Minitest 1A - MTH 2010
Dr. Graham-Squire, Fall 2014

Name: _____

I pledge that I have neither given nor received any unauthorized assistance on this exam.

_____
(signature)

DIRECTIONS

1. Show all of your work and use correct notation. A correct answer with insufficient work or incorrect notation will lose points.

2. Clearly indicate your answer by putting a box around it.

3. Calculators, cell phones and computers are <u>not</u> allowed on this test.

4. Make sure you sign the pledge.

5. Number of questions = 6. Total Points = 30.

1. (5 points)

(a) Compare the fractions by finding the *least* common denominator: $\dfrac{9}{10}$ versus $\dfrac{5}{6}$

(b) Plot the fraction $\dfrac{4}{5}$ on the number line below.

0   1   2
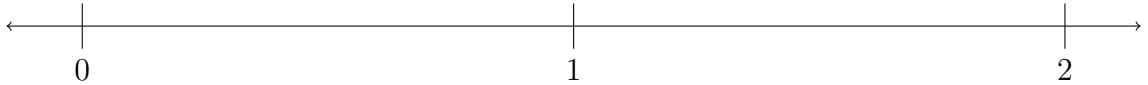
(c) Reduce the fraction to lowest terms: $\dfrac{18}{30}$

(d) Round 2,309.4348 to the nearest hundredth.

(e) Compare the numbers (that is, write $<$, $>$, or $=$ in between them):
$$-1.8 \text{ versus } -2.3$$

2. (5 points) You are told that a rectangle has a width of 3 inches and a length of 4 inches, where each measurement is rounded to the nearest whole number. Which of the following is a possible value of A, where A is the area of the rectangle? Explain your answer or show your work to get full points.

(a) 8.5 square inches

(b) 9 square inches

(c) 16 square inches

(d) 16.5 square inches

3. (5 points) The table below summarizes the discounts you can get from local stores. You plan to buy two basketballs, each of which has a regular price of $15.

Store #1: $3 off the price of each basketball.

Store #2: 1/3 off the price of each basketball.

Store #3: Buy one basketball, get the second for half price.

Store #4: 20% off your total purchase.

At which store can you buy the basketballs for the least amount of money? Explain your reasoning and/or show your work.

4. (5 points) Jane has $\frac{6}{7}$ of a pizza, and wants to give $\frac{1}{3}$ of what she has to Joe. What fraction of the whole pizza will Jane have left for herself? Use a math diagram to help explain your answer.

5. (5 points) Compare the fractions (that is, put a symbol $>$, $<$ or $=$ in between them). You can use any method you choose, but you should avoid using common denominators, cross-multiplying, or reducing to decimals, as that could take you a long time. You can get full points without showing any work, but showing work or giving an explanation can get you partial credit if your answer is wrong.

(a) $\dfrac{5}{8}$ versus $\dfrac{7}{12}$

(b) $\dfrac{97}{100}$ versus $\dfrac{35}{38}$

(c) $\dfrac{5}{21}$ versus $\dfrac{7}{24}$

(d) $\dfrac{6}{11}$ versus $\dfrac{6}{13}$

(e) $\dfrac{21}{22}$ versus $\dfrac{56}{57}$

6. (5 points) There are 200 marbles in a bucket. Of the 200 marbles, 80% have swirled colors and 20% have solid colors. How many swirled marbles must be removed so that 75% of the remaining marbles are swirled?

Extra Credit (1 point) What fraction does the following diagram represent? Explain your answer.