

Pre K–K Rubric

Level	Problem Solving/ Reasoning and Proof	Communication	Representation	Connections
Novice	<ul style="list-style-type: none"> No strategy and reasoning is evident or Strategy and reasoning would not work to solve any part of the problem 	<ul style="list-style-type: none"> No awareness of audience or purpose is communicated No communication of an approach is evident 	<ul style="list-style-type: none"> No attempt is made to construct mathematical representation (diagram, model, tally chart, etc.) 	<ul style="list-style-type: none"> No mathematical connection is possible because strategy and reasoning are not evident
Apprentice	<ul style="list-style-type: none"> Partially correct strategy and reasoning is chosen that could solve part of the problem Evidence of drawing on some relevant previous mathematical knowledge is present 	<ul style="list-style-type: none"> Some awareness of audience or purpose is communicated One mathematical term and/or numbers (oral or written) is used to communicate strategy and reasoning 	<ul style="list-style-type: none"> An attempt is made to construct mathematical representation (diagram, model, tally chart, etc.) to communicate strategy and reasoning 	<ul style="list-style-type: none"> No attempt to make a mathematical connection about partially correct strategy and reasoning or Attempts to make an observation about the solution but it is not mathematically relevant
Practitioner	<ul style="list-style-type: none"> Correct strategy and reasoning is chosen to support conceptual understanding of the mathematics of the problem Evidence of solidifying prior knowledge and applying it to the problem-solving situation is present The answer must be correct 	<ul style="list-style-type: none"> A sense of audience or purpose is communicated At least two mathematical terms and/or numbers (oral or written) are used to communicate strategy and reasoning 	<ul style="list-style-type: none"> Appropriate mathematical representation (diagram, model, tally chart, etc.) is constructed to communicate strategy and reasoning All necessary labels are evident and data is accurate 	<ul style="list-style-type: none"> Mathematical observations are recognized <ul style="list-style-type: none"> - Some examples include stating and/or continuing a pattern, recreating the problem to find a new answer, linking number to mathematical concepts (Seven days is one week, 12 apples is a dozen)
Expert	<ul style="list-style-type: none"> Extends strategy and reasoning to show additional conceptual understanding of the mathematics of the problem Adjustments, analysis and alternative strategies may be considered The answer is correct 	<ul style="list-style-type: none"> A sense of audience and purpose is communicated Uses precise mathematical language and symbolic notation beyond what is expected to communicate strategy and reasoning 	<ul style="list-style-type: none"> Appropriate mathematical representation(s) (diagram, model, tally chart, etc.) are constructed to communicate, verify, clarify or extend strategy and reasoning All necessary labels are evident and data is accurate 	<ul style="list-style-type: none"> Mathematical observations are used to extend the solution <ul style="list-style-type: none"> - Some examples include verifying strategy and reasoning by solving the problem more than one way, relating one problem to another by their mathematical similarities, generalizing and extending the solution to other cases, testing and accepting or rejecting a hypothesis