

Financial Algebra TEST 2 REVIEW

1) In October, 300 shares of Johnson Controls, sold for \$39.24/share. What was its market capitalization?

2) One company has 200,000 shares that are valued at \$5/share and generates a profit of \$100,000. The second company has 1 million shares valued at \$1/share and generates a profit of \$150,000. Which stock is cheaper, and why? Assume that neither company has any debt.

3) One company has \$1,000,000 in assets, has \$200,000 in liabilities, has 400,000 shares worth \$2/share and generates a profit of \$200,000. The second company has \$1,000,000 in assets, has no liabilities, has 500,000 shares worth \$2/share and generates \$150,000 in income. Which stock is cheaper, and why?

4) A company sold 1000 shares at \$40/share and has 5% return on each share. How much profit did the company generate? Show how you arrived at your answer.

5) Complete the income statement using the following information.

Assume that Revenues(Sales) is \$5 million, cost of goods sold is \$2 million, marketing expenses is 300,000, sales expenses is 150,000 and that G&A expenses = 350,000. If the company has \$20 million of assets that generate the operating profit, and \$8 million in debt, with 10% interest, record the information on the income statement and calculate the ROE (Return on Equity).

Revenues(Sales)
COGS (cost of goods sold)
Gross Profit:
Marketing Expense:
Sales Expense:
G &A Expense:
Operating Profit:
Interest (10%):
Pre-tax Income:
Taxes (30%):
Net Income:

6) Go line by line on the Cash flow statement (on the back of this paper), and identify all errors.

Cash Flow Spreadsheet Problems:

A) No increase (or decrease) in a category during a year: Other than fixed expenses, it is unlikely that most categories in a spreadsheet will remain fixed over time.

B) Increase in one area related to another area that has a decrease.

C) Increase or decrease in a strictly linear or exponential fashion: This again is unlikely and may indicate a lack of research and planning.

i) Adding (or subtracting) a certain amount each time.

ii) Multiplying an entry by a certain amount each time.

D) Amounts that increase and then decrease by large amounts. Expenses tend not to seesaw. They are usually going up or down over time.

E) Substantial changes in expenses that do not happen at regular intervals, such as quarterly, bi-yearly or seasonally.

F) Changes in items that should be fixed over a period of time, such as rent.

G) Putting in a lump expense at one point, rather than breaking it down, due to difficulty estimating the expense.

H) Inconsistent units or other typos.

Twelve-month cash flow

JMHS Edition of Shark Tank

Fiscal Year Begins: Jan-14

| | Pre-Startup EST | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 |
|---|--------------------|-----------|-----------|-----------|-----------|---------|---------|---------|---------|---------|-----------|-----------|-----------|
| Cash on Hand (beginning of month) | 0 | 1,273,980 | 1,179,730 | 1,083,980 | 976,040 | 803,550 | 652,785 | 520,595 | 292,865 | 195,135 | 287,655 | 137,055 | 87,400 |
| CASH RECEIPTS | | | | | | | | | | | | | |
| Cash Sales | 0 | 0 | 0 | 0 | 25,000 | 30,000 | 100,000 | 250,000 | 450,000 | 700,000 | 700,000 | 900,000 | 1,100,000 |
| Collections fm CR accounts | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,500 | 25,000 | 60,000 | 110,000 | 150,000 | 180,000 |
| Loan/ other cash inj. | 1,450,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL CASH RECEIPTS | 1,450,000 | 0 | 0 | 0 | 25,000 | 30,000 | 100,000 | 260,500 | 475,000 | 760,000 | 810,000 | 1,050,000 | 1,280,000 |
| Total Cash Available (before cash out) | 1,450,000 | 1,273,980 | 1,179,730 | 1,083,980 | 1,001,040 | 833,550 | 752,785 | 781,095 | 767,865 | 955,135 | 1,097,655 | 1,187,055 | 1,367,400 |
| CASH PAID OUT | | | | | | | | | | | | | |
| Purchases - Online Project Management | 2,500 | 2,500 | 2,000 | 2,000 | 2,000 | 1,500 | 1,500 | 3,000 | 3,000 | 3,500 | 2,000 | 2,000 | 2,000 |
| Purchases - Server Access | 0 | 100 | 200 | 400 | 800 | 1,600 | 3,200 | 6,400 | 12,800 | 25,600 | 51,200 | 102,400 | 102,400 |
| Purchases - Online Search Engine Optimization | 0 | 0 | 0 | 0 | 0 | 0 | 5,000 | 0 | 0 | 0 | 0 | 0 | 10,000 |
| Purchases - Online Web Design and Publishing | 0 | 7,000 | 7,000 | 6,000 | 6,000 | 5,000 | 5,000 | 4,000 | 4,000 | 3,000 | 3,000 | 2,000 | 2,000 |
| Wages & Benefits: Officer salary | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| Wages & Benefits: Officer Payroll Taxes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1750 | -1750 | -1750 | -1750 | -1750 | -1750 |
| Wages & Benefits: Staff salary | 0 | 0 | 0 | 0 | 70,000 | 70,000 | 70,000 | 140,000 | 140,000 | 140,000 | 350,000 | 350,000 | 350,000 |
| Wages & Benefits: Payroll Taxes - Staff | 0 | 0 | 0 | 5390 | 5390 | 5390 | 5390 | 10780 | 10780 | 10780 | 26950 | 26950 | 26950 |
| Wages & Benefits: Retirement Plan | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| Wages & Benefits: Health Insurance | 27,500 | 27,500 | 27,500 | 27,500 | 27,500 | 27,500 | 27,500 | 70,000 | 70,000 | 70,000 | 110,000 | 110,000 | 110,000 |
| Wages & Benefits: Other payroll expenses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,000 | 10,000 |
| Outsourcing | 75000 | 0 | 0 | 15000 | 0 | 5000 | 0 | 0 | 0 | 12100 | 0 | 6500 | 0 |
| Bank Charges: Merchant Card Service | 0 | 1500 | 1500 | 1500 | 0 | 0 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| Bank Charges: Other bank charges | 250 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Capital purchases: Computer equipment | 55,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 114,500 |
| Capital purchases: Other | 2000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Supplies (office & oper.) | 250 | 500 | 750 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 | 3250 |
| Printing | 0 | 0 | 3500 | 0 | 3500 | 0 | 2500 | 0 | 2500 | 0 | 2500 | 0 | 2500 |
| Postage and delivery | 120 | 2000 | 5000 | 250 | 150 | 75 | 1000 | 2150 | 2950 | 400 | 600 | 655 | 710 |
| Repairs & maintenance | 0 | 0 | 0 | 0 | 0 | 0 | 6500 | 0 | 0 | 0 | 0 | 0 | 0 |
| Advertising | 0 | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 |
| Car, delivery & travel | 0 | 0 | 0 | 0 | 15000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Accounting & legal | 0 | 0 | 0 | 0 | 250 | 0 | 250 | 0 | 0 | 250 | 0 | 0 | 250 |
| Recruitment | 0 | 0 | 0 | 0 | 0 | 5000 | 15000 | 25000 | 35000 | 0 | 0 | 0 | 0 |
| Training and staff education | 0 | 1200 | 1800 | 2500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rent | 0 | 21000 | 21000 | 21000 | 25000 | 21000 | 21000 | 21000 | 11000 | 21000 | 21000 | 21000 | 21000 |
| Telephone | 0 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| Utilities | 0 | 1900 | 1800 | 1700 | 1600 | 1500 | 1400 | 1300 | 1200 | 1100 | 1000 | 900 | 800 |
| Insurance: Life Insurance | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 |
| Insurance: Officer Errors and Omission | 0 | 5350 | 0 | 0 | 5350 | 0 | 0 | 5350 | 0 | 0 | 5350 | 0 | 0 |
| Insurance: Worker's Compensation | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 5,000 | 5,000 | 5,000 | 12,000 | 12,000 | 12,000 |
| Insurance: Disability | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15,000 |
| Interest | 0 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 |
| Taxes | 0 | 0 | 0 | 0 | 10000 | 12000 | 40000 | 100000 | 180000 | 280000 | 280000 | 360000 | 440000 |
| SUBTOTAL | 176,020 | 94,250 | 95,750 | 107,940 | 197,490 | 180,765 | 232,190 | 468,230 | 552,730 | 647,480 | 940,600 | 1,079,655 | 1,295,610 |
| Owners' Withdrawal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| TOTAL CASH PAID OUT | 176,020 | 94,250 | 95,750 | 107,940 | 197,490 | 180,765 | 232,190 | 488,230 | 572,730 | 667,480 | 960,600 | 1,099,655 | 1,315,610 |
| Cash Position (end of month) | 1,273,980 | 1,179,730 | 1,083,980 | 976,040 | 803,550 | 652,785 | 520,595 | 292,865 | 195,135 | 287,655 | 137,055 | 87,400 | 51,790 |
| ESSENTIAL OPERATING DATA (non cash flow information) | | | | | | | | | | | | | |
| Total Sales | | 0 | 0 | 0 | 44250 | 53100 | 177000 | 442500 | 796500 | 1239000 | 1239000 | 1593000 | 1947000 |
| Cash from Operations | | 0 | 0 | 0 | 25,000 | 30,000 | 100,000 | 260,500 | 475,000 | 760,000 | 810,000 | 1,050,000 | 1,280,000 |
| Average Current Liabilities | | 0 | 0 | 0 | 6,750 | 8,100 | 27,000 | 70,335 | 128,250 | 205,200 | 218,700 | 283,500 | 345,600 |