Math4010 Portfolio In-Depth Problem

Your write-up and solutions to these problems must be placed in your portfolio at the end of the semester.

1. For all of the following questions, consider the division calculation,
   $17 \div 5 \; = \; ?$

   a. Use this problem to illustrate briefly how division is related to the other three arithmetic operations.

   b. Give two word problems (one partitive and one measurement) for each of the calculations of $17 \div 5$ where the best answer in the context of the word problem would be
      (i) 3 R 2
      (ii) $3\frac{2}{5}$
      (iii) 3
      (iv) 4
      (Solve each problem explaining what the R 2 and $\frac{2}{5}$ mean in the context of the problem, or explaining why you ignore/change the remainder somehow.)

2. Respond to each question below: **Type and title it** *"Concepts of Division."*
   a. Why might it be useful to have more than one concept of the operation of division, i.e. partitive and measurement?

   b. Using your word problems illustrate what is meant when one says, "division and multiplication are inverse operations."

   c. Which method of division is more readily accessible to children who know how to add and subtract? What are the implications of your answer for developing an understanding of division?