

Math Honors Rubric

Criteria	Distinguished (4)	Accomplished (3)	Emerging (2)	Unacceptable (1)	Evidence
Motivation and Work Ethic	<ul style="list-style-type: none"> - Highly motivated -Goes beyond expectations -Produces high quality work 	<ul style="list-style-type: none"> -Usually motivated -Uses time effectively - Meets the requirements of the assignment 	<ul style="list-style-type: none"> -Sometimes motivated -Procrastinates occasionally - Meets most of the assignment requirements 	<ul style="list-style-type: none"> -Rarely motivated -Procrastinates frequently - Requirements of the assignment are often not met 	
Collaboration and Leadership	Contributes positively to group dynamics AND/OR leads and empowers group members towards positive outcomes	Satisfactory contributions to positive group dynamics	Unengaged on group dynamics	Detrimental to group dynamics	
Responsibility	Consistently comes to class prepared, on time, and responsible for completion of all assignments	Usually comes to class prepared, on time, and responsible for completion of all assignments	Sometimes comes to class prepared, on time, and responsible for completion of all assignments	Rarely comes to class prepared, on time, or responsible for completion of all assignments	
Communication (Verbal/Written)	<ul style="list-style-type: none"> -Uses extensive content specific vocabulary or terminology -Fully articulates the connections between mathematical concepts 	<ul style="list-style-type: none"> -Uses adequate content specific vocabulary or terminology - Explains mathematical concepts without difficulty 	<ul style="list-style-type: none"> -Uses ineffective content specific vocabulary and terminology -Rudimentary explanations of mathematical concepts 	<ul style="list-style-type: none"> -Avoids use of content specific vocabulary or terminology. - Displays errors in knowledge of mathematical concepts 	
Depth of Knowledge	<ul style="list-style-type: none"> -Consistently makes connections to real life and provides evidence of higher level thinking with no teacher prompting -Demonstrates above mastery of content knowledge 	<ul style="list-style-type: none"> -Makes connections to real life and provides evidence of higher level thinking with occasional teacher prompting -Demonstrates mastery of content knowledge 	<ul style="list-style-type: none"> -Makes connections to real life and provides evidence of higher level thinking with consistent teacher prompting -Demonstrates partial mastery of content knowledge 	<ul style="list-style-type: none"> -Rarely makes connections to real life and provides evidence of higher level thinking, despite teacher prompting -Demonstrates a novice level of content knowledge 	
Intellectual Curiosity	<ul style="list-style-type: none"> -Consistently poses thought-provoking questions -Consistently demonstrates creative thought process 	<ul style="list-style-type: none"> -Usually poses thought-provoking questions -Usually demonstrates creative thought process 	<ul style="list-style-type: none"> -Sometimes poses thought-provoking questions -Sometimes demonstrates creative thought process 	<ul style="list-style-type: none"> -Rarely poses thought-provoking questions -Rarely demonstrates creative thought process 	
Total Points 24 Honors = 20 or more (3 out of the 4 nine weeks)					
	Distinguished (4)	Accomplished (3)	Emerging (2)	Unacceptable (1)	

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Math Honors Examples

This is not a **checklist**. It presents several characteristics that a student may show at each level. Use this chart as a guide, if needed, when deciding where to place a student on the Honors Rubric.

Criteria	Distinguished Students	Accomplished Students	Emerging Students
Make Sense of Problems and Persevere in Solving Them	<p>Student explains the meaning of the problem, analyzes givens and goals, and chooses an efficient and mathematically sound solution pathway.</p> <p>Student implements multiple solution strategies.</p> <p>Student monitors progress and changes course when necessary. The student articulates whether or not their resulting solution “makes sense”.</p> <p>Student checks their answers using a different method.</p>	<p>Student explains the meaning of the problem, analyzes givens and goals, and plans a mathematically sound solution pathway.</p> <p>Student implements one or two appropriate solution strategies.</p> <p>Student monitors progress and changes course when necessary. The student articulates whether or not their solution “makes sense”.</p>	<p>Student has difficulty explaining the meaning of the problem with prompting from the teacher.</p> <p>Student implements an appropriate solution strategy.</p> <p>Student can explain the reasonableness of the solution with prompting from the teacher.</p>
Reason Abstractly and Quantitatively.	<p>Student abstracts a given situation, represents it symbolically in various ways, and manipulates the resulting symbols to determine a solution.</p> <p>Student pauses as needed during the manipulation and at the end of the problem solving process in order to relate the symbols back to the original problem or question and consider the units involved.</p>	<p>Student abstracts a given situation, represents it symbolically, and manipulates the resulting symbols to determine a solution.</p> <p>Student pauses as needed during the manipulation and at the end of the problem solving process in order to relate the symbols back to the original problem/question and consider the units involved.</p>	<p>Student can abstract a given situation and represent with prompting from the teacher.</p> <p>Student can attempt to contextualize a problem: pause as needed in order to relate the symbols back to the original problem/question and consider the units involved with prompting from the teacher.</p>
Construct Viable Arguments and Analyze the Reasoning of Others.	<p>Student understands and uses stated assumptions, definitions, and previously established results in constructing more than one argument.</p> <p>Student justifies conclusions, communicates to others, and responds to arguments of others by asking useful questions to clarify or improve the arguments of others.</p>	<p>Student understands and uses stated assumptions, definitions, and previously established results in constructing a mathematical argument.</p> <p>Student justifies conclusions, communicates them to others, and responds to the arguments of others.</p>	<p>Student understands and uses stated assumptions, definitions, and previously established results inconsistently when constructing mathematical arguments.</p> <p>Student partially justifies his/her conclusions, communicates them to others. Student justification may contain flaws.</p>

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<p>Model with Mathematics</p>	<p>Student can formulate a model that maps the relationship between important quantities in a practical situation.</p> <p>Student routinely interprets their model in the context of the situation, improving on the model if it has not served its purpose.</p>	<p>Student can formulate a model that maps the relationship between important quantities in a practical situation.</p> <p>Student uses the model to analyze the relationships represented in the problem in order to draw a mathematically sound conclusion.</p>	<p>Student attempts to formulate a model that maps the relationship between important quantities in a practical situation.</p> <p>Student attempts to analyze the relationships represented in the problem in order to draw a mathematically sound conclusion.</p>
<p>Use Appropriate Tools Strategically and Attend to Precision</p>	<p>Student selects and successfully uses familiar tools to solve a problem.</p> <p>Student communicates reasoning precisely to others using clear definitions and appropriate mathematical vocabulary. They examine claims made by others and make explicit use of definitions to either support or refute.</p> <p>Student calculates accurately and efficiently, expressing numerical answers with a degree of precision appropriate for the problem content.</p>	<p>Student selects and successfully uses familiar tools to solve a problem.</p> <p>Student communicates reasoning precisely to others, using clear definitions and appropriate mathematical vocabulary.</p> <p>Student calculates accurately, expressing numerical answers with a degree of precision appropriate for the problem content.</p>	<p>Student is guided in their selection of tools and attempts to use those tools to solve a problem.</p> <p>Student attempts to communicate reasoning precisely to others using some definitions and mathematical vocabulary.</p> <p>Student calculations and units of measuring / labeling are inconsistent.</p>
<p>Look for and Make use of Structure/Look for and Express Regularity in Repeated Reasoning</p>	<p>Student notices repeated patterns and can develop shortcuts while explaining why they work.</p> <p>Student is constantly evaluating the efficiency of their solution path.</p> <p>Student can see complex problems as a mixture of simpler structures and can justify or analyze whether a solution is reasonable with ease.</p>	<p>Student notices repeated patterns and can create shortcuts but cannot articulate why they work.</p> <p>Student sometimes has difficulty noticing whether their solution path is inefficient and finding a new approach. When faced with a complex problem, the student occasionally has difficulty finding an entry point or recognizing parts previously learned mathematics.</p>	<p>Student notices repeated patterns but cannot create a shortcut or formulate a rule.</p> <p>Student is reluctant to abandon a solution path that is not correct. When faced with a complex problem, the student struggles to find an entry point without prompting or guidance of the teacher.</p>