**Gabriel Yeager**

**EMGT 5020**

**HW4**

**4.2, 4.18, 4.23, 4.26, 4.37**

4.2 Flying Penguins Corp. has total current assets of $11,845,175, current liabilities of $5,311,020, and a quick ratio of 0.89. How much inventory does it have?

Current assets – Inventory

Quick ratio = -----------------------------------

Current liabilities

-x = (0.89 \* 5,311,020) – 11,845,175

-x = - 7,118,370

x = **7,118,370**

4.18 Nimitz Rental Company had depreciation expenses of $108,905, interest expenses of $78,112, and an EBIT of $1,254,338 for the last fiscal year. What are the times interest-earned and cash coverage ratios for this company?

EBIT

Times interest = ----------------------------

Interest expense

x = 1,254,338 / 78,112

**Times interest-earned = 16.06**

EBITDA

Cash coverage = -------------------------

Interest expense

x = (1,254,338 + 108,905) / 78,112

**Cash coverage = 17.45**

4.23 Xtreme Sports Innovations has disclosed the following information:

EBIT = $25,664,300 Net income = $13,054,000

Net sales = $83,125,336 Total debt = $20,885,753

Total assets = $71,244,863

Compute the following ratios for this firm using the DuPont identity: debt-to-equity ratio, EROA, ROA, and ROE.

Debt-to-equity ratio = Total debt / Total equity 20,885,753 / Total equity

EROA = EBIT / Total assets 22,664,300 / 71,244,863 = 0.3181

ROA = Net income / Total assets 13,054,000 / 71,244,863 = 0.1832

ROE = Net income / Total equity 13,054,000 / Total equity = ROE

Total debt = Total assets – Total equity

20,885,753 = 71,244,863 – x

Total equity = $50,359,110

Debt-to-equity ratio = 20,885,753 / 50,359,110 = 0.4147

ROE = 13,054,000 / Total equity

ROE = 13,054,000 / 50,359,110

ROE = 0.2592

Dupont identity:

ROE = profit margin \* asset turnover \* equity multiplier

ROE = (net income / net sales) \* (net sales / total assets) \* (total assets / total equity)

ROE = (13,054,000 / 83,125,336) \* (83,125,336 / 71,244,863) \* (71,244,863 / 50,359,110)

ROE = 0.2592

**Debt-to-equity ratio = 0.4147**

**EROA = 0.3181**

**ROA = 0.1832**

**ROE = 0.2592**

4.26 Carter, Inc., a manufacturer of electrical supplies, has an ROE of 23.1 percent, a profit margin of 4.9 percent, and a total asset turnover ratio of 2.6 times. Its peer group also has an ROE of 23.1 percent, but has outperformed Carter with a net profit margin of 5.3 percent and a total asset turnnover ratio of 3.0 times. Explain how Carter managed to achieve the same level of profitability as reflected by the ROE.

CARTER OTHER GUYS

ROE 23.1 23.1

Profit margin 4.9 5.3

Asset turnover 2.6 3.0