MATH 05X   Exam 1, take II
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Directions: You should fully justify your answers. Do all your work on separate paper, and make sure to *print* your name in the first sheet and staple all the sheets together. **Unstapled, loose pieces of paper will not be graded.** This exam is due on Monday, July 7, at 6:00pm.

1. Evaluate: $3 - 2(5 - 7) - 3^3 \div 9 \cdot 4$.

2. Evaluate: $\dfrac{-20}{-12} \cdot \dfrac{-8}{45} \cdot \dfrac{21}{5} \cdot \dfrac{-4}{5} \cdot \left(-\dfrac{6}{7}\right)$.

3. Evaluate, if $a = -\dfrac{4}{3}$ and $b = \dfrac{7}{9}$: $-4a - 3b$

4. Evaluate if $a = -1$, $b = 2$, $c = -4$, and $d = -5$: $(a^2 - b^2)(c - d)$.

5. Solve the equation:
$$5(2x - 1) + 6 = 3x - 20$$

6. Solve the equation:
$$x - 2(4 - 3x) + 5 = 5x + 3(x - 1) - 1$$

7. Solve the equation:
$$\frac{x + 8}{2} + \frac{x + 5}{3} = x + 7$$

8. Solve for y: $6x - 2y = 4$.

9. Solve the following inequality, give the answer using interval notation and graph the solution set.
$$3 - (4x - 2) \leq 5 - x$$

10. Find five solutions to the following equation: $2x - y = 6$.

11. Complete the following pairs: $(-1, \ )$, $(3, \ )$, $(-4, \ )$, $(\ , \dfrac{1}{2})$, $(\ , -\dfrac{3}{4})$, $(\ , \dfrac{2}{3})$ to solutions of the equation:
$$-x + 2y = 9$$

12. Twice the sum of two consecutive even integers is 20. Find the two integers.

13. I have some nickels, dimes, and quarters in my pockets. I have 3 less nickels than dimes, while the number of quarters is 4 less than twice the number of dimes. If the total value of the change in my pocket is $1.45 how many nickels do I have in my pocket?

14. The length of a rectangle is $5\,\text{cm}$ less than 3 times its width. If the perimeter of the rectangle is $38\,\text{cm}$ find its dimensions.