify the area of the course content the question is asking.  I can come up with an approach to solve the problem. |
| Proficient | I understand and can identify the objectives of the problem. I can clearly explain and represent different approaches to solve the problem. I am able to arrive at a solution with my group in multiple ways. |
| Extending | I fully understand and can quickly identify the objectives of the problem. I can clearly explain and represent different approaches to solve the problem. I can lead the group collaboratively to represent the solution in multiple ways, including different ways to verify the solution.  Working through the problem causes me to consider other relevant aspects of the question that are not stated in the question. |
|  | Curricular Competency: Communicating and Representing |
| Emerging  (#1, #2 or  1 to 2 out of 7) | 1. I can explain and justify using mathematical arguments to convince. 2. I can engage in discussions through small-group discussions. 3. I can represent using models, tables, graphs, words, numbers, and connect meanings among various representations. 4. I can represent in many ways, such as oral, written, visual, and use of technology. 5. I can make decisions by exploring different scenarios where I can choose and defend my choice. 6. I can explain and justify using mathematical arguments, and I can anticipate the consequences. 7. I can engage in mathematical discourse to deepen my understanding of math concepts, and I can clarify my thinking even if I am not sure about an idea or have misconceptions. |
| Developing  (#1 to #4 or  3 to 4 out of 7) |
| Proficient  (#1 to #5 or  5 out of 7) |
| Extending  (#1to #7 or  6 to 7 out of 7) |
| Reflection on the Course Content and the Curricular Competency | |
| Areas I did well | |
| Areas I wish to do better | |
| What steps can I take to improve on the areas I wish to do better? | |

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| Embedded Core Competencies | Checklist | Points |
| Communication | * I can connect and engage with others to share and develop ideas * I can acquire and present information * I can focus on intent and purpose |  |
| Collaboration | * I can work collectively * I can determine common purposes * I can support group interactions |  |
| Creative Thinking | * I look for new perspectives, new problems, or new approaches. * I can generate creative ideas as a result of engagement with someone else’s ideas. * I can further develop my ideas by evaluating and refining my original ideas. |  |
| Critical and Reflective  Thinking | * I can gather, select, evaluate, and synthesize information. * I can ask questions and offer judgments, conclusions, and interpretations supported by evidence I or others have gathered. * I can examine my thinking, seek feedback, reassess my work, and make adjustments. * I can develop or adapt criteria, check information, assess my thinking, and develop reasoned conclusions, judgments, or plans. |  |
| Positive Personal and Cultural Identity | * I understand that my characteristics, qualities, strengths, and challenges make me unique and are an important part of the communities in which I belong. * I understand that what I value influences the choices I make and how I present myself in various contexts. * I can explain how I can use my strengths to contribute to my home and/or communities. |  |
| Personal Awareness and Responsibility | * I use strategies for working toward a healthy and balanced lifestyle, for dealing with emotional challenges, and for finding peace in stressful times. * I have valuable ideas to share. * I take responsibility for my learning, seeking help as I need it. * I can set priorities, implement, monitor, and adjust a plan; and assess the results. |  |
| Social Awareness and Responsibility | * I work to make positive changes in the communities I belong to and the natural environment. * I am aware of how others may feel and take steps to help them feel included. * I can clarify problems or issues, generate multiple strategies, weigh consequences, compromise to meet the needs of others, and evaluate actions. * I use respectful and inclusive language and behavior, including in social media. I can advocate for others. |  |
| Reflection on Embedded Core Competencies | | |
| Areas I did well |  | |
| Areas I wish to do better |  | |
| What steps can I take to improve on the areas I wish to do better? |  | |