

Grade Level Proficiency Descriptors

Aspect	Sub-Aspect	K	1	2	3	4	5	6	7	8	9	10	11	12
Interprets	Understands the real-world problem	Makes a personal connection with one aspect of the problem <i>personal connection: experiences and prior knowledge</i>	Makes personal connections with aspects of the problem <i>personal connection: experiences and prior knowledge</i>	Makes personal connections to explore the problem <i>personal connection: experiences and prior knowledge</i>	Makes personal connection to explore the problem <i>personal connection: experiences and prior knowledge</i>	Makes general connections to understand the problem in context <i>general connection: personal or to similar problems</i>	Makes general connections to understand the problem in context <i>general connection: personal or to similar problems</i>	Makes relevant connections to understand a real-world problem <i>real-world problem: contextual, relevant, related to current learning, personally/locally/globally meaningful</i>	Makes relevant connections to understand a real-world problem <i>real-world problem: contextual, relevant, related to current learning, personally/locally/globally meaningful</i>	Makes relevant connections to fully understand the real-world problem in context <i>real-world problem: contextual, relevant, related to current learning, personally/locally/globally meaningful</i>	Makes relevant connections to fully understand the real-world problem in context <i>real-world problem: contextual, relevant, related to current learning, personally/locally/globally meaningful</i>	Makes connections necessary to understand the context and implications of the real-world problem <i>real-world problem: contextual, relevant, related to current learning, personally/locally/globally meaningful</i>	Makes connections necessary to investigate and understand new contexts and implications of real-world problems <i>real-world problem: contextual, relevant, related to current learning, personally/locally/globally meaningful</i>	Makes connections necessary to investigate and understand new contexts and implications of real-world problems <i>real-world problem: contextual, relevant, related to current learning, personally/locally/globally meaningful</i>
		Identifies a significant fact about the problem	Identifies a significant fact and gathers other information from the problem	Identifies and gathers most of the significant information from the presented problem to assist in solving the problem	Identifies and gathers most of the significant information from the presented problem to assist in solving the problem	Gathers relevant information from the presented problem to assist in solving the problem	Gathers relevant information from the presented problem to assist in solving the problem	Extracts relevant information from the presented problem needed to solve the problem	Extracts relevant information from the presented problem needed to solve the problem	Extracts relevant information from the presented problem and other external resources as needed required to solve the problem.	Extracts relevant information from the presented problem and other external resources as needed required to solve the problem.	Extracts and organizes relevant information from the presented problem and other external resources as needed from a variety of sources to be used in solving the problem.	Extracts and organizes relevant information from the presented problem and other curated external resources as needed from a variety of sources to be used in solving the problem.	Extracts and organizes relevant information from the presented problem and other curated external resources as needed from a variety of sources to be used in solving the problem.
	Identifies parameters and limitations	Understands that problems have parameters <i>parameters: factors and conditions which define the problem</i>	Identifies a clearly defined parameter needed to solve the problem <i>parameters: factors and conditions which define the problem</i>	Identifies some of the clearly defined parameters needed to solve the problem <i>parameters: factors and conditions which define the problem</i>	Identifies most of the clearly defined parameters needed to solve the problem <i>parameters: factors and conditions which define the problem</i>	Identifies all clearly defined parameters needed to solve the problem <i>parameters: factors and conditions which define the problem</i>	Identifies all clearly defined parameters needed to solve the problem <i>parameters: factors and conditions which define the problem</i>	Identifies only relevant explicit parameters needed to solve the problem <i>parameters: factors and conditions which define the problem</i> <i>limitations: reasonable constraints in a real world problem or context</i>	Identifies only relevant explicit parameters needed to solve the problem <i>parameters: factors and conditions which define the problem</i> <i>limitations: reasonable constraints in a real world problem or context</i>	Identifies relevant explicit parameters and limitations needed to solve the problem <i>parameters: factors and conditions which define the problem</i> <i>limitations: reasonable constraints in a real world problem or context</i>	Identifies relevant explicit parameters and limitations needed to solve the problem <i>parameters: factors and conditions which define the problem</i> <i>limitations: reasonable constraints in a real world problem or context</i>	Identifies relevant explicit parameters and infers implicit limitations needed to solve the problem <i>parameters: factors and conditions which define the problem</i> <i>limitations: reasonable constraints in a real world problem or context</i>	Identifies explicit and implicit parameters and limitations needed to solve the problem <i>parameters: factors and conditions which define the problem</i> <i>limitations: reasonable constraints in a real world problem or context</i>	Identifies explicit and implicit parameters and limitations of the problem <i>parameters: factors and conditions which define the problem</i> <i>limitations: reasonable constraints in a real world problem or context</i>

Applies	<p>Translates scenario into a mathematical problem (Mathematizes)</p> <p>Recognizes the mathematical competencies and content needed to solve the problem</p> <p><i>content: link to math curriculum</i></p>	<p>Recognizes the mathematical competencies and content needed to solve the problem</p> <p><i>content: link to math curriculum</i></p>	<p>Identifies the mathematical competencies and content needed to solve the problem</p> <p><i>content: link to math curriculum</i></p>	<p>Identifies the mathematical competencies and content needed to solve the problem</p> <p><i>content: link to math curriculum</i></p>	<p>Applies the mathematical understanding needed to partially translate a familiar scenario into a mathematical problem</p> <p><i>mathematical understanding: link to math curriculum</i></p>	<p>Applies the mathematical understanding needed to partially translate a familiar scenario into a mathematical problem</p> <p><i>mathematical understanding: link to math curriculum</i></p>	<p>Applies the mathematical understanding needed to translate a familiar scenario into a mathematical problem</p> <p><i>mathematical understanding: link to math curriculum</i></p> <p><i>familiar: previously seen or modelled</i></p>	<p>Applies the mathematical understanding needed to translate a familiar scenario into a mathematical problem</p> <p><i>mathematical understanding: link to math curriculum</i></p> <p><i>familiar: previously seen or modelled</i></p>	<p>Applies the mathematical understanding needed to translate an unfamiliar scenario into a mathematical problem.</p> <p><i>mathematical understanding: link to math curriculum</i></p> <p><i>unfamiliar: previously unseen or unmodelled</i></p>	<p>Applies the mathematical understanding needed to translate an unfamiliar scenario into a mathematical problem.</p> <p><i>mathematical understanding: link to math curriculum</i></p> <p><i>unfamiliar: previously unseen or unmodelled</i></p>	<p>Applies the mathematical understanding needed to translate a complex, unfamiliar scenario into a mathematical problem.</p> <p><i>mathematical understanding: link to math curriculum</i></p> <p><i>unfamiliar: previously unseen or unmodelled</i></p>	<p>Applies mathematical understanding needed to translate a complex, unfamiliar scenario into a mathematical problem.</p> <p><i>mathematical understanding: link to math curriculum</i></p> <p><i>unfamiliar: previously unseen or unmodelled</i></p>	
	<p>Represents the mathematical problem (Visualization)</p> <p>Represents the mathematical problem using concrete materials and/or pictures</p>	<p>Represents the mathematical problem using concrete materials and diagrams</p>	<p>Represents the mathematical problem using concrete materials and diagrams</p>	<p>Represents the mathematical problem using concrete materials, diagrams, and/or some familiar equations</p> <p><i>familiar: previously seen or modelled</i></p>	<p>Represents the mathematical problem using concrete materials, diagrams, and/or some familiar equations</p> <p><i>familiar: previously seen or modelled</i></p>	<p>Represents the mathematical problem using concrete materials, diagrams, and/or equations</p> <p><i>models: e.g., concrete materials, diagrams, equations</i></p>	<p>Accurately represents the mathematical problem using a variety of models</p> <p><i>models: e.g., concrete materials, diagrams, equations</i></p>	<p>Accurately represents the mathematical problem using a variety of models</p> <p><i>models: e.g., concrete materials, diagrams, equations</i></p>	<p>Clearly represents the mathematical problem by choosing an appropriate model(s)</p> <p><i>clearly: immediately demonstrates student's understanding</i></p> <p><i>appropriate: link to Math curriculum</i></p> <p><i>models: e.g., concrete materials, diagrams, equations</i></p>	<p>Clearly represents the mathematical problem by choosing an appropriate model(s)</p> <p><i>clearly: immediately demonstrates student's understanding</i></p> <p><i>appropriate: link to Math curriculum</i></p> <p><i>models: e.g., concrete materials, diagrams, equations</i></p>	<p>Clearly and accurately represents the problem by strategically choosing an effective model(s)</p> <p><i>clearly: immediately demonstrates student's understanding</i></p> <p><i>effective: chooses a model which best fits the student's understanding and ability</i></p> <p><i>models: e.g., concrete materials, diagrams, equations</i></p>	<p>Clearly and accurately represents the problem in context by strategically choosing an effective model(s)</p> <p><i>clearly: immediately demonstrates student's understanding</i></p> <p><i>in context: the representation is appropriate to the problem or scenario</i></p> <p><i>effective: chooses a model which best fits the student's understanding and ability</i></p> <p><i>models: e.g., concrete materials, diagrams, equations</i></p>	<p>Clearly and accurately represents the problem in context by strategically choosing an effective model(s)</p> <p><i>clearly: immediately demonstrates student's understanding</i></p> <p><i>in context: the representation is appropriate to the problem or scenario</i></p> <p><i>effective: chooses a model which best fits the student's understanding and ability</i></p> <p><i>models: e.g., concrete materials, diagrams, equations</i></p>
	<p>Develops a plan of approach</p> <p>Experiments with problem solving using prior knowledge</p>	<p>Develops a straightforward plan of approach using prior knowledge and mathematical tools and strategies</p> <p><i>basic: could be one step</i></p> <p><i>familiar: previously seen or modelled</i></p>	<p>Develops a basic plan of approach using familiar mathematical tools and/or strategies</p> <p><i>basic: could be one step</i></p> <p><i>familiar: previously seen or modelled</i></p>	<p>Develops a basic plan of approach using familiar mathematical tools and/or strategies</p> <p><i>basic: could be one step</i></p> <p><i>familiar: previously seen or modelled</i></p>	<p>Develops a sequence of steps that applies familiar mathematical tools and/or strategies</p> <p><i>familiar: previously seen or modelled</i></p>	<p>Develops a logical sequence of steps that applies familiar mathematical tools and/or strategies</p> <p><i>familiar: previously seen or modelled</i></p>	<p>Develops an organized and intentional sequence of steps that applies appropriate mathematical tools and/or strategies</p> <p><i>appropriate: link to Math curriculum</i></p>	<p>Develops logical and organized plan that applies appropriate mathematical tools and/or strategies</p> <p><i>plan: an intentional sequence of steps with an end goal</i></p> <p><i>appropriate: link to Math curriculum</i></p> <p><i>strategies: e.g., Using a tool [calculator], picture, graph, equation</i></p>	<p>Uses mathematical reasoning to develop a logical and organized plan that applies appropriate mathematical tools and/or strategies</p> <p><i>plan: an intentional sequence of steps with an end goal</i></p> <p><i>appropriate: link to Math curriculum</i></p> <p><i>strategies: e.g., Using a tool [calculator], picture, graph, equation</i></p>	<p>Uses mathematical reasoning to develop a logical and organized plan that applies appropriate mathematical tools and/or strategies</p> <p><i>plan: an intentional sequence of steps with an end goal</i></p> <p><i>appropriate: link to Math curriculum</i></p> <p><i>strategies: e.g., Using a tool [calculator], picture, graph, equation</i></p>	<p>Uses mathematical reasoning to develop a logical, organized, and effective multi-step plan that applies appropriate mathematical tools and/or strategies</p> <p><i>plan: an intentional sequence of steps with an end goal</i></p> <p><i>appropriate: link to Math curriculum</i></p> <p><i>strategies: e.g., Using a tool [calculator], algorithm, picture, graph; Social Studies/Science: evidence from text</i></p>	<p>Uses mathematical reasoning to develop a logical, organized, and effective multi-step plan that applies appropriate mathematical tools and/or strategies</p> <p><i>plan: an intentional sequence of steps with an end goal</i></p> <p><i>appropriate: link to Math curriculum</i></p> <p><i>strategies: e.g., Using a tool [calculator], algorithm, picture, graph; Social Studies/Science: evidence from text</i></p>	

Solves	Estimates reasonably in context	Estimates the scope of the answer <i>scope: range, size, shape, time, etc.</i>	Estimates the scope of the answer <i>scope: range, size, shape, time, etc.</i>	Estimates reasonably within known parameters using benchmarks <i>benchmarks: e.g., 25, 50, 100, distance, colour, rhythm, pattern</i>	Estimates reasonably within identified parameters using benchmarks and information from the scenario <i>Benchmarks: e.g., up to 1000, distance, colour, rhythm, pattern</i>	Estimates reasonably within identified parameters using benchmarks and relevant information from the scenario <i>Benchmarks: e.g., up to 10 000, fractions, decimals, distance, colour, rhythm, pattern</i>	Estimates reasonably within identified parameters using benchmarks and relevant information from the scenario <i>Benchmarks: e.g., up to 1 000 000, fractions, decimals, distance, colour, rhythm, pattern</i>	Estimates reasonably within the context and parameters of the situation using benchmarks <i>Benchmarks: e.g., thousandths to billions, length, area; Arts: rhythm, pattern, Science: trend, frequency, Language Arts: pattern, ADST: area, materials needed</i>	Estimates reasonably within the context and parameters of the situation using appropriate benchmarks <i>Benchmarks: e.g., perfect squares, volume, Arts: rhythm, pattern, Science: trend, frequency, Language Arts: pattern, ADST: area, volume, materials needed</i>	Estimates reasonably within the context and parameters of the situation using appropriate benchmarks <i>Benchmarks: e.g., perfect squares, volume, Arts: rhythm, pattern, Science: trend, frequency, Language Arts: pattern, ADST: area, volume, materials needed</i>	Estimates reasonably in context, within parameters, and considering limitations	Estimates reasonably in context, within parameters, and considering limitations; explains reasoning for estimate	Estimates reasonably in context, within parameters, and considering limitations; explains reasoning for estimate
	Solves the mathematical problem	Finds a solution using play, concrete materials, or models	Finds a solution using play, concrete materials, or models	Finds a solution using mathematical tools and/or strategies <i>strategies: e.g., play, concrete materials, or models</i>	Finds a solution by applying familiar mathematical tools and/or strategies <i>strategies: e.g., play, concrete materials, or models</i>	Finds a solution by applying familiar mathematical tools and/or strategies <i>strategies: e.g., equations, play, concrete materials, or models</i>	Finds a solution by applying familiar mathematical tools and/or strategies <i>strategies: e.g., equations, play, concrete materials, or models</i>	Finds a solution using appropriate strategies <i>strategies: (e.g., Using a tool [calculator], picture, graph, equations, concrete materials, and/or models)</i>	Finds a solution using appropriate strategies <i>strategies: (e.g., Using a tool [calculator], picture, graph, equations, concrete materials, and/or models)</i>	Solves the mathematical problem using effective strategies as needed <i>effective: the end goal can be met</i> <i>strategies: (e.g., Using a tool [calculator], picture, graph, equations, concrete materials, and/or models)</i>	Solves the mathematical problem following a logical plan using efficient strategies as needed <i>plan: an intentional sequence of steps with an end goal</i> <i>efficient: well-organized and competent</i> <i>strategies: (e.g. Using a tool [calculator], algorithm, picture, graph; Social Studies/Science: evidence from text</i>	Solves the mathematical problem following a logical, multi-step plan using efficient strategies as needed <i>plan: an intentional sequence of steps with an end goal</i> <i>efficient: well-organized and competent</i> <i>strategies: (e.g. Using a tool [calculator], algorithm, picture, graph; Social Studies/Science: evidence from text</i>	Solves the mathematical problem following a logical, multi-step plan using efficient strategies as needed <i>plan: an intentional sequence of steps with an end goal</i> <i>efficient: well-organized and competent</i> <i>strategies: (e.g. Using a tool [calculator], algorithm, picture, graph; Social Studies/Science: evidence from text</i>
	Verifies accuracy of mathematical solution	Compares their solution with those of their teachers and/or peers	Compares their solution with those of their teachers and/or peers	Verifies accuracy of solution by comparing solution to a variety of proofs/checks, including estimation <i>familiar: previously seen or modelled</i>	Verifies accuracy of solution using familiar mathematical strategies and/or by comparing to their estimate <i>familiar: previously seen or modelled</i>	Verifies accuracy of solution using reasonable estimates and other familiar mathematical strategies <i>familiar: previously seen or modelled</i>	Verifies accuracy of solution using reasonable estimates and other familiar mathematical strategies <i>familiar: previously seen or modelled</i>	Verifies the accuracy of the results and/or solution using reasonable estimates and other familiar strategies <i>familiar: previously seen or modelled, e.g., using a tool [calculator], alternate algorithm, picture, graph</i>	Verifies the accuracy of the results and/or solution using reasonable estimates and other familiar strategies. Identifies factors that could affect the accuracy of the results <i>familiar: previously seen or modelled, e.g., using a tool [calculator], alternate algorithm, picture, graph</i>	Verifies the accuracy of the results and/or solution using reasonable estimates and other familiar strategies. Identifies factors that could affect the accuracy of the results <i>familiar: previously seen or modelled, e.g., using a tool [calculator], alternate algorithm, picture, graph</i>	Verifies the accuracy of the results and/or solution using reasonable estimates and other familiar strategies. Describes how factors affect the accuracy of the results <i>familiar: previously seen or modelled, e.g., using a tool [calculator], alternate algorithm, picture, graph</i>	Verifies the accuracy of the results and/or solution using reasonable estimates and other familiar strategies. Compares and evaluates how factors affect the accuracy of the results <i>familiar: previously seen or modelled, e.g., using a tool [calculator], alternate algorithm, picture, graph</i>	Verifies the accuracy of the results and/or solution using reasonable estimates and other familiar strategies. Compares and evaluates how factors affect the accuracy of the results <i>familiar: previously seen or modelled, e.g., using a tool [calculator], alternate algorithm, picture, graph</i>

Analyzes	Reflects on the reasonableness of solution in context	Identifies a reasonable solution in relation to the original problem/question	Identifies a reasonable solution in relation to the original problem/question	Reflects on the reasonableness of a solution in relation to the original problem/question	Reflects on the reasonableness of a solution in relation to the original problem/question	Reflects on the reasonableness of their solution in relation to the original problem/question	Reflects on the reasonableness of their solution in relation to the original problem/question	Reflects on the reasonableness of their solution within the context of the problem <i>reasonableness: rationality, practicality</i> <i>context of the problem: e.g., Social Studies/Science: evidence from text; Arts: soliciting feedback</i>	Reflects on the reasonableness of their solution within the context of the problem <i>reasonableness: rationality, practicality</i> <i>context of the problem: e.g., Social Studies/Science: evidence from text; Arts: soliciting feedback</i>	Reflects on the validity of their solution within the context of the problem <i>validity: accuracy in context</i> <i>context of the problem: e.g., Social Studies/Science: evidence from text; Arts: soliciting feedback</i>	Reflects on the validity of their solution within the context of the problem <i>validity: accuracy in context</i> <i>context of the problem: e.g., Social Studies/Science: evidence from text; Arts: soliciting feedback</i>	Reflects on the validity of solution identifying contextual factors that may affect their answer <i>validity: accuracy in context</i> <i>solution: e.g., lab results, map, product, model, etc.</i> <i>contextual factors: Social Studies/Science: evidence from text; Arts: soliciting feedback</i>	Reflects on the validity and reliability of processes and solutions, describing how contextual factors may affect their answer <i>validity: accuracy in context</i> <i>reliability: reproducibility of results</i> <i>contextual factors: Social Studies/Science: evidence from text; Arts: soliciting feedback</i>	Reflects on the validity and reliability of processes and solutions, describing how contextual factors may affect their answer <i>validity: accuracy in context</i> <i>reliability: reproducibility of results</i> <i>contextual factors: Social Studies/Science: evidence from text; Arts: soliciting feedback</i>
	Evaluates alternative approaches	Identifies an alternative approach	Identifies an alternative approach	Explores an alternative approach	Explores alternative approaches	Compares and contrasts alternative approaches <i>approaches: own approach, peer-, or teacher-driven approach</i>	Compares and contrasts alternative approaches <i>approaches: own approach, peer-, or teacher-driven approach</i>	Describes the benefits and limitations of alternative approaches <i>approaches: own approach, peer-, or teacher-driven approach</i>	Describes the benefits and limitations of alternative approaches <i>approaches: own approach, peer-, or teacher-driven approach</i>	Evaluates the benefits and limitations of alternative approaches <i>approaches: own approach, peer-, or teacher-driven approach</i>	Evaluates the benefits and limitations of alternative approaches <i>approaches: own approach, peer-, or teacher-driven approach; comparison to research-based approaches</i>	Evaluates efficiency and effectiveness of alternative approaches <i>approaches: own approach, peer-, or teacher-driven approach; comparison to research-based approaches</i>	Evaluates efficiency and effectiveness of alternative approaches and evaluates possible improvements <i>approaches: own approach, peer-, or teacher-driven approach; comparison to research-based approaches</i>	Evaluates efficiency and effectiveness of alternative approaches and evaluates possible improvements <i>approaches: own approach, peer-, or teacher-driven approach; comparison to research-based approaches</i>
	Revises approach as needed	Experiments with a recommended alternative approach to solve the problem	Experiments with a recommended alternative approach to solve the problem	Selects an alternative approach to solve the problem	Selects an alternative approach to solve the problem	Identifies and experiments with an alternative approach	Identifies and experiments with an alternative approach	Refines approach using the benefits and limitations of alternative approaches <i>refines: improves through small changes</i>	Refines approach using the benefits and limitations of alternative approaches <i>refines: improves through small changes</i>	Revises approach using the benefits and limitations of alternative approaches <i>revises: reflects and adjusts</i>	Revises approach based on their evaluation of alternative approaches <i>revises: reflects and adjusts</i>	Revises approach using the benefits and limitations of alternative approaches to compare alternative solution(s) <i>revises: reflects and adjusts</i>	Redesigns approach to improve efficiency of process or accuracy of solution. <i>redesigns: iteratively reflects and adjusts</i>	Redesigns approach to improve efficiency of process or accuracy of solution. <i>redesigns: iteratively reflects and adjusts</i>

Communicates	Represents processes and solution	Represents problem solving process using numbers, pictures, and/or manipulatives	Represents problem solving process using words, numbers, pictures, symbols and/or manipulatives	Represents problem solving process using familiar tools <i>familiar tools: e.g., manipulatives, symbols, graphic organizers, charts</i>	Represents processes and solution by selecting and using reasonable tools <i>reasonable tools: table, manipulative, graphic organizer, array, model, etc.</i>	Represents processes and solution by selecting and using reasonable tools <i>reasonable tools: model, chart, map, table, graph, chart, array etc.</i>	Represents processes and solution by selecting and using reasonable tools <i>reasonable tools: model, chart, map, table, graph, chart, array etc.</i>	Represents full process and solution by selecting and using appropriate tools <i>appropriate tools: model, chart, map, table, graph, chart, array, etc.</i>	Represents full process and solution by selecting and using appropriate tools <i>appropriate tools: model, chart, map, table, graph, chart, array, equation etc.</i>	Effectively represents full process and solution using appropriate presentations <i>effectively: student selects an appropriate number of steps</i> <i>appropriate presentations: e.g., bulleted explanation, equation, graph, model, map, table, array)</i>	Effectively represents full process and solution using appropriate presentations <i>effectively: student selects an appropriate number of steps</i> <i>appropriate presentations: e.g., bulleted explanation, equation, graph, model, map, table, diagram)</i>	Represents complex processes and solutions using a variety of presentations in a manner that is suitable to the context <i>presentations: e.g., bulleted explanation, equation, graph, model, map, table, diagram)</i>	Represents complex processes and solutions. Chooses a presentation most suited for the purpose, context and audience. <i>Presentation: e.g., proof, model, equation, graph, model, map, table, diagram</i>	Represents complex processes and solutions. Chooses a presentation most suited for the purpose, context and audience. <i>Presentation: e.g., proof, model, equation, graph, model, map, table, diagram</i>
	Explains the approach taken	Identifies one step of their problem-solving approach	Outlines their problem-solving approach	Outlines their problem-solving approach using familiar mathematical language <i>familiar: previously seen or modelled</i> <i>mathematical language: link to math curriculum</i>	Describes their problem-solving approach using familiar mathematical language <i>familiar: previously seen or modelled</i> <i>mathematical language: link to math curriculum</i>	Describes their problem-solving approach using familiar mathematical language <i>familiar: previously seen or modelled</i> <i>mathematical language: link to math curriculum</i>	Describes their problem-solving approach using familiar mathematical language <i>familiar: previously seen or modelled</i> <i>mathematical language: link to math curriculum</i>	Accurately explains the approach used <i>approach: e.g., process: making a model, tool: manipulatives, strategy: using an equation</i>	Accurately explains the approach used <i>approach: e.g., process: making a model, tool: calculator, strategy: using an equation</i>	Accurately explains the approach used, identifying limitations and assumptions of the approach <i>approach: e.g., process: making a diagram, tool: calculator, strategy: using an equation</i>	Accurately explains the approach used, identifying limitations and assumptions of the approach <i>approach: e.g., process: making a diagram, tool: calculator, strategy: using an equation</i>	Accurately explains in detail the approach used, describing any limitations and assumptions of the approach <i>approach: e.g., process: making a flowchart, tool: calculator, strategy: using a familiar algorithm or evidence from text</i>	Accurately explains in detail the approach used, evaluating the effect of any assumptions or limitations of the approach <i>approach: e.g., process: making a flowchart, tool: calculator, strategy: using an algorithm or evidence from text</i> <i>evaluate: assess the implications</i>	Accurately explains in detail the approach used, evaluating the effect of any assumptions or limitations of the approach <i>approach: e.g., process: making a flowchart, tool: calculator, strategy: using an algorithm or evidence from text</i> <i>evaluate: assess the implications</i>
	Defends decisions and assumptions	Identifies one problem-solving decision	Outlines one problem-solving decision	Describes one problem-solving decision and a supporting reason	Describes their problem-solving decisions and supporting reasons	Explains their problem-solving decisions and supporting reasons	Explains their problem-solving decisions and supporting reasons	Presents a rationale for their problem-solving decisions and assumptions	Presents a rationale for their problem-solving decisions and assumptions	Presents a logical argument and justifies their decisions and assumptions	Presents a logical argument and justifies their decisions and assumptions	Presents a valid, logical argument to justify their decisions about the selected approach and assumptions, and describes the effect of these choices	Presents a valid, logical argument to justify their decisions about the selected approach used, evaluating assumptions and the effect of these choices <i>evaluate: assess the implications</i>	Presents a valid, logical argument to justify their decisions about the selected approach used, evaluating assumptions and the effect of these choices <i>evaluate: assess the implications</i>