Quiz 4A, MTH 2010 - No Calculators

Dr. Graham-Squire, Fall 2014

Name: _____

1. (2 points) If you pay $0.36 for 1.4 liters of water, how much would it cost to buy just 1 liter? Round your answer to the nearest cent.

2. (3 points) Five pumps begin draining a 320-gallon pool. At the same time, two pumps begin draining a 200-gallon pool. Assuming all pumps drain at the same rate, how many gallons are left in the smaller pool once the bigger pool is finished being drained?

   (A) 64

   (B) 72

   (C) 128

   (D) 136

3. (2 points) A hostess, waiter, and cook all work for the same restaurant. The waiter makes 50% more than the hostess, and the cook makes 200% of what the waiter makes. At the end of the night, they have made \$330 altogether. How much money did the hostess make?

4. (3 points) Below is a sample of student work:

$$\frac{12}{20} \div \frac{3}{4} = \frac{12 \div 3}{20 \div 4} = \frac{4}{5} \qquad \frac{15}{8} \div \frac{5}{4} = \frac{15 \div 5}{8 \div 4} = \frac{3}{2} \qquad \frac{7}{15} \div \frac{7}{3} = \frac{7 \div 7}{15 \div 3} = \frac{1}{5}$$

Which of the following statements best describes the mathematical validity of the algorithm that the student appears to be using?

(a) It is not valid for any rational numbers.

(b) It is valid only when all numerators and denominators are integers.

(c) It is valid only when all numerators and denominators are positive integers.

(d) It is valid for all rational numbers.