SCALE
Stanford Center for Assessment, Learning, & Equity

PERFORMANCE ASSESSMENT RESOURCE BANK

SCALE MATH PERFORMANCE ASSESSMENT RUBRIC, GRADES 3-12

Practice	Not Yet	Approaches	Achieves	Masters
Make sense of problems and persevere in solving them	I need assistance from my teacher to understand what the problem or question asks me to do. I am unsure how to connect this problem or question to what I already know. I am still working to organize the information in this problem or question.	I have a partial understanding of what a problem or question asks me to do. I am working on this to make the connection stronger. I show a partial connection between this question and what I already know. I am working on this to make the connection stronger. I organized some of the information in this question or problem but missed some important information.	I explain questions and problems in my own words. I relate questions and problems to similar things I have seen before. I organize given information before attempting to solve. I check to make sure that my final solution makes sense and is reasonable.	Achieves, and also: My work includes a reflection of how I monitored myself while I was working and adjusted my plan when necessary.
Reason abstractly and quantitatively	I am still working to translate between my math work (symbols, calculations) and real world situations. I currently do this with the assistance of my teacher.	I show and explain what some of my math work (symbols, calculations) means in real life contexts.	I show and explain what all or most of my math work (symbols, calculations) means in real life contexts. I pay attention to the meaning of quantities, not just how to compute them.	Achieves, and also: I describe my solution and any limitations in terms of the real world context described within the problem.

SCALE
Stanford Center for Assessment, Learning, & Equity

PERFORMANCE ASSESSMENT RESOURCE BANK

Practice	Not Yet	Approaches	Achieves	Masters
Construct viable arguments	I am still working to provide evidence (that someone else will understand) to support my conjectures, arguments, and claims.	I provide partial or inconsistent evidence to support my conjectures, arguments, and claims.	I support my arguments and claims with evidence. I evaluate and improve incomplete or flawed arguments	Achieves, and also: I provide more than one way to verify that my argument is correct.
Critique the reasoning of others	I need assistance to provide evidence to support or refute others' conjectures, arguments, and claims.	I provide partial or inconsistent evidence to support or refute others' conjectures, arguments, and claims.	I explain how I tested the reasoning of others. If there is a flaw, I can identify it. I use evidence to support or refute others' arguments and claims.	Achieves, and also: I provide more than one way to verify the reasoning of others.
Model with mathematics	I need assistance showing how to represent the given situation. I am unsure what information I should use in my model.	I start to represent situations, questions, and problems but I am not sure how to use my model to find my answer.	I represent situations, questions, and problems in multiple and effective ways (pictures, diagrams, charts, graphs, expressions, numbers, words etc.) I adjust, revise, and update my model when I receive new information, and document that I did this.	Achieves, and also: I describe the conditions for which my model is valid.

SCALE
Stanford Center for Assessment, Learning, & Equity

PERFORMANCE ASSESSMENT RESOURCE BANK

Practice	Not Yet	Approaches	Achieves	Masters
Use appropriate tools strategically	The tools I choose do not help me solve the problem.	I use appropriate tools but may have taken extra steps to get to my answer.	I choose the appropriate tool for my situation. I use my tools efficiently and document how I did this.	Achieves, and also: I explain how my answer would be affected by different choices of tools.
Attend to precision	My calculations and measurements have many errors. The language, symbols, and units I use to describe my ideas are ambiguous.	My calculations and measurements are mostly accurate with some errors. I use precise language, symbols, and units to describe my ideas in some parts of my work but some parts are unclear.	My calculations are accurate; my estimations are reasonable for the context. I use precise language, symbols, and units to describe my ideas	Achieves, and also: I justify the level of precision, estimation and/or the units selected given the context of the problem
Look for and express repeated reasoning	I point out examples of repeated reasoning and patterns with assistance and am working toward doing this on my own.	I use examples of repeated reasoning in calculations to find general rules, but I over-generalize or make other flawed assumptions.	I use examples of repeated reasoning in calculations to find general rules.	Achieves, and also: I explain and verify a pattern or general rule.
Communication and Representation	My work (words, representations, and calculations) is unclear and I can't tell others what I did.	My work (words, representations, and calculations) may be correct, but they are not organized for the reader to follow my thinking.	My work (words, representations and calculations) is organized and my results are labeled for readers to follow my argument.	Achieves, and also: I use multiple representations to help my reader make connections