MATH 111 EXAM 1, Fall 2007

Show all work!	Name:	Score

1. Given the points $P(4, -5)$ and $Q(1, -2)$, find:

a) The distance $d(P, Q)$.

b) The midpoint of $\overline{PQ}$

Ans:_____.

Ans:_____.

2. a) Solve for x: $2(3 + 2x) = -2(x - 4)$.

b) Solve for y: $y(1 + 2y) = (2y - 1)(y - 2)$.

Ans:_____.

Ans:_____.

3. Solve the Equations:

a) $2x^2 - 5x + 3 = 0$

b) $x^2 + x = 4$

Ans:_____.

Ans:_____.

4. Find the equations of the lines passing through:

a) The points (-2,4) and (1,5).

b) The point (1,2) and $\perp$ to the line $3x - 6y = 13$.

Ans:_____.

Ans:_____.

5. a) Find the real solutions of: $7 + \sqrt{x - 1} = x$.

b) Solve: $3x^4 - 2x^2 - 1 = 0$

Ans:_____.

Ans:_____.

Extra Space

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Tot	

Part II.	Name:

6. A bank loaned out $12,000, part of it at the rate of 8% and the rest at 12% per year. If the interest received totalled $1,300, how much was loaned at 8%?

Ans:_____.

7. Solve the following inequalities:

a) $-3 < 3 - 2x < 9$.

b) $|x + 4| \geq 2$.

8. Write in the form $a + ib$

a) i^{-25}.

b) $\dfrac{2 - i}{3 + i}$.

Ans:_____.

Ans:_____.

9. Solve the following system of equations:

$$2x - 3y = -1$$
$$10x + y = 11$$

Ans:_____.

10. Solve the following system of equations:

$$x^2 - 4y^2 = 16$$
$$2y - x = 2$$

Ans:_____.

Extra Space