Introduction to Finance

Problem Set 1

1. The Robinson Company has the following current assets and current liabilities for these two years:

	2016	2017
Cash and marketable securities	$50,000	$50,000
Accounts receivable	300,000	350,000
Inventories	350,000	500,000
Total current assets	$700,000	$900,000
Accounts payable	$200,000	$250,000
Bank loan	0	$150,000
Accruals	$150,000	$200,000
Total current liabilities	$350,000	$600,000

a. Compare the current ratios between the two years.

b. Compare the acid test ratios between 2016 and 2017. Comment on your findings.

2. The Robinson Company had a cost of goods sold of $1,000,000 in 2016 and $1,200,000 in 2017.

a. Calculate the inventory turnover for each year. Comment on your findings.

b. What would have been the amount of inventories in 2017 if the 2016 turnover ratio had been maintained?

3. The Dayco Manufacturing Company had the following financial statement results for last year. Net sales were $1.2 million with net income of $90,000. Total assets at year-end amounted to $900,000.

a. Calculate Dayco's asset turnover ratio and its profit margin.

b. Show how the two ratios in Part (a) can be used to determine Dayco's rate of return on assets.

c. Dayco operation's industry average ratios are, as follows: Return on assets: 11%; Asset turnover: 2.5 times; Net profit margin: 3.6%. Compare Dayco's performance against the industry averages.

4. There are two periods in this problem: now (t=0) and tomorrow (t=1). Assume an individual has 1000$ now. He can invest in machines, which will produce, without risk, a return of 20%.

a. How much will he get in the next period if he invests everything in machines? If he only invests 750$?

b. The interest rate in the market is 7%. Instead of investing he can lend his money and benefit from the interest during the next period. How much will he get in the next period if he lends everything? If he invests 750$ and lends 250$?

c. The bank agrees to lend him some funds based on what he will have next period. But the bank thinks that the investment is risky so that it only agrees to apply a tax rate of 10%.
   i. How do we call the difference between the interest rate in the market and the rate he gets from the bank?
   ii. How much can he borrow if he invests 750$? 1000?

d. Draw a diagram with all these possibilities. Conclude on the most profitable strategy.