

Key

Part I. Multiple Choice. (3 points per question)

1. Methods for acquiring machinery would include:
  - a. purchase or buy.
  - b. lease.
  - c. joint ownership.
  - d. custom hire.
  - e. All of the above are methods.
  
2. Reasons why you would replace machinery would include:
  - a. it is too small.
  - b. it is worn out and not dependable.
  - c. it is obsolete.
  - d. costs such as repairs for the present machine are increasing.
  - e. All of the above are reasons.
  
3. Budgets are a common tool used in analyzing farm alternatives or decisions. Examples of budgets could include:
  - a. a partial budget.
  - b. a whole farm budget.
  - c. an enterprise budget such as soybeans.
  - d. a cash flow budget.
  - e. All of the above are types of budgets.
  
4. In a whole farm budget:
  - a. you only evaluate the costs and return for the items that are changing.
  - b. you only evaluate the variable costs for the entire operation.
  - c. you only evaluate the fixed costs for the operation.
  - d. you only compare the return for the items that are changing.
  - e. None of the above.
  
5. Which of the following is an example of a fixed (long term) liability?
  - a. breeding livestock value
  - b. feed in storage
  - c. land loan which is not due in the next 12 months
  - d. account payable for feed purchased at local feed company
  - e. c and d above
  
6. The degree to which a business' current assets adequately cover or exceed the current liabilities is referred to as:
  - a. bankruptcy
  - b. solvency
  - c. profitability
  - d. net worth
  - e. liquidity

7. When evaluating the solvency of a farm business which is applying for a loan, a lender would be most likely to look at the farms:
- checking account balance
  - net farm income from operations
  - cost value net worth
  - market value net worth
  - value of feed in storage
8. Which of the following is an example of a current asset?
- breeding livestock value
  - feed in storage
  - loan on farm machinery
  - account payable
  - b and d above
9. If a business has a current ratio which is greater than two:
- it is in good financial shape for the long term
  - it is not solvent; it is bankrupt, or debt exceeds asset.
  - the short term financial picture looks good.
  - the net farm income from operations has been at good levels in the past.
  - None of the above apply.
10. Which of the following best describes a "particular" balance sheet?
- it shows changes in profit from assets used in the business
  - it shows the assets and liabilities over the last accounting period
  - it shows assets and liabilities at a point in time
  - it shows business profit for the last accounting period
  - None of the above.

**The following six questions (11-16) are based on the attached "Finishing SEW Pigs" budget.**

11. How much supplement and minerals is fed per pig?
- 9.7 bushels
  - 120 pounds
  - 14 pounds
  - 12 pounds
  - None of the above.
12. Given the attached "Finishing SEW Pigs" budget, what is the income (gross revenue) per animal placed on feed if the death loss is 6 percent and the market pig price is \$.45 (\$45.00 per hundred pounds)?
- \$112.50
  - \$108.00
  - \$105.75
  - \$100.00
  - None of the above.
13. For the "Finishing SEW Pigs" budget, the labor was:
- hired hourly labor at \$9.00 per hour.
  - provided by the farm family.
  - Can't determine with information provided.

14. If the feeder pig reflected on the "Finishing SEW Pigs" budget was on feed for 4 months rather than the 150 days, what would be the interest on the feeder pig purchase price if the rate is 8.5% (the purchase price remains at \$25.00) (round to nearest cent).
- \$0.82
  - \$0.71
  - \$2.13
  - None of the above
  - Can't determine with information provided.
15. For the "Finishing SEW Pigs" budget, if the market pig price is \$.50 per pound, what is the income over variable costs (gross margin) per pig? All other information is as shown in the budget.
- \$36.38
  - \$25.10
  - \$26.38
  - \$31.38
  - None of the above.
16. What is the breakeven selling price for variable costs given the budget information provided?
- \$35.57 per hundred pounds or 35.57¢ per pound
  - \$36.93 per hundred pounds or 36.93¢ per pound
  - \$38.53 per hundred pounds or 38.53¢ per pound
  - \$43.43 per hundred pounds or 43.43¢ per pound
  - None of the above.

**The next seven questions (17-23) are based on the following information.**

You are looking into purchasing a tractor for your farm business. You have pulled together the following information for a tractor purchase and want to calculate costs.

Purchase price	=	\$160,000
Salvage value	=	\$41,000
Years of useful life	=	7 years
Fuel cost	=	\$2.00/gallon
Fuel use (gallon/acre)	=	5.0
Taxes	=	1% of new cost
Labor cost	=	\$12.00/hour
Labor amount (use)	=	800 hours
Repairs	=	5% of new cost
Number of acres	=	500 acres
Interest rate	=	8%
Insurance and housing	=	2% of new cost

17. In a budget for tractor ownership, what is the annual depreciation? (Use straight line as you did in Lab 5)
- \$17,000
  - \$22,857
  - \$28,429
  - \$38,000
  - None of the above.

18. In a budget for tractor ownership, what is the annual level of taxes?
- a. \$1,210
  - b. \$1,100
  - c. \$1,600
  - d. \$1,500
  - e. None of the above.
19. What is the level of fuel cost per hour? (As indicated, you will use the tractor on 500 acres.)
- a. \$10.00
  - b. \$12.50
  - c. \$16.00
  - d. \$6.25
  - e. None of the above.
20. In a budget for tractor operating cost, what is the annual repair cost per hour?
- a. \$18.75
  - b. \$10.00
  - c. \$16.00
  - d. \$9.50
  - e. None of the above.
21. In a budget for tractor operating cost, what is the annual labor cost?
- a. \$9,600
  - b. \$10,000
  - c. \$11,000
  - d. \$15,000
  - e. None of the above.
22. In a budget for tractor ownership, what is the annual interest cost?
- a. \$6,400
  - b. \$8,040
  - c. \$12,800
  - d. \$4,000
  - e. None of the above.
23. If you use the tractor for 400 acres rather than the 500 acres, what happens to your annual operating cost (variable cost) per acre?
- a. Remains unchanged.
  - b. Decreases.
  - c. Increases.
  - d. None of the above.

The next five questions (24-28) are based on the following information for Clone's Balance Sheet.

Fixed liabilities	\$150,000
Current liability	50,000
Intermediate liability	100,000
Total liabilities	300,000
Fixed assets	250,000
Current assets	60,000
Intermediate assets	80,000
Total assets	390,000

24. Is Clone solvent?
- a. Yes
  - b. No
  - c. Can't tell with information provided.
25. What is Clone's current ratio? (As calculated for Cy Acres in class and in the text.)
- a. 1.458
  - b. .833
  - c. 1.20
  - d. 2.0
  - e. None of the above.
26. What is Clone's working capital?
- a. \$10,000
  - b. -\$10,000
  - c. \$50,000
  - d. \$20,000
  - e. None of the above.
27. What is Clone's debt to equity ratio?
- a. 4.33
  - b. 3.33
  - c. 2.75
  - d. .6857
  - e. None of the above.
28. What is Clone's debt-to-asset ratio?
- a. .769
  - b. 1.300
  - c. .600
  - d. .670
  - e. None of the above.
29. Items or options you would consider in choosing an accounting (record) system would include:
- a. accounting period
  - b. single versus double entry
  - c. cash versus accrual accounting
  - d. All of the above should be considered.
30. Reasons for keeping farm records would include:
- a. provides information for business analysis.
  - b. can assist in obtaining loans.
  - c. can be used to help prepare tax returns.
  - d. can be used to assess the progress of your business over time.
  - e. All of the above are reasons for keeping records.

**The following information is used for the next two questions.**

You have the option of purchasing a self-propelled combine or having your neighbors, Joyce and her daughter Heather, custom harvest your crop. They will custom harvest the crop for \$30.00 per acre. The purchase cost of the combine is \$200,000. Given this, you calculate the annual fixed ownership cost to be \$22,000 per year. Your operating cost per acre is \$10.00 per acre while your fixed cost per acre is calculated to be \$35.00 per acre.

31. Given this, how many acres are needed before you can justify ownership? (Don't consider any other factors such as potential yield differences, etc. for this question)
- At least 2,200 acres
  - At least 1,100 acres
  - At least 628.57 acres
  - At least 880 acres
  - None of the above.
32. With further calculation, you conclude that if you have Joyce and Heather custom combine your soybean crop they will have a combine with more current harvesting technology. However, you are paying them so much per acre so they travel at a rapid speed for harvesting so they can get over as many areas as possible. The net effect is you get one bushel more of soybeans per acre if you custom combine your soybeans. You project that the soybean price will be \$7.00 per bushel. Given this, what is the break even number of acres? (However, with this calculation, assume that the annual fixed ownership cost is \$15,000 per year; the custom rate per acre is \$25.00, the operating cost is \$10.00 per acre, and the fixed cost per acre is \$35.00.)
- At least 1,000 acres
  - At least 1,875 acres
  - At least 681.82 acres
  - At least 468.75 acres
  - None of the above.
33. During Spring Break, which is about a week away,
- you are going to get some time to yourself fully charged and come back ready to go to finish off the semester full of energy.
  - you are going to do some fun things.
  - you are going to do some thing that you enjoy.
  - HINT: "You are going to do all of the above" is the best answer.
  - You are going to do all of the above.

**Part II. Bonus (3 points)**

What is the name of the person that sits next to you (closest to you) in this class (on most days)?

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The Old Sage Says:

- A smile is a gently curved line that sets a lot of things straight.

- Well done is better than well said.
- Calculating business analysis ratios is a lot like twirling a baton, turning handsprings or eating with chopsticks. It looks easy until you try it.

## FINISHING SEW PIGS – One Pig

		Total	Cash
<b>INCOME</b> <sup>a/</sup>			
Market hog (250 lb x \$_____ per lb x 0.92 head)		\$ _____	\$ _____
<b>VARIABLE COSTS</b>			
SEW Feeder pig (12 lb)		\$25.00	\$25.00
Interest @ 8% for 150 days		\$0.82	\$0.82
<b>Feed Costs</b>			
Corn @ \$1.85 per bushel	9.7 bu	\$17.95	\$0.00
Supplement & minerals @ \$0.14 per lb	120 lbs	16.80	16.80
Pre-nursery diet		3.00	3.00
Feed Additives		3.00	3.00
Feed processing & delivery @ \$20.00 per ton		6.70	6.70
<b>Total Feed Costs</b>		<b>\$47.44</b>	<b>\$29.50</b>
Veterinary and medical		\$1.00	\$1.00
Fuel, repairs, utilities		1.20	1.20
Marketing, miscellaneous		4.00	4.00
Manure application cost		.175	1.75
Interest on feed and other costs @ 8%	3 months	1.11	0.00
Labor @ \$9.00 per hour	0.70 hours	6.30	0.00
<b>TOTAL VARIABLE COSTS</b>		<b>\$88.62</b>	<b>\$63.27</b>
<b>INCOME OVER VARIABLE COSTS</b>		<b>\$ _____</b>	<b>\$ _____</b>
<b>FIXED COSTS</b>			
Facilities & equipment		<u>\$11.28</u>	<u>\$1.13</u>
<b>TOTAL OF ALL COSTS</b>		<b>\$99.90</b>	<b>\$64.40</b>
<b>INCOME OVER ALL COSTS</b>		<b>\$ _____</b>	<b>\$ _____</b>
Break-even selling price for variable costs			
Break-even selling price for all costs			

<sup>a/</sup> Assumed death loss is 4 percent.

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