

Mathematics 095
Semester One, 2005-2006
29 Sept. 2005

EXAMINATION ONE

Instructor _____

Student _____

Problem	Points possible	Points earned
1	5	
2	5	
3	5	
4	5	
5	10	
6	10	
7	10	
8	15	
9	15	
10	20	
		Total

- Show your work. Even if your answer is correct, if you do not show your work, you will receive zero credit.
- No calculators of any kind.
- No notes.
- No textbooks.
- No interacting student-to-student.

1. Simplify completely, or, that is, reduce to lowest terms, the fraction $\frac{108}{162}$. (5 pts.)

1. _____

2. Perform the operation indicated. Write your answer as a decimal. (5 pts.)

$$0.02 \times 56.8$$

2. _____

3. Perform the operation indicated. Write your answer as a decimal. (5 pts.)

$$0.06348 \div 0.06$$

3. _____

4. Perform the operations indicated. Write your answer as a fraction simplified completely. (5 pts.)

$$\frac{3}{14} - \frac{1}{12} - \frac{4}{21}$$

4. _____

5. Perform the operations indicated in accordance with the order of operations. Write your answer as a mixed number with the fractional part simplified completely. (10 pts.)

$$\left(\frac{1}{2}\right)^4 + \frac{1}{4} - \left(\frac{1}{6} \div \frac{1}{12}\right) - \frac{2}{3} \left(\frac{1}{4}\right)^2$$

5. _____

6. Find the absolute value of the following algebraic expression. Write your answer as a decimal. (10 pts.)

$$-0.12 \div 0.6 + (-3)(1.2) - (-0.5)$$

6. _____

7. Evaluate the following algebraic expression when $x = -2$ and $y = -3$. Write your answer as a fraction simplified completely. (10 pts.)

$$\frac{4}{5}y - \frac{3}{4}x^2 - \frac{2}{3}y + \frac{1}{8}x^2$$

7. _____

8. In the human body, there are a total of 206 bones. Each foot contains 26 of those bones. What percent of the bones in the human body are in one foot? Round your answer to the nearest 1/100-th percent. (15 pts.)

8. _____

9. In their last three fill-ups, a certain individual required the following amounts of gasoline for one of their motor vehicles: $18\frac{7}{10}$ gallons, $15\frac{2}{5}$ gallons, and $14\frac{1}{2}$ gallons. What is $\frac{4}{15}$ of the total amount of gasoline gotten. Write your answer as a fraction simplified completely. (15 pts.)

9. _____

10. In a place and at a time where no sales taxes are applied to purchases, three friends meet together to have dinner at the Big City Restaurant. Two of them are employed with one of them earning nearly twice as much as the other; the remaining individual is unemployed. So, they decide to pay their bill in this manner: as to the two who are employed, the one who earns the most will pay $\frac{2}{3}$ of the total cost of their dinners and the one who earns the least will pay $\frac{1}{3}$ of the total cost of the dinners, while the one who is unemployed will contribute a 15% tip. One of the friends eats a lobster dinner costing \$49.95; another, a sirloin steak dinner costing \$35.60; and, the remaining one, a strip steak dinner costing \$40.75. (i) How much will the employed individual earning the most pay? And, (ii) how much will the unemployed individual contribute? Round off your answer to the nearest penny. (20 pts.)

10(i) _____

10(ii) _____
