

BRONX COMMUNITY COLLEGE
of the City University of New York

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

MATH 05X
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Exam 1
June 30, 2008

Directions: Write your answers in the provided booklet. To get full credit you *must* show all your work in the provided space. Simplify your answers whenever possible. Be certain to indicate your final answer clearly. **Each problem is worth 10 points**

1. Evaluate: $5 - 3(4 - 3) - 2^3 \div 8 \cdot 4.$

2. Evaluate: $\frac{-16}{9} \cdot \frac{18}{-25} \cdot \left(-\frac{10}{6}\right) \cdot \frac{-5}{4} \cdot \frac{3}{4}.$

3. Evaluate, if $a = -\frac{2}{5}$ and $b = \frac{7}{10}$: $-3a + 11b$

4. Evaluate if $c = -2$ and $d = -3$: $c^2 - d^2.$

5. Solve the equation:

$$2(3x - 1) + 2x + 5 = 5x - 2(x - 3) + 12$$

6. Solve the equation:

$$\frac{x - 2}{5} + \frac{8 - x}{3} = x$$

7. Solve for y : $6x + 3y = 7$

8. Solve the following inequality, give the answer using interval notation and graph the solution set.

$$9 - 2(2x + 3) \geq -7x - 3$$

9. Find three solutions to the following equation: $4x - 5y = 20.$

Solve **only one** of the following two word problems. Indicate clearly what problem you are solving.

10. I have some nickels, dimes and quarters in my pockets. I have twice as many nickels as quarters, while the number of dimes is 5 less than 3 times the number of quarters. If the total value of the change in my pocket is \$4.25 how many nickels do I have in my pocket?

11. The width of a rectangle is 2 inches more than 3 times its length. If the perimeter of the rectangle is 84 inches find its dimensions.