SMP 1 - Make Sense of Problems and Persevere in Solving Them

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1 SMP 1—Make sense of problems and persevere in solving them—is essential for developing the

2 productive disposition students need to engage deeply in mathematical problem-solving. This SMP

3 requires students to make sense of the problem at hand by articulating what question is being asked

4 and considering what a reasonable answer to that question might be. Before students begin to solve,

5 they make a plan for their work and regularly assess that plan as they work towards a solution. Once

6 students have a solution, they assess whether or not it is a reasonable answer to the original question.

7 SMP 1 emphasizes sense-making and perseverance, both of which are needed in order for students to

8 identify entry points into a task and follow through to uncover a solution. Teachers who engage students

9 in tasks that require the sense-making and perseverance described in SMP 1 might ask questions such

10 as:

11 ● How would you restate this problem in your own words?

12 ● What is it you are trying to find?

13 ● What information is given in the problem?

14 ● How might you begin to solve this problem?

15 ● Describe the steps you have already taken to solve this problem. Do you think they will get you

16 to a solution? What might you change?

17 In this fifth grade standard, students are expected to represent real-world and mathematical problems

18 by graphing points on the coordinate plane and interpreting coordinate values in context. As described

19 in the standards document, in order to work towards mastery of this Geometry standard, students

20 should engage in SMP 1 as they make sense of how the coordinate pair can help describe the

21 relationship between two parts of the problem context.

22 Students who engage in SMP 1 are not only making sense of mathematics and the given problem, but

23 also demonstrating and developing a productive disposition of perseverance in problem solving.