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| CCSSO Standards for Mathematical Practice  Student “Look-Fors” |  | CCSSO Standards for Mathematical Practice  Student “Look-Fors” |
| **1. Make sense of problems and persevere in solving them**   * Consider or attempt multiple entry points * Analyze information (givens, constrains, relationships, goals) * Make conjectures and plan a solution pathway * Use objects, drawings, and diagrams to solve problems * Monitor progress and change course as necessary * Check answers to problems and ask, “Does this make sense?” |  | **1. Make sense of problems and persevere in solving them**   * Consider or attempt multiple entry points * Analyze information (givens, constrains, relationships, goals) * Make conjectures and plan a solution pathway * Use objects, drawings, and diagrams to solve problems * Monitor progress and change course as necessary * Check answers to problems and ask, “Does this make sense?” |
| **2. Reason abstractly and quantitatively**   * Make sense of quantities and relationships in problem situations * Represent abstract situations symbolically * Create a coherent representation of the problem * Translate from contextualized to generalized or vice versa * Flexibly use properties of operations |  | **2. Reason abstractly and quantitatively**   * Make sense of quantities and relationships in problem situations * Represent abstract situations symbolically * Create a coherent representation of the problem * Translate from contextualized to generalized or vice versa * Flexibly use properties of operations |
| **3. Construct viable arguments and critique the reasoning of others**   * Use definitions and previously established causes/effects (results) in constructing arguments * Make conjectures and use counterexamples to build a logical progression of statements to explore and support their ideas * Listen to or read the arguments of others * Ask probing questions to other students   **4. Model with mathematics**   * Determine equation that represents a situation * Illustrate mathematical relationships using diagrams, two-way tables, graphs, flowcharts and formulas * Apply assumptions to make a problem simpler * Check to see if an answer makes sense within the context of a situation and change a model when necessary |  | **3. Construct viable arguments and critique the reasoning of others**   * Use definitions and previously established causes/effects (results) in constructing arguments * Make conjectures and use counterexamples to build a logical progression of statements to explore and support their ideas * Listen to or read the arguments of others * Ask probing questions to other students |
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| **5. Use appropriate tools strategically**   * Choose tools that are appropriate for the task.   Examples: *Manipulative, Calculator, Ruler, Digital Technology*   * Use technological tools to visualize the results of assumptions, explore consequences and compare predications with data * Identify relevant external math resources (digital content on a website) and use them to pose or solve problems |  | **5. Use appropriate tools strategically**   * Choose tools that are appropriate for the task.   Examples: *Manipulative, Calculator, Ruler, Digital Technology*   * Use technological tools to visualize the results of assumptions, explore consequences and compare predications with data * Identify relevant external math resources (digital content on a website) and use them to pose or solve problems |
| **6. Attend to precision**   * Communicate precisely using appropriate terminology * Specify units of measure and provide accurate labels on graphs * Express numerical answers with appropriate degree of precision * Provide carefully formulated explanations |  | **6. Attend to precision**   * Communicate precisely using appropriate terminology * Specify units of measure and provide accurate labels on graphs * Express numerical answers with appropriate degree of precision * Provide carefully formulated explanations |
| **7. Look for and make use of structure.**   * Look for patterns or structure, recognizing that quantities can be represented in different ways * Use knowledge of properties to efficiently solve problems * View complicated quantities both as single objects or compositions of several objects |  | **7. Look for and make use of structure.**   * Look for patterns or structure, recognizing that quantities can be represented in different ways * Use knowledge of properties to efficiently solve problems * View complicated quantities both as single objects or compositions of several objects |
| **8. Look for and express regularity in repeated reasoning**   * Notice repeated calculations and look for general methods and shortcuts * Continually evaluate the reasonableness of intermediate results while attending to details and make generalizations based on findings |  | **8. Look for and express regularity in repeated reasoning**   * Notice repeated calculations and look for general methods and shortcuts * Continually evaluate the reasonableness of intermediate results while attending to details and make generalizations based on findings |
| Adapted fromfrom ems&tl, as cited in Bay-Williams, J.M., McGatha, M.B., Kobett, B. M., & Wray, J. (in press). *Mathematics Coaching Tools: A Handbook for K-12 Coaches and Leaders*. New York, NY: Pearson. |  | Adapted fromfrom ems&tl, as cited in Bay-Williams, J.M., McGatha, M.B., Kobett, B. M., & Wray, J. (in press). *Mathematics Coaching Tools: A Handbook for K-12 Coaches and Leaders*. New York, NY: Pearson. |