Math 200 - FTC 5

Name _____

Please do your work neatly on separate paper.

1. (3pts) A student, Ava, raises her hand and proclaims that she has discovered a new way to divide fractions. She explains that you get a common denominator then just divide the numerators. For example

$$\frac{2}{3} \div \frac{4}{5} = \frac{10}{15} \div \frac{12}{15} = 10 \div 12 = \frac{10}{12} = \frac{5}{6}$$

   Will this method **always** work for dividing **any** two rational numbers? Explain the reasoning behind your answer.

2. (3pts) Make up a real world word problem for $46 \div 6$ where the answer is:

   (a) 7

   (b) 8

   (c) 4

3. (4pts) Consider the following word problem:

   Terry has 11 yards of fabric to make costumes. Each costume requires $1\frac{1}{2}$ yards of fabric. How many costumes can be made?

   (a) Without using division, draw a picture to determine the number of costumes that can be made and how much material will be left over.

   (b) Solve this word problem using division.

   (c) Explain any differences between your answer in part a and your answer in part b.