|  |  |  |
| --- | --- | --- |
| **1: Make sense of problems and persevere in solving them**   * uses concrete objects or pictures to conceptualize a problem. * determines the meaning of the problem * determines a course to a solution prior to beginning the solution. * evaluates progress and changes course if necessary. * asks “Does this make sense?” * checks answers to problems using a different method | **2:** **Reason abstractly and quantitatively**   * uses reasoning strategies to make sense of problems – deconstructing a problem, representing it symbolically, manipulating the individual symbols * uses reasoning strategies to make sense of problems – analyzing the context of the problem and determining “what is this asking?” * uses quantitative reasoning strategies – creating a representation of the problem, considering the units used, understanding the quantities involved (not just how to compute them), knowing and using properties of operations. | **3: Construct viable arguments and critique the reasoning of others.**   * construct arguments using concrete referents such as objects, drawings, diagrams, and actions. |
| **4: Model with mathematics.**   * can apply mathematics to solve problems arising in everyday life, society, and the workplace * identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. | **5: Use appropriate tools strategically**   * consider and make appropriate decisions about which tools to use to solve problems | **6:** **Attend to precision.**   * calculate accurately and efficiently * express numerical answers with a degree of precision appropriate for the problem context * students give carefully formulated explanations to each other |
| **7: Look for and make use of structure**   * students look closely to discern a pattern or structure | **8: Look for and make use of regularity in repeated reasoning.**   * students notice if calculations are repeated, and look both for general methods and for shortcuts |  |

Comments and other observations: