

1) (6 pts. total) Below is a simplified farm Balance Sheet.

a) (2 pts.) Use the information given and your knowledge of the relationships among Balance Sheet entries to fill in the **four** missing cells and then answer the questions below.

BALANCE SHEET		1/1/2022	1/1/2021			1/1/2022	1/1/2021
Current Assets	400,000			Current Liabilities		270,000	
Non-Current Assets			2,000,000	Non-Current Liabilities		760,000	710,000
				Total Liabilities		1,030,000	1,000,000
				Equity		1,670,000	
Total Assets	2,700,000	2,410,000		Total Liabilities & Equity			2,410,000

b) (2 pts.) Based on this Balance Sheet, what is the Current Ratio on 1/1/2022?

c) (2 pts.) Based on this Balance Sheet, what is the Debt to Asset Ratio on 1/1/2022?

2) (19 pts. total) Below is a simplified farm Income Statement.

a) (3 pts.) Use the given information to fill in the **three** missing cells.

INCOME STATEMENT		1/1/2021 to 1/1/2022	
Crop Sales			
Livestock/Dairy Sales		500,000	
Total Revenue		1,100,000	
Operating Costs		710,000	
Interest Expenses		50,000	
Total Costs			
Net Farm Income from Operations			
Unpaid Labor and Management		80,000	
Net Farm Income		260,000	

Use the Income Statement on the previous page and the Balance Sheet in Question 1 to answer the questions below. Show how you calculate your answers for potential partial credit.

**b) (4 pts.)** What is this farm's Return on Assets? What is this farm's Rate of Return on Assets?

**c) (4 pts.)** What is this farm's Return on Equity? What is this farm's Rate of Return on Equity?

**d) (4 pts.)** What is this farm's Operating Profit Margin Ratio (i.e. Profit Margin)?

**e) (4 pts.)** The income statement above shows net farm income of \$260,000. Where does this \$260,000 go in terms of the farm balance sheet?

**3) (4 pts.)** This is for a different farm. Suppose you sell some land for \$100,000 (the value on your market basis balance sheet below) and put the money into your farm checking account. You then use the money to pay off \$60,000 of the farm's long-term debt. The column **Before** in the balance sheet below gives the financial data before you made these transactions. For each entry in the **Before** column, write in the **After** column the new value that applies after you complete these transactions.

<b>BALANCE SHEET</b>	<b>Before</b>	<b>After</b>		<b>Before</b>	<b>After</b>
Current Assets	500,000		Current Liabilities	400,000	
Non-Current Assets	1,500,000		Non-Current Liabilities	900,000	
			Total Liabilities	1,300,000	
			Equity	700,000	
Total Assets	2,000,000		Total Liabilities & Equity	2,000,000	

4) Briefly and concisely answer each question below.

a) (2 pts.) Suppose you harvested corn in November 2021 and sold it in March 2022. If you did cash accounting for taxes, when would you claim this income, on your 2021 or 2022 taxes?

b) (2 pts.) Suppose you bought fertilizer in 2021 and then used it in 2022 for your corn crop. If you claim this cost on your 2021 taxes, is this cash accounting or accrual accounting?

5) Suppose you bought farmland for \$3,000/acre in 2010 and it is now worth \$5,000/acre.

a) (3 pts.) Which value would a cost basis balance sheet use for the land? Based on class discussion, give one reason why a farmer might want to use a cost basis balance sheet?

b) (3 pts.) Which value would a market basis balance sheet use for the land? Based on class discussion, give one reason why a farmer might want to use a market basis balance sheet?

c) (3 pts.) Explain why it is not unusual or a sign of a serious financial problem if a cash grain farm has a high current ratio (say 5.0 or 500%) in December.

d) (3 pts.) Explain why it is not unusual or a sign of a serious financial problem if a dairy farm has a low current ratio (say 1.5 or 150%).

**6) (6 pts. total)** You buy a combine to harvest grain for \$300,000 with a useful life of 4 years.  
**a) (2 pts.)** Fill in the table below using Straight Line Depreciation for this combine assuming a \$100,000 salvage value. Show your work.

Year	Depreciation During Year	Value at Year End
1		
2		
3		
4		

**b) (4 pts.)** Fill in the table below using 200% Declining Balance Depreciation for this combine for years 1 and 2 only. IGNORE SALVAGE VALUE. Show your work.

Year	Depreciation During Year	Value at Year End
1		
2		
3	xxxx	xxxx
4	xxxx	xxxx

**7) (8 pts.)** Suppose that in November of 2021 you paid \$20,000 for a used truck for hauling grain and have been and will be depreciating it for tax purposes using the tax table below.

**a) (2 pts.)** Enter the depreciation claimed in 2021 and that will be claimed 2022 in the table.

Year	Calendar Year	Depreciation Rate	Depreciation Claimed
1	2021	5.00%	
2	2022	35.00%	
3	2023	25.80%	
4	2024	13.68%	
5	2025	10.94%	
6	2026	9.58%	

**b) (2 pts.)** What will be your tax basis in the truck at the end of 2022?

**c) (2 pts.)** If you sold the truck on December 31, 2022 for \$15,000, how much gain (depreciation recapture) would you report on your tax return?

**d) (2 pts.)** Considering ordinary income tax, self-employment tax, and capital gains tax, which one or ones is this gain subject to?

**8)** Suppose a farmer only grows corn and in 2022 reported \$900,000 of costs on their schedule F for growing the corn and sold \$1,000,000 of corn in 2022.

**a) (2 pts.)** How much gain would this farmer report on their 2022 tax forms for this sale?

**b) (2 pts.)** Considering ordinary income tax, self-employment tax, and capital gains tax, which one or ones is this income subject to?

**9)** Suppose a farmer bought land for \$500,000 in 2010 and then sold it for \$1,500,000 in 2022.

**a) (2 pts.)** How much gain would this farmer report on their 2022 tax forms for this sale?

**b) (2 pts.)** Considering ordinary income tax, self-employment tax, and capital gains tax, which one or ones is this gain subject to?

**10)** Use this information to give short answers to the following questions. Homer and Marge own a farm, with all assets owned as marital property under Wisconsin's marital property law. Among their assets is land worth \$900,000 with a \$100,000 income tax basis.

**a) (2 pts.)** Suppose Homer and Marge gave the land to Bart. If this is their first major gift to Bart, based on current tax laws, how much gift taxes would Homer and Marge have to pay?

**b) (2 pts.)** If Bart sold the land after they gave it to him, how much gain would he have?

**c) (2 pts.)** Sadly, before Homer and Marge do any of this, Homer dies and his will gives Marge the land. How much gain would Marge have to report if she sold the land for \$900,000?

**11)** Suppose you and your sister decide to farm together. You manage the crops and livestock together, splitting the costs and earnings equally. You call yourselves Sisterhood Farms.

**a) (2 pts.)** You do not do file any official paperwork with the state or federal government, you just start farming together. Is this legal? Do you have to register with the state?

**b) (2 pts.)** What sort of business entity would this be for tax and liability purposes?

**12)** You own a farm with your sister that is organized as an LLC. Among its assets is land worth \$500,000 that has a \$100,000 income tax basis.

**a) (2 pts.)** Suppose your sister buys a new combine harvester for \$500,000 on credit for the farm. If the LLC cannot pay the loan payments, could the lender seize your personal assets (your house, retirement accounts) to pay off this debt?

**b) (2 pts.)** Suppose you end the LLC and you each contribute your ownership interests in that LLC to separate LLCs, each with your own children. Would this transfer trigger recognition of the gain in land value for tax purposes?

**13)** You own a farm with your sister that is organized as an S-corporation. Its only assets are land worth \$500,000 that has a \$100,000 income tax basis.

**c) (2 pts.)** Suppose your sister buys a new combine harvester for \$500,000 on credit for the farm. If the farm cannot pay the loan payments, could the lender seize your personal assets (your house, retirement accounts) to pay off this debt?

**d) (2 pts.)** Suppose you end the S-corporation and you and your sister both contribute your ownership interests in the land to an LLC that you own together. Would this transfer trigger recognition of the gain in land value for tax purposes?

**14) (5 pts.)** Put an “X” in a column to indicate which case or cases apply to each entity.

Business Entity	Entity pays taxes on income	Entity passes income to owners who pay taxes	Entity passes income to lenders who pay taxes
C-corporation			
S-corporation			
Limited Liability Company			
General Partnership			
Partnership with limited partners			

**15) (5 pts.)** Put an “X” in a column to indicate where each would appear on a farm balance sheet.

Item	Current Asset	Non-Current Asset	Current Liability	Non-Current Liability
Corn stored on the farm				
Fuel bill due at the end of the month				
Tractor you bought on credit				
Payment for tractor due by year end				
Long-term principle owed on tractor				

**16) (5 pts.)** True or False? Mark your answer based on material discussed in class.

- a) T \_\_\_ F \_\_\_ Farmers can use Section 179 to depreciate land to reduce capital gain taxes
- b) T \_\_\_ F \_\_\_ Small farms as a group own a lot of the ag land in the US, but produce a small amount of ag output and most have other income sources.
- c) T \_\_\_ F \_\_\_ Most farms in the US use cash accounting for tax purposes.
- d) T \_\_\_ F \_\_\_ The Dairy Carrie blog noted how your farm has to get bigger if you want to farm with your adult children, the farm has to support two households.
- e) T \_\_\_ F \_\_\_ On average, larger farms have higher profit margins than smaller farms, but lots of variation exists, so some large farms have low profit margins.