Assignment Day 8

1) A business student has $2,500 available from a summer job and has identified three potential stocks in which to invest. The cost per share and expected return over the next 2 years is given in the table.

Stock	A	B	C
Price/Share	$25	$15	$30
Return/Share	$8	$7	$11

Identify the decision variables, objective function and constraints in simple verbal statements. Mathematically formulate a linear optimization model.

2) A farmer has 1000 acres of land on which he can grow corn, wheat and soyabean. The following table lists the cost of preparation for each acre, man-days of work required and profit yielded in
$.

	Cost ($)	Work Days	Profit ($)
Corn	100	7	30
Wheat	120	10	40
Soyabean	70	8	20

The farmer has $100,000 for preparation and can count on 8000 man-days of work. Develop a linear optimization model use Solver to find an optimal solution.

3) Kelly Foods has two plants and ships canned vegetables to customers in four cities. The cost of shipping one case from a plant to a customer is given in the following table.

Plant/Customer	Chicago	Cincinnati	Indianpolis	Pitsburg
Akron	$1.70	$2.30	$2.50	$2.15
Evansville	$1.95	$2.35	$1.65	$2.95

The plant in Akron has a capacity of 2,800 cases per week, and the Evansville plant can produce 4,500 cases per week. Customer orders for the next week are.
Chicago: 2,000 cases
Cincinnati: 1,200 cases
Indianapolis : 2,500
cases Pittsburg: 1,400
cases
Find the minimum cost shipping plan.