Tutorial Tasks

1. There are two different types of division situations: (1) grouping situation – to determine the number of groups given the number in each group, (2) sharing situation – to find the number in each group given the number of equivalent groups. (Read GB, p.5.) Describe appropriate real-world scenarios to illustrate each of the following division:

   (a) \( \frac{3}{2} \)  
   (b) \( \frac{3}{4} \div 4 \)  
   (c) \( \frac{7}{9} \div \frac{1}{3} \)

2. In introducing the negative integers, most of the local textbooks use the number line model. Which other model can we use? Compare the different models in the context of teaching addition and subtraction involving negative integers and discuss which method you would use in teaching the Secondary 1 students. Also give examples of using real-life scenarios to illustrate addition and subtraction involving negative integers.

3. Some teachers use number patterns to help their students ‘discover’ rules for determining the sign of product of numbers (read GB, p.6). Draw an analogy between product of integers and suitable real-life scenarios. Compare the two different methods and discuss which method you would use in teaching the Secondary 1 students.

4. For each of the category of numbers listed in Classification of Numbers (GB, p.9-10), explain and provide examples to illustrate the terminology, and where conventional notations exist, state the notation.

5. Answer all the questions in Some Arithmetical Questions for Discussion (GB, p.10), and explain fully your answers.

6. For each of the statements in A Matter of Percentage (GB, p.11), state whether it is true or false and discuss how you would explain your answers to your students.