**Question 1: (Financial Statement Analysis) 12 points**

Consider the following set of financial statements:



a. What is the company's average annual rate of sales growth from 2008 through 2010?

b. How long, on average, was Better Mouse Trap taking to collect on its receivable accounts in 2010? (Assume all of the company’s sales were on credit.)

c. Was Better Mouse Trap more or less profitable in 2010 than it was in 2008? Justify your answer using at least two ratios.

d. Was Better Mouse Trap more or less liquid at the end of 2010 than it was at the end of

2008? Justify your answer using at least two ratios.

**Question 2: (Time Value of Money – Payments and Rate of Return) 6 points**

Assume you are planning how to finance your child's college education. The child is 2 years old now so there are 16 years to go before your child enters college at age 18. According to your estimates you will need $80,000 in the bank at that time.

a. If you believe you can earn 7% a year, on average, between now and the time your child starts college, how much will you have to invest each year between now and then in order to reach your target?

b. It appears the annual payment required to reach your target is more than you can afford. If the most you can afford to invest each year is $2,000 what average annual rate of return must you earn in order to reach your target?

**Question 3: (Time Value of Money – Present Value) 4 points**

Joe's Clambake Company is considering the purchase of a C130 airplane to help spot monster clams on the bottom of Chesapeake Bay. In estimating the worth of adding the plane to the company the following cash flow analysis has been developed:

Cash inflow at the end of year 1: $12,000

Cash inflow at the end of year 2: $12,000

Cash inflow at the end of year 3: $12,000

Cash inflow at the end of year 4: $12,000

Cash inflow at the end of year 5: $12,000

Cash inflow at the end of year 6: $32,000

If Joe's required rate of return is 12%, how much is the plane worth to him today?

**Question 4: (Risk & Return) 3 points**

You hold a portfolio of stocks consisting of the following:

Stock Beta Current Value

Blackwater Gas 0.4 $10,000

Tidy Tom’s Cleaners 0.8 $5,000

Globular Grabbus 1.3 $20,000

Creative Crafts 1.5 $4,000

Total: $39,000

a. What is the beta of the portfolio?

b. You have decided to sell Creative Crafts for $4,000 and to use the proceeds to buy $4,000 of International Steel stock with a beta of 2.0. After the transaction is complete, what will be the new beta of the portfolio? (Disregard any commissions on the buy and sell transactions.)

**Question 5: (Risk & Return) 5 points**

You have been scouring The Wall Street Journal looking for stocks that are “good values” and have found the following five candidates for addition to your portfolio:

Stock Expected Return Beta

A 11.00% 1.1

B 7.00% 1.0

C 10.50% 1.4

D 5.00% 0.8

E 11.50% 0.7

However, you can afford to buy only one of these stocks. Based solely on the stocks’ expected returns and risk, as measured by Beta, which one represents the best investment? Be sure to justify your answer.

**Question 6: (Bond valuation) 10 points**

According to the Yahoo Finance Bond Center, dealers are currently offering the US government’s 8.5% 2020 Treasury Bond for “142.12.” Answer the following questions about the bond:

a. What is the price in dollars of the bond?

b. What is the amount of the coupon interest payment you would receive each year if you bought the bond? (assume annual payments)

c. How many payments would you receive if you bought the bond and held it to maturity? (In other words, how many years from now does the bond have to go before it matures?)

d. What is the bond’s *Yield to Maturity*, or YTM, assuming you purchased it for the current offering price?

**Question 7: (Stock Valuation) 8 Points**

You have been given the following projections for Cali Corporation for the coming year.

Sales = 10,000 units

Sales price per unit = $12

Variable cost per unit = $6

Fixed costs = $10,000

Long-term debt = $15,000

Interest rate on long-term debt = 8%

Tax rate = 40%

Dividend payout ratio = 60%

Expected long-term growth rate = 8%

Shares of common stock outstanding = 10,000 shares

Beta = 1.4

Current rate on government T-Bonds = 5%

Expected return on the stock market = 9%

Calculate the current price per share for Cali Corporation.