Math 131 (052) Quiz Test I (Ch: 1 - 3).

Dr. Raja Latif. Time: 30 Minutes, Marks: 20

Name:_____,I.D.#_____Se.#____

Saturday, March 11, 2006.

Note: Show Complete Solution for each question for Full Credit. The questions are not in any order of difficulty at all.

Q.1. $(49Rolf40)$. $[Marks: 2+3]$. The profit function is revenue minus cost; that is,

$P(x) = R(x) - C(x)$

The cost and revenue functions for Acme Manufacturing are

$C(x) = 28x + 465$

$R(x) = 52x$

(i) Write the profit function.

(ii) What is the profit from selling 25 items?

$Q.2$. $[Marks: 5]$. (72Rolf46). demand for a Mobile in The Discount Store are given for two prices:

Supply (q)	Price (p)
$q_1 = 10$	$p_1 = \$\ 130$
$q_2 = 25$	$p_2 = \$\ 100$

Find the linear demand equation for the Mobile.

$Q.3.$ $[Marks : 5]$. $(110 Rolf E11)$. A brokerage firm packaged blocks of common stocks, bonds, and preferred stocks into three different portfolios. The portfolios contained the following:

Portfolio	Common	Bands	Preferred
I (x)	3 blocks	2 blocks	5 blocks
II (y)	2 blocks	6 blocks	8 blocks
III (z)	5 blocks	8 blocks	13 blocks
Total	110 blocks	190 blocks	300 blocks

A customer wants to buy 110 blocks of common stock, 190 blocks of bonds, and 300 blocks of preferred stock.

How many of each portfolio should be purchased to accomplish this?

Set up the system of equations without solution.

Let x, y, and z represent the number of portfolios I, II, and III used.

The information given can be stated as a system of equations:

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$Q.4.$ $[Marks : 5]$. $(86 Rolf E7)$. Solve the following system of Equations (Do not use Matrices):

$$\begin{aligned} 2x - 4y + 6z &= 20 \\ 3x - 6y + z &= 22 \\ -2x + 5y - 2z &= -18 \end{aligned}$$