MSCI 261 Assignment 1

Question 2

Note: All results are in the thousands						
Givens	**Value**					
Interest Rate	15%					
Initial Investment	40,000					
Period	5 years					
Variable Expense	$12.00					
Fixed Costs	$3,500					
Without Additional Investment			**Period**	**Selling Price**	**Units Sold**	**Total**
Present Value Fixed Expenses	$11,732.70		1	$29.00	1,000	$29,000.00
Present Value Variable Expenses	$40,226.40		2	$25.19	1,000	$25,191.57
Present Value Total Expenses	$51,959.10		3	$21.88	1,000	$21,883.28
Present Worth Income	$91,959.10		4	$19.01	1,000	$19,009.46
Net Profit	$0.00		5	$16.51	1,000	$16,513.04
Growth	-0.032321424					
With Additional Investment			**Period**	**Selling Price**	**Units Sold**	**Total**
Present Value Fixed Expenses	$11,732.70		1	$29.00	1,000	$29,000.00
Present Value Variable Expenses	$75,975.69		2	$25.19	2,200	$55,421.45
Present Value Total Expenses	$87,708.39		3	$21.88	2,200	$48,143.22
Present Worth Income	$140,751.87		4	$19.01	2,200	$41,820.80
Present Worth Additional Investment	$13,043.48		5	$16.51	2,200	$36,328.68
Net Profit	$0.00					
Growth	-0.131325193					
The growth rate was determined using the "Goal Seek" function. Without the additional investment, a price change rate of -3.23% is required to make the present worth of the investment equal to zero. With the additional investment, a rate of -13.1% is needed. If the price change is less than the obtained rate, the net profit will decrease because the present worth income would decrease, so an investment should not be made. If the price rate is greater, then the net profit would increase since the present worth income would increase, hence an investment should be made.						

Paolo Torres