

Math 085 - Test 5a

May 6, 2013

Name _____

Score _____

Part I - Solve each problem. Show all work to receive full credit. Supply explanations where necessary. Each problem is worth 2 points. **CALCULATORS ARE ALLOWED ON THIS PORTION OF THE TEST.**

1. Combine like terms: $79.02x - 6.74 + 0.765y - 45.109x + 17.457y - 0.05$

2. Compute: $23.042 \times (7 - 4.037 \times 1.46 - 0.932^2)$

3. Solve for x : $4.19 + 1.8(x - 6.2) = 5.7x + 16.32$

4. Find the area of a triangle whose height is 14.352 in and whose base measures 6.64 in.

5. Find the decimal form of $\frac{97}{113}$. Round to the nearest hundred-thousandth.

Math 085 - Test 5b

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Part II - Solve each problem. Show all work to receive full credit. Supply explanations where necessary. **CALCULATORS ARE NOT ALLOWED ON THIS PORTION OF THE TEST.**

1. (2 points) Write each number as a fraction in mixed-number form. Do not reduce to lowest terms.

(a) -4.389

(b) 72.00135

2. (2 points) Write each number in decimal notation.

(a) $5\frac{55}{100}$

(b) $-65\frac{18}{10000}$

3. (2 points) Arrange the following numbers in order from least to greatest.

$$-0.989, \quad -0.898, \quad -1.009, \quad -1.09, \quad -0.098$$

4. (2 points) Round each number to the indicated place.

(a) 4.674891 to the nearest thousandth

(b) 0.08543 to the nearest tenth

5. (2 points) Compute each of the following.

(a) $4.6989 + 31.77592$

(b) $-9.0432 + 4.7687$

6. (2 points) Combine like terms.

(a) $7.1x + 5.4y + 1.2x + 6.8y$

(b) $3.2r - 4.1t - 5.6t - 1.9r$

7. (4 points) Carry out the indicated operation.

(a) 0.4536×0.01

(b) $13.456 \div 1000$

(c) 9.882×1000

(d) $0.005412 \div 0.00001$

8. (2 points) A rectangular room measures 6.92 m by 5.63 m. Find the area of the room.

9. (2 points) Carry out the indicated operation.

(a) $6.45 \times (-3.6)$

(b) $2.5221 \div 4.2$

10. (2 points) Write each fraction in decimal form. Find exact values. Do not round.

(a) $\frac{67}{25}$

(b) $\frac{7}{8}$

11. (1 point) Compute: $3.2(1.2^2 + 8.7)$

12. (6 points) Solve each equation. Write your solutions in decimal form.

(a) $3x + 4 = 11x - 6$

(b) $2r - 7 = 12(r - 3)$

(c) $9(x - 4) + 13 = 4x - 23$

13. (1 point) Claire bought a book for \$16.95 plus \$0.85 sales tax. She paid with a \$20 bill. How much change did she receive?

14. (1 point) Find and simplify the ratio of $6\frac{3}{10}$ to $1\frac{4}{5}$.
15. (1 point) Cage-free chicken eggs cost \$2.80 per dozen. How much does each egg cost?
16. (2 points) Use the Pythagorean theorem to find the length of the hypotenuse of a right triangle whose legs have the given lengths.
- (a) $a = 5, b = 12$
- (b) $a = 6, b = 8$
17. (2 points) Solve each proportion.
- (a) $\frac{1.2}{4} = \frac{x}{9}$
- (b) $\frac{8}{12} = \frac{20}{x}$
18. (1 point) What is 10% of 8.57?
19. (1 point) Write 0.625 in percent notation.
20. (2 points) Sally and Joe are running on a track. Sally runs 4 laps for every 3 that Joe runs. After Sally has run 20 laps, how many has Joe run?