

**Math 70**  
**Exam 1**  
**October 22nd, 2010**

Name: \_\_\_\_\_

1. Your exam contains 6 questions and 4 pages; Please make sure you have a complete exam.
2. The entire exam is worth 100 points. Point values vary and these are indicated on each problem. You have 50 minutes for this exam.
3. Make sure to **ALWAYS SHOW YOUR WORK**; you will not receive partial credit unless all work is shown. If in doubt, ask for clarification.
4. Simplify your answers as much as possible.
5. Put a box around your final answer where applicable.
6. If you need extra space, attach a sheet to the back of the exam and clearly indicate this.

Problem	Total Points	Score
1	22	
2	7	
3	8	
4	35	
5	18	
6	10	
Total	100	

1. (22 pts.) Evaluate the following. Simplify your answers as much as possible.

(a) (3 pts.)  $\frac{5}{8} - \frac{3}{8}$

(d) (4 pts.)  $12 - (-9)$

(b) (6 pts.)  $3\frac{1}{2} + \frac{2}{3}$

(e) (5 pts.)  $-2.1 - 3.57$

(Note:  $3\frac{1}{2}$  is a mixed number, not 3 times  $\frac{1}{2}$ )

(c) (4 pts.)  $5 + (-9)$

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2. (7 pts.) How many liters are in 325 milliliters (mL)?

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3. (8 pts.) Suppose someone told you that they weighed 75 kilograms.

What is their weight in pounds? (Use the approximation  $1 \text{ kg} = 2.2 \text{ lbs.}$ )

4. (35 pts.) Evaluate the following. Simplify your answers as much as possible.

(a) (3 pts.)  $-30 \div 6$

(b) (5 pts.)  $-\frac{12}{5}\left(\frac{3}{4}\right)$

(c) (5 pts.)  $(-3)^4$

(d) (5 pts.)  $\frac{\frac{1}{2}}{\frac{3}{10}}$

(e) (6 pts.)  $(-2.4)(-1.7)$

(f) (8 pts.)  $8 - 5(6 - 3)^2$

(g) (3 pts.)  $0.8 \div \left(\frac{4}{5}\right)$

5. (18 pts.) Suppose Bill's total monthly income is \$2000. The cost of his rent is \$600.

(a) (6 pts.) What percentage of Bill's income is dedicated to rent?

(b) (6 pts.) If Bill wants to invest 15% of his income in a retirement fund, how much should he be investing each month?

(c) (6 pts.) If the cost of Bill's rent increases by one-third of the original price, what is the new rent price?

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6. (10 pts.) Simplify the following as much as possible.

(a) (5 pts.)  $a - 2ab + 7a + 2ab$

(b) (5 pts.)  $14x + 21x^2 - 5x^2 - 7$