



Background Information:

- **Purpose:** This rubric is intended to support students and educators as they assess progress and completion of the performance-based graduation pathway requirements for mathematics.
- **Audience:** This document was written in language that is accessible to students and families, as well as educators, so that everyone can understand the expectations for successful completion of the pathway.
- **Rubric Design Considerations:**
 - Driving question: "What do we see in the student work when the student has demonstrated a particular mathematical practice?" Each of the practices has several descriptive indicators which describe the most important features that we will see in student work when the student has demonstrated the practice.
 - The single point rubric allows educators to assess and document their feedback to the student in a way that is more specific to the learning experience the student chose. Because this Graduation Pathway is intended to provide validation of that student's ability to meet the standards, and not a numerical grade, a yes/no assessment is all that is required

Directions:

1. Assess a student's learning experience using the rubric provided below. Select "yes" or "no" depending on whether evidence of the indicator described is present in the student's work.
 - a. If you select "no," you must include a description of areas for improvement (Grows).
 - b. If you select "yes," you must include a description of strengths or places where there is strong evidence (Glows).
 - i. Note: You may provide both Glows and Grows when selecting "yes."
2. In order to complete the pathway, students must "meet the standard" for at least five (5) out of the eight mathematical practices AND for at least two high-school level mathematics standards from each of at least two conceptual categories (limited to: Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability).
 - a. In order to "meet the standard" for the mathematical practices, students must provide evidence for each of the indicators listed.
 - b. In order to "meet the standard" for the high-school level mathematics standards, students must provide evidence that satisfies local scoring criteria.
3. Students are allowed to resubmit their evidence if needed. The feedback in the Glows and Grows sections should be incorporated into their revisions.



For each of the standards below, use the Evidence column to indicate whether the student has demonstrated that they have met each indicator.

Mathematical Practices & Indicators	Evidence			Glow (evidence of meeting standard)	Grows (areas for improvement)
	Meets the Standard	Does Not Meet the Standard	Not Selected		
1. Make sense of problems and persevere in solving them. <i>Note: Throughout this rubric, the word “problem” is a general term for “a question that needs to be answered, or something that needs to be figured out, addressed, or solved.”</i>					
A. The student clearly breaks down the problem by explaining the existing conditions, requirements, limitations, assumptions, and goals of the project.	☐	☐	☐		
B. The student develops and describes a well-thought out solution pathway after considering multiple approaches to the problem.	☐	☐	☐		
C. The student documents regular monitoring and evaluation of progress, adjusts their method when needed, and continues to work even when challenged.	☐	☐	☐		
D. The student checks work using two or more approaches and makes any necessary modifications. They explain the reasonableness of their solution within this context and why it makes sense.	☐	☐	☐		

Mathematical Practices & Indicators	Evidence			Glow (evidence of meeting standard)	Grows (areas for improvement)
	Meets the Standard	Does Not Meet the Standard	Not Selected		
2. Reason abstractly and quantitatively.					
A. The student translates the context of the problem into mathematical representations (expressions, equations, graphs, etc.) to create a coherent representation of the problems at hand.					
B. The student uses applicable mathematical reasoning and calculation to manipulate their symbolic representation in problem solving.					
3. Construct viable arguments and critique the reasoning of others.					
A. The student provides an introduction that includes stated assumptions, definitions, and previously established results to construct a compelling and well-supported mathematical argument.					
B. Throughout the learning experience, the student creates a logical progression of statements that support their tentative conclusions.					

Mathematical Practices & Indicators	Evidence			Glows (evidence of meeting standard)	Grows (areas for improvement)
	Meets the Standard	Does Not Meet the Standard	Not Selected		
C. As part of the conclusion, the student provides an explanation of their reasoning that others can follow including addressing one or more counter-arguments or examples.	☐	☐	☐		
4. Model with Mathematics.					
A. The student makes reasonable assumptions and approximations to simplify a complicated problem.	☐	☐	☐		
B. The student identifies important quantities and maps their relationships using tools such as diagrams, two-way tables, graphs, flowcharts, and formulas.	☐	☐	☐		
C. The student interprets and describes the relationship between quantities, mathematically recognizing patterns, trends, and functions as applicable, and then uses them to draw conclusions and make decisions.	☐	☐	☐		

Mathematical Practices & Indicators	Evidence			Glows (evidence of meeting standard)	Grows (areas for improvement)
	Meets the Standard	Does Not Meet the Standard	Not Selected		
5. Use appropriate tools strategically.					
A. The student considers a wide range of available tools and then makes sound decisions about which of these tools might be helpful and when to use them.	☐	☐	☐		
B. The student seeks out and uses external mathematical resources to pose and solve problems, and describes their application and benefit in solving this problem.	☐	☐	☐		
6. Attend to precision.					
A. The student consistently and appropriately uses clear definitions, states the meaning of the symbols they choose, specifies units of measure, and appropriately labels graphs and diagrams to clarify correspondence with quantities within the problem.	☐	☐	☐		
B. The student uses applicable vocabulary to explain and support their reasoning and solution pathway.	☐	☐	☐		

Mathematical Practices & Indicators	Evidence			Glow (evidence of meeting standard)	Grow (areas for improvement)
	Meets the Standard	Does Not Meet the Standard	Not Selected		
C. The student performs calculations accurately and efficiently. They then express numerical answers with a degree of precision appropriate to the problem context.	☐	☐	☐		
7. Look for and make use of structure.					
A. The student recognizes patterns and structures within quantities and expressions.	☐	☐	☐		
B. The student uses recognized patterns or structures to make predictions or decisions (rather than repeated calculations).	☐	☐	☐		
C. The student decomposes complicated quantities into single objects or a composition of several objects	☐	☐	☐		
8. Look for and express regularity in repeated reasoning.					
A. The student recognizes calculations or results that repeat and uses them mathematically through substitution or other processes.	☐	☐	☐		

Mathematical Practices & Indicators	Evidence			Glow (evidence of meeting standard)	Grows (areas for improvement)
	Meets the Standard	Does Not Meet the Standard	Not Selected		
B. The student identifies and uses progressions of calculations to create procedural shortcuts.	☐	☐	☐		

SUMMARY TABLE

Math Practice	Result	
	Meets the Standard	Does Not Meet the Standard
1. Make sense of problems and persevere in solving them.	☐	☐
2. Reason abstractly and quantitatively.	☐	☐
3. Construct viable arguments and critique the reasoning of others.	☐	☐
4. Model with Mathematics.	☐	☐
5. Use appropriate tools strategically.	☐	☐
6. Attend to precision.	☐	☐

7. Look for and make use of structure.	☐	☐
8. Look for and express regularity in repeated reasoning.	☐	☐
Practices Result: Did the student complete the pathway with 5+ practices met?	☐ YES	☐ NO

As part of the Performance-Based Graduation Pathway, students are also expected to meet the standard for at least **two high school mathematical standards** in each of two separate conceptual categories (limited to: Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability). Please list the standards that the student provided evidence for as part of their graduation pathway learning experience and select whether the standard has been met. These standards are scored using local criteria. Note that students may provide evidence of more than two standards.

		Meets the Standard	Does Not Meet the Standard
Conceptual Category 1: (circle category) Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability Standard 1: Standard 2: Additional Standard(s) met (optional)	Standard 1	☐	☐
	Standard 2	☐	☐
Conceptual Category 2: (circle category) Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability Standard 1: Standard 2: Additional Standard(s) met (optional)	Standard 1	☐	☐
	Standard 2	☐	☐

TOTAL SUMMARY		
Standards Result	Did the student meet the standard for at least two mathematical standards from each of at least two separate conceptual categories?	
	☐ YES	☐ NO
Final (Practices & Standards) Result:	Did the student complete the pathway with evidence for the required number of practices AND standards?	
	☐ YES	☐ NO
Final Pathway Result	If the answer to both summary questions above is YES, the student has passed their Gradation pathway.	
	If the answer to either summary questions above is NO, then the student should receive feedback, revise, and submit again.	
	☐ PASS	☐ NOT YET
Additional Comments		

Resources:

Single point mastery rubric and guidance adapted from: https://aurora-institute.org/cw_post/the-single-point-mastery-rubric/

Common Good Learning Tools' Standards Satchel: Common Core Standards for Mathematics: <https://satchel.commongoodlt.com/c6496676-d7cb-11e8-824f-0242ac160002/6b9e9614-d7cc-11e8-824f-0242ac160002/5> (referenced on OSPI's

K-12 Mathematics Learning Standards Site: <https://ospi.k12.wa.us/student-success/resources-subject-area/mathematics/mathematics-k-12-learning-standards>)