



Alignment of Alaska State Standards with Solve It!

| STANDARD | DESCRIPTION | ALIGNMENT WITH <i>Solve It!</i> |
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| STANDARDS FOR MATHEMATICAL PRACTICE 1 | Make sense of problems and persevere in solving them. | <ul style="list-style-type: none"> Paraphrasing (“explaining to themselves the meaning of the problem”) Hypothesizing (to “plan a solution pathway rather than simply jumping into a solution attempt”) Visualizing (to “draw diagrams of important features and relationships...to help conceptualize” the problem) Checking (to “check their answers to problems using a different method”) Metacognition (to “monitor and evaluate their progress and change course if necessary”; to “continually ask themselves, ‘Does this make sense?’”) |
| STANDARDS FOR MATHEMATICAL PRACTICE 2 | Reason abstractly and quantitatively. | <ul style="list-style-type: none"> Concepts of Operations (“knowing and flexibly using different properties of operations”) Visualizing (“to abstract a given situation and represent it symbolically and manipulate the representing symbols”; to “create a coherent representation of the problem at hand”) Computing (“considering the units involved; attending to the meaning of quantities, not just how to compute them”) |
| STANDARDS FOR MATHEMATICAL PRACTICE 3 | Construct viable arguments and critique the reasoning of others. | <ul style="list-style-type: none"> Practice with Peers (to “justify their conclusions, communicate them to others, and respond to the arguments of others”) Discussion of Solution Paths (to “compare the effectiveness of two plausible arguments [and] distinguish correct logic or reasoning from that which is flawed”; to “listen or read the arguments of others, decide whether they makes sense, and ask useful questions to clarify or improve the arguments”) Visualizing (to “construct arguments using concrete referents such as objects, drawings, [and] diagrams”) |
| STANDARDS FOR MATHEMATICAL PRACTICE 4 | Model with mathematics. | <ul style="list-style-type: none"> Visualizing (“to identify important quantities in a practical situation and map their relationships using tools such as diagrams”) Hypothesizing (to “analyze those relationships mathematically to draw conclusions”) Metacognition (to “interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose”) |
| STANDARDS FOR MATHEMATICAL PRACTICE 5 | Use appropriate tools strategically. | <ul style="list-style-type: none"> Visualizing (to “consider the available tools when solving a mathematical problem”) Estimation (to “detect possible errors by strategically using estimation”) |

continued





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| STANDARDS FOR MATHEMATICAL PRACTICE 6 | Attend to precision. | <ul style="list-style-type: none">• Practice with Peers (to “try to communicate precisely to others”)• Computing (“specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem”; “calculating accurately and efficiently”) |
| STANDARDS FOR MATHEMATICAL PRACTICE 7 | Look for and make use of structure. | <ul style="list-style-type: none">• Visualizing (to “look closely to discern a pattern or structure”)• Hypothesizing with Multi-Step Problems (to “see complicated things...as single objects or as being composed of several objects”) |
| STANDARDS FOR MATHEMATICAL PRACTICE 8 | Look for and express regularity in repeated reasoning. | <ul style="list-style-type: none">• Metacognition (to “maintain oversight of the process, while attending to the details”; to “continually evaluate the reasonableness of their intermediate results”) |

