Ed Reports DM6 Response

Gateway 1

Criterion 1A

Indicator 1A

- Content from earlier grades is assessed formatively as teachers teach the lessons. The teacher's guide includes notes for teachers about what topics were taught in earlier grades. For example, 6A teacher's guide p. 113 states, "This lesson is mostly review of what students learned in previous grades."
- Dimensions Math 6 does not currently include assessments but the workbook pages can be used for assessment purposes.
- Dimensions Math addresses the Common Core standards the Common Core using the Singapore approach which develops important topics gradually over several years. The idea of percentage is introduced in grade 5, developed in grade 6, and mastered in grade 7, as required by 7.RP.3. The Common Core states, "These learning goals outline what a student should know and be able to do at the end of each grade." (See About the Common Core Standards" http://www.corestandards.org/about-the-standards/).

Criterion 1C – 1F

Indicator 1D

- The average school year is 180 days. Given 134 days of instruction this leaves 46 extra days which is ample time to complete the program in one year.

Indicator 1E

- Since middle school is where many students begin to struggle with mathematics and it contains important foundational material for high school mathematics some prior grade level content is included. Prior grade material is indicated in the teacher's guide. For example, in lesson 1.1 prior learning is clearly indicated on teacher's guide p. 5, and p 8. Lesson 2.1 does not specifically state that the lesson is a review from earlier grades but the introduction does state what students learned in grades 4 and 5 and the Dimensions Math web site shows the pre-K to 5 scope and sequence clearly. It is important to review multiplication and division of fractions as this often gives students difficulty and is important for algebra. For lesson 3.4, teacher's guide p 125 clearly states that "students learned how to multiply a decimal by a decimal and a decimal by a whole number in Dimensions Math 4 and 5." Ed reports rightly points out that these are included in the Notes for Teaching. It is expected that teachers will communicate this to students.
- Expressing the sum of two numbers with a common factor is on textbook 6A p. 21 where students have to find the combined areas of two rectangles with a common side.
- In chapter 5 rate reasoning is used. See textbook 6A p. 146. The base quantity is seen as 1 so the ratio 3:4 is seen as ¾:1.

- Ratios are represented in tables in textbook 6A p. 136. Tables are used throughout chapter 6 in rate. See textbook p. 177 for example.
- Real world problems graphing points on the coordinate place (6NS8) is on textbook 6A p. 69.
- The Dimensions materials provide ample opportunities for extensive work dividing multi-digit numbers using the standard algorithm in textbook 6A pp. 88-94 as well as in the related workbook pages.
- Students use nets to represent 3-D figures and find surface area (6G4) on textbook pp. 175-177, 188-189 and 192.

Gateway 2

Criterion 2A – 2D

Indicator 2A
- Ratios are represented in tables in textbook 6A p. 136. Tables are used throughout chapter 6 in rate. See textbook p. 177 for example.

Criterion 2G – 2G.III

Indicator 2E
- Although the mathematical practices are not identified as such in the materials all Common Core mathematical practices are covered in depth.
- For MP5, different methods for solving problems are shown in worked examples. Students then choose the method they want to use in non-worked examples and practice problems. MP5 includes in the definition of "tools" pencil and paper, models, spreadsheets, etc. These are all in the worked examples and students choose which tools to use in non-worked examples and practice.
- For MP7 Ed Reports points out that Dimensions 6 problems involve making use of structure. The explanation for the Brain Works problem cited by Ed Reports includes an explanation for teachers in the teacher's guide.

Indicator 2F
- The activity (6.1) cited by Ed Reports is an informal exploration and the method is generalized in subsequent examples. Class Activities are nearly always generalized with equations. See Class Activity 1 on textbook pp. 138-139 for example where the comparison of equivalent ratios with cubes is generalized with a mathematical procedure.
- The workbook is for consolidation and practice. Opportunities for students to revise assumptions are found throughout the textbook; e.g. Write in your math journal textbook 6A p 129.
- Different ways to draw models are shown throughout (e.g. textbook 6A p 36). Students can decide which model works best for each problem as the solve problems. Guidance is given to the teacher on this in the TG; e.g. teacher's guide 6A p 48. Model drawing is developed

beginning in grade 2 in Dimensions so too much discussion on how to draw models differently would be redundant.

- The Singapore method emphasizes bar models but other models and tools besides bar models are introduced in Dimensions 6; e.g. area model in textbook 6A p 42, bar-number line model textbook 6A p 192, unitary model 6A textbook p 174, line model textbook 6A p 185.
- Summaries are given after Class Activities to generalize the mathematics. The teacher's guide gives guidance on how to pull these generalizations from students through careful questioning and thinking activities; e.g. see 6A teacher's guide p. 130 where students discuss why a quotient is greater or less than the dividend and share their ideas.
- The textbook page cited by Ed Reports 6A p 94 actually does have repeated decimal reasoning; see p 94 #16. This is woven throughout the series in the problem solving. Repeating decimals are in chapter 3, see textbook pp 92-93.

Indicator 2G.II

- The textbook and teacher's guides provide ample opportunities to think, discuss and make connections. Much guidance on how to do this is given in the teacher's guides. In the textbook there are sections called Discuss and remark that provide these opportunities. They are also in the problems given e.g. 6A textbook p. 94 #16.
- The teacher's guides provide ample prompts for teachers to facilitate discussions and develop thinking and reasoning; e.g. 6A teacher's guide pp 130-131.

Indicator 2G.III

- A formal definition of "convention" is given on teacher's guide 6A p. 3.