Name: $\qquad$
Quiz 5 - Take home - Due date: August 8 MGF-1006
Panther ID $\qquad$

To receive credit you MUST SHOW ALL YOUR WORK.

1. ( 10 pts ) Suppose you invest a total of $\$ 50,000$ in two different stock market accounts. After one year, you made a profit of $10 \%$ on the first account, but you had a loss of $8 \%$ on the second account. Overall you still had a total profit of $\$ 2300$. How much you invested in each account?
2. ( 10 pts ) A manufacturer has determined that at a price of 115 dollars consumers will purchase 10,000 portable CD players and that at a price of 90 dollars consumers will purchase 12,000 portable CD players. Find the formula for the linear function giving the number of CD players purchased by the consumers at a given price $x$.
Use this function to predict the number of portable CD players bought by consumers at a price of 80 dollars.
