



Planning To Succeed

Student Workbook

Business and Financial Planning
Curriculum for High School Students

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Lesson 1

The Language of Business– Note Organizer

There are terms specific to the business world

- Like learning a new language

You should understand these terms:

- To improve your business management
- To be able to talk with:
 - _____
 - Accountants
 - _____
 - Lawyers
 - Other business owners/managers

Understanding Profits

Most businesses try to earn profits

- Profits allow them to:
 - _____
 - Buy new equipment, expand, replace old equipment
 - Pay the owners

_____ = the money left after paying all expenses

- $\text{Profits} = \text{Revenues} - \text{Expenses}$

Revenues

- The money coming in (_____) from selling your product or service
- $\text{Revenues} = \text{Selling Price/Unit} \times \text{Units Sold}$
 - For all products/services sold
- Revenue refers to the money coming in
 - It does NOT include any expenses

_____ = cost of doing business

2 Main Types of Expenses:

Variable _____ (Operating Expenses)

- These are expenses that change directly with the level of production
 - If you increase production, these costs increase
 - If you decrease production, these costs decrease

- Easy to think of “out of pocket” expenses
- Also called “_____”
- Examples:
 - Fuel, fertilizer, seed, chemicals, hired labor, repairs

Overhead (_____) Expenses

- These are costs that you have just because you are in business
 - Business licenses, property taxes
 - Office rent, insurance premiums
 - Administrative and office expenses, interest on loans
 - _____
 - Owners salary (not always included in overhead)
- These costs do NOT change significantly if production changes
 - If production increases, office rent doesn’t change

Total Expenses = _____ + Overhead

- Measure of the total cost of doing business

_____ = Revenues – Variable Expenses

- You want your gross margin to be greater than \$0

Gross Margin/_____ = Gross Margin divided by the number of units sold

- Good number to know
- It shows which products are earning you the most

Total Profit = Revenues – _____

- Or: Profit = Gross Margin – Overhead Expenses
- Also called “_____”
- You want Profit to be greater than \$0
 - The higher the better (usually)!
- When a manager talks about “_____”, they are referring to profits

Capital Structure

_____ = resources that a business owns

- Land, buildings, equipment, labor, cash
- A “_____” refers to buying something that will be used in the business year after year
 - Tractors, breeding livestock, barns, mowers

Asset = something tangible that a business owns or controls

- Land, buildings, _____, cash, inventories
- Breeding livestock, feeder livestock, fencing

- Accounts receivable
 - This refers to money owed to a producer for items sold " _____ " or " _____ "
 - Example: A customer buys \$5,000 of lumber on credit and will be billed at the end of the month.
 - The \$5,000 is called "accounts receivable" for the seller

_____ = something the business owes to a lender or creditor

- _____ = money owed to a supplier for items purchased on credit
 - You will pay the supplier at the end of the month
- _____ = more formal arrangement than Acct. Payable
 - Loans are used to purchase high-dollar assets
 - Apply to a lender for a loan
 - Lender provides you with funds for your stated purchase
 - You repay the lender over time
 - Terms are specified in the loan contract

Owners Equity (or _____)

- Equity = the difference between market value of an asset and the remaining loan balance
- _____ = Value of Assets – Remaining Loan
- You want your equity to be greater than \$0
- You want your equity to grow over time
 - This means you are:
 - _____
 - Paying down your liabilities
 - The value of your business is growing

The Language of Business– In-Class Exercise

Classify each of the following items associated with Tim's lawn-mowing business under the appropriate term(s).

- | | |
|---|--------------------------|
| A. Revenue | F. Asset |
| B. Operating Expense (Variable Expense) | G. Account Receivable |
| C. Overhead Expense (Fixed Expense) | H. Account Payable |
| D. Gross Margin | I. Loan |
| E. Profit | J. Equity (or Net Worth) |

- _____ Tim's 2 riding mowers, valued at \$4,250 each.
- _____ \$2,000 paid to Tim for his mowing services this week.
- _____ \$3,000 remaining on the loan used to purchase one of the riding mowers.
- _____ \$1,500 that Tim's customers owe him for mowing their lawns "on account". They will pay him within the next month or so.
- _____ \$500 that Tim owes the supply store for parts to repair his mowers.
- _____ \$750 that Tim paid to his hired worker for this week's wages.
- _____ \$2,000 insurance premium payment for auto insurance coverage for the year.
- _____ Tim wants to borrow \$2,500 to buy attachments for his mowers. He doesn't have the cash on hand, so he will try to borrow this money from a lender.
- _____ For the month Tim received revenues of \$5,000. He had variable expenses of \$2,800 for fuel, parts, and hired labor. He says, "I made \$2,200 this month." What is the term for that \$2,200?
- _____ Tim's truck has a market value of \$18,000. He still owes \$4,000 on the loan he used to purchase the truck. What is the term for the \$14,000 difference between the market value of the truck and the remaining loan balance?
- _____ Tim bought \$1,400 of fuel and parts for 2 weeks of mowing.

Use the following information to help Tim understand the financial side of his business:

For the entire year of 2016:

Tim mowed 800 lawns at an average price of \$50/lawn

He paid for the following items:

Fuel - \$6,000

Advertising - \$1,000

Office Rent - \$12,000

Parts & repair costs - \$2,000

Property taxes - \$2,000

Hired Labor for mowing - \$8,000

Interest on mower loans - \$500

Calculate the Total Revenues for Tim's business

Calculate the Total Operating Expenses for the year
(Only include the costs that change as the number of lawns mowed change)

Calculate the Total Overhead Expenses for the year

Calculate the Gross Margin for Tim's business for the year

Calculate the Gross Margin per Lawn for Tim's business.

Calculate the Profit (or Net Income) for Tim's business for the year
Because Tim did not include a salary for himself, the profit for the year is what he can pay himself.

Tim thinks the market value of his business assets is \$30,000. He owes a total of \$12,000 in loans and accounts payable at the moment. Calculate the total equity of Tim's business.

The Language of Business - Homework

Jan's Bicycle Sales & Repair is a new business in the area. Jan is an avid bike rider – she competes in several road races each year. She also loves to talk to people about the health benefits of riding bicycles. That's one of the main reasons she opened her business. She sells many different types of bicycles, and she repairs all types as well. Let's practice "the language of business" as it relates to Jan's business.

Here is a list of items that are associated with Jan's business:

\$50,000 of bikes in inventory today, ready to sell

\$150,000 building (the store) & land

\$10,000 in the business checking account

\$80,000 loan to purchase the building and land

\$40,000 operating loan to purchase the bikes so she can sell them

\$7,500 depreciation on the building and equipment for the year

\$30,000 of office equipment, displays, cash registers, etc. that she owns

\$8,000 of interest paid this year on the loan to purchase the building

\$2,000 of interest paid this year on the operating loan to purchase the bicycle inventory

\$140,000 of bicycle sales for the year

\$12,000 of property insurance for the year

\$60,000 spent to purchase the bicycles she sold throughout the year

\$5,000 in advertising expenses for the year

\$11,000 that Jan owes to her bicycle parts supplier as of today – to be paid within 1 month

\$20,000 that Al's Bike Tours owes to Jan as of today for bicycles he purchased but hasn't paid for yet

\$25,000 of sales commission (based on the number of bikes sold) that Jan pays to her sales team

Please classify these items into the correct category. Each item belongs in only one category.

Revenues (Item)	(\$)
_____	_____
Operating Expenses (Item)	(\$)
_____	_____
_____	_____
Total Operating Expenses	_____

Overhead Expenses (Item)	(\$)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
Total Overhead Expenses	_____
Asset (Item)	(\$)
_____	_____
_____	_____
_____	_____
_____	_____
Account Receivable (Item)	(\$)
_____	_____
Account Payable (Item)	(\$)
_____	_____
Operating Loan (Item)	(\$)
_____	_____
Term Loan (Item)	(\$)
_____	_____

Please calculate the Gross Margin for Jan's bike business for the year.

Total Revenues:	\$ _____
- Total Operating Expenses:	\$ _____
= Gross Margin:	\$ _____

Jan sold a total of 800 bicycles last year. Calculate Jan's Gross Margin per bicycle? This represents how much money is left over after paying the operating expenses for each bike sold.

Calculate the Profit (or Net Income) for Jan's business for the year.

Total Revenues:	\$ _____
- Total Operating Expenses:	\$ _____
- Total Overhead Expenses:	\$ _____

= Profit: \$ _____

How much profit did Jan earn per bicycle that she sold? Briefly explain what this number means to Jan.

Calculate the Total Assets for Jan's business as of today.

Accounts Receivable: \$ _____
+ Assets: \$ _____
= Total Assets: \$ _____

Calculate the Total Liabilities for Jan's business as of today.

Accounts Payable: \$ _____
+ Operating Loan: \$ _____
+ Term Loan: \$ _____
= Total Liabilities: \$ _____

How much Equity (Net Worth) does Jan have in her business as of today? This is how much Jan has personally invested in her business so far.

Total Assets: \$ _____
- Total Liabilities: \$ _____
= Equity (Net Worth): \$ _____

What does this Equity number mean to Jan?

The Language of Business – Student Driven Learning Activity

After completing the homework exercise evaluate the expenses and determine 2-3 ways you may be able to cut expenses without compromising the integrity of the business. You may not remove insurance, etc... Upon determining 2-3 ways prepare justifications for why those costs may be cut and how you will offset for the cut expense. Prepare a sales pitch to your investors to describe how you will cut these costs and how it will or will not affect daily business operations.

Lesson 2

Lesson 2- Types of Business Organizations Notes Organizer

	Advantages	Disadvantages	Who is it good for?	Other
Sole Proprietorship				
Partnership -General Partners -Limited Partners				
Corporations				
C Corporation				

S Corporation	Cooperatives	Limited Liability Company (LLC)

Types of Business Organizations Worksheet

Directions: Utilize the presentation and notes to fill out the chart. You may also need to do some research of your own.

	Ease/Cost of Start-up	Ease of Transfer	Taxation	Liability
Sole Proprietor				
General Partnership				
Limited Partnership				
C- corporation				
S- corporation				
Cooperative				
Limited Liability Company (LLC)				

Forms of Business Organization In-Class Exercise

Choose the most appropriate form of business organization for the following businesses. There may be more than one answer for each! Your choices are:

Sole Proprietorship (SP)

C-Corporation (C)

General Partnership (GP)

S-Corporation (S)

Limited Partnership (LP)

Limited Liability Company (LLC)

- _____ Roadside produce market for a family farm operated only in the summer.
- _____ Building construction company owned by several people who are not related.
- _____ Medical Doctor/Office with 3 doctors
- _____ A part-time woodworking business where you sell birdhouses, small furniture, yard ornaments, etc.
- _____ A grocery store where 2 people want to own and manage the business, and 1 person wants to just invest \$50,000, but have no management responsibilities.
- _____ A student who wants to sell flowers on the sidewalk outside of a local business.
- _____ A transportation company that wants to limit ownership of the company to a few family members.
- _____ A lawn-mowing business that is only operated for 1 summer.
- _____ A landscaping business owned by 3 friends. The company installs very expensive landscapes in a wealthy neighborhood.
- _____ A tree removal firm owned by 1 person. He cuts down trees next to houses, buildings, and power lines.

Forms of Business Organization Homework Exercise

Please answer the following questions in a concise, meaningful manner.

1. What are the 3 main factors that you should consider when choosing a form of business organization for your operation?
2. Your entire class wants to start its own small business that does handiwork for low-income families in the community – mowing lawns, shoveling snow, painting fences, etc. The main goal of this business is to gain experience managing a real-world operation while helping improve the community. The work that you will be doing is very low risk – the chances of hurting someone or damaging property are very low. You will charge prices that are just enough to cover your expenses. Finally, you would like this business to continue for several years – long after you have graduated – you will pass the ownership of the business to younger students as you graduate.

What is the best form of business organization for your business? Please give 3 reasons why you selected this particular form of organization.

3. Find at least one example of a local business for each of the main forms of organization.

Type of Organization

Example of a Local Business

Sole Proprietorship: _____

General Partnership: _____

Limited Partnership: _____

C-corporation: _____

S-corporation: _____

Limited Liability Company: _____

4. Choose the owner of a local business – it can be someone from your family who owns a business. Briefly interview them about the form of organization of their business. Ask them questions such as:

What is the form of organization for your business?

What is the main reason you chose this form of organization?

What do you think is the biggest advantage of this form?

What do you think is the biggest disadvantage of this form?

Who did you talk to for advice before you selected this form of business organization?

Write a 1- to 2-page paper that summarizes your interview. Please include a brief description of the business. Also, include your thoughts into your paper: for example, do you agree with the choice of organization? What other type of organization might be appropriate for this business?; What did you learn from this interview....

Forms of Business Organization- Student Driven Learning Activity

Divide into groups and develop an interactive presentation through skit, ppt, charts/diagrams, etc... about one of the types of business organizations. Present this business type to the group without giving away the name or type and see if they can properly identify the business organization.

Lesson 3

Balance Sheet-Note Organizer

A Balance Sheet lists value of the _____ owned by a business and the value of the _____ that the business owes to its lenders. The _____ of the business shows how much the owners have invested into the business as of that day.

A _____ is something that the business owns and will use up within the next 12 months. Examples include supplies that you have on hand, feed inventories, or accounts receivable.

A _____ is something that the business owns that lasts for more than one year. Examples include machinery and equipment, buildings, and land.

A _____ is something that the business owes to someone and it will be paid within the next 12 months. Examples include accounts payable, loan principal that is to be paid this year, and accrued interest.

A _____ is something that the business owes to someone over the next several years, but it will not be repaid within the next 12 months. Examples include loan principal on a tractor loan that you owe over the next 5 years.

Balance Sheet In-Class Exercise

Determine where the following items would belong on a balance sheet for a greenhouse/floral shop. Use the following classifications:

CA = Current Asset

CL = Current Liability

NA = Not Applicable

NCA = Non-Current Asset

NCL = Non-Current Liability

- _____ \$800 of cut flowers that are ready to be sold
- _____ \$20,000 of operating loan that is still owed to the bank
- _____ \$200,000 of mortgage (loan) that is due after the next year
- _____ \$5,000 of wages that are owed to the workers
- _____ \$3,000 of cash in the cash register
- _____ \$265,000 worth of greenhouse, land, and other buildings
- _____ \$25,000 of seed and fertilizer to be used to grow plants
- _____ \$45,000 of equipment loans that will not be repaid within the next 12 months
- _____ \$75,000 of equipment (fork lift, carts, delivery truck, etc.)
- _____ \$35,000 of money owed to the business from "credit sales"
- _____ \$125,000 of operating expenses paid over the year (utilities, labor, fertilizer, etc.)
- _____ \$4,500 of accrued interest (interest owed but not yet paid)
- _____ \$15,000 in the business checking account
- _____ \$300,000 of revenues from sales throughout the entire year

Use the above assets and liabilities to create a balance sheet for this flower store.

A convenience store has total assets of \$750,000. As of today, the owner still owes \$200,000 of liabilities (loans, accounts payable, etc.) to her lenders. Calculate this owner's Net Worth in her business on this day.

Two years later this convenience store has total assets of \$800,000 and total liabilities of \$100,000. Has the owner's Net Worth increased (improved) or decreased (declined)?

Increased

Decreased

Balance Sheet Homework Exercise

Use the following information to construct a balance sheet for Joe's Sporting Goods business for January 1, 2017.

First, classify these items in Current Assets, Non-Current Assets, Current Liabilities or Non-Current Liabilities.

CA = Current Asset CL = Current Liability NA = Not Applicable
 Okay, well NCA = Non-Current Asset NCL = Non-Current Liability

- _____ \$40,000 of loan payments due within the next 12 months
- _____ \$350,000 building & land for the store and parking lot
- _____ \$50,000 of operating loan that is still owed to the bank – used to purchase inventory
- _____ \$150,000 of mortgage (loan) on the building that is due after the next year
- _____ \$8,000 of cash in the cash register
- _____ \$85,000 of furniture, office equipment, and display racks
- _____ \$80,000 of shoes, clothing, and sporting gear in inventory, ready to be sold.
- _____ \$45,000 of loans to buy the furniture & display racks that is not due within the next 12 months
- _____ \$25,000 of accounts receivable from sales to a high school baseball team
- _____ \$10,000 owed to an advertising company for a recent radio commercial
- _____ \$7,500 of accrued interest (interest owed but not yet paid)
- _____ \$3,000 of wages that are owed to the workers
- _____ \$35,000 in the business checking account

Use the above assets and liabilities to create a balance sheet for Joe’s Sporting Goods store. Use the attached blank balance sheet

Balance Sheet

Joe's Sporting Goods

Date: _____

Assets

Liabilities

Current Assets

Current Liabilities

Total Current Assets _____		Total Current Liabilities _____	
----------------------------	--	---------------------------------	--

Non-Current Assets

Non-Current Liabilities

Total Non-Current Assets _____		Total Non-Current Liabilities _____	
--------------------------------	--	-------------------------------------	--

Total Assets _____		Total Liabilities _____	
--------------------	--	-------------------------	--

Total Assets _____ - Total Liabilities _____ = Net Worth (Owners Equity) _____

From Joe's balance sheet:

Is Joe's business liquid or not liquid? How did you determine this?

Is Joe's business solvent or insolvent? How did you determine this?

Assume Joe sells all of his business assets today and repays all of his liabilities. How much money will he have left over after all the liabilities are repaid? Where can you find this number on his balance sheet?

The Balance Sheet- Student Driven Activities

Student Driven Activity: Develop your own scenario to be used with a balance sheet. Be sure to include all portions of the assets and liabilities. Use the example scenario from class to make sure you've included all pieces. The teacher will collect everyone's scenarios and will hand them back out to others in the class to problem solve and create a balance sheet with.

Lesson 4

Income Statements- Note Organizer

- _____ - income from sale of products and services
- _____ - operating expenses & overhead expenses
- Duration is typically 1 year
- Can be called Profit and Loss Statement
- Shows _____ of the business
 - The _____ shows your net income or profit for the period
- These tax forms can be used as a format
 - _____ - farm
 - _____ - business
- Used to:
 - _____
 - Net farm income
 - Weekly, monthly, quarterly, yearly, etc...
 - _____
 - Repayment ability

SECTIONS OF AN INCOME STATEMENT

	Description	Description (cont.)
REVENUE		
EXPENSES	Operating (variable) expenses-	Overhead (fixed) expenses-
GROSS MARGIN		
PROFITS (Net Income, Net Farm Income)		

Income Statement In-Class Exercise

Use the following information to complete an income statement for Jack's Roadside Market. Not all of the information belongs on an income statement.

Annual Business License	\$100
Hired Labor Wages	\$12,000
Operating Loan Principal Received	\$35,000
Depreciation	\$8,000
Office Expense	\$1,200
Total Sales (Gross Receipts)	\$115,000
Repairs & Maintenance	\$900
Supplies	\$2,000
Interest on Mortgage	\$3,500
Interest on Other Loan	\$700
Legal & Professional Services	\$1,500
Car & Truck Expenses	\$2,500
Advertising	\$800
Utilities	\$4,000
Loan Principal Repaid	\$6,000
Insurance	\$3,000

To calculate the Cost of Goods Sold (Operating Expenses): Use Part III of Schedule C

Beginning Inventory	\$30,000
Hired Labor Wages – Production	\$18,000
Purchase of Inventory	\$25,000
Materials & Supplies	\$3,000
Ending Inventory	\$35,000

Calculate the Gross Margin (Line 7) for Jack's business.

Calculate the Net Income (Line 31) for Jack's business. What can Jack do with these profits?

What can Jack do to try to improve the profitability (net income) of his business?

Income Statement Homework Exercise

Use the following information to complete an income statement for Ernie's Welding & Machine Shop. Not all of the information belongs on an income statement. Please use the Schedule C tax form to build this income statement.

Total Sales (Gross Receipts)	\$550,000
Wages - Hired Administrative Labor	\$42,000
Car & Truck Expenses	\$5,500
Operating Loan Principal Received	\$125,000
Depreciation	\$15,000
Office Expense	\$2,800
Operating Loan Principal Repaid	\$125,000
Repairs & Maintenance	\$9,000
Other expenses	\$5,000
Rent – machinery	\$20,000
Supplies	\$52,000
Income Taxes	\$28,000
Annual Business License	\$200
Interest on Mortgage	\$12,500
Interest on Other Loan	\$6,000
Legal & Professional Services	\$2,500
Advertising	\$8,000
Utilities	\$34,000
Mortgage Principal Repaid	\$30,000
Insurance	\$23,000

To calculate the Cost of Goods Sold (Operating Expenses): Use Part III of Schedule C

Beginning Inventory	\$50,000
Hired Labor Wages – Production	\$88,000
Purchase of Inventory	\$125,000
Ending Inventory	\$65,000

Calculate the Gross Margin (Line 7) for Ernie’s business.

Calculate the Net Income (Line 31) for Ernie’s business.

What can Ernie do to try to improve the profitability (net income) of his business?

SCHEDULE C
(Form 1040)

Department of the Treasury
Internal Revenue Service (99)

Profit or Loss From Business
(Sole Proprietorship)

► Go to www.irs.gov/ScheduleC for instructions and the latest information.

► Attach to Form 1040, 1040-SR, 1040-NR, or 1041; partnerships must generally file Form 1065.

OMB No. 1545-0074

2021

Attachment
Sequence No. **09**

Name of proprietor

Social security number (SSN)

A Principal business or profession, including product or service (see instructions)

B Enter code from Instructions

C Business name. If no separate business name, leave blank.

D Employer ID number (EIN) (see instr.)

E Business address (including suite or room no.) ►

City, town or post office, state, and ZIP code

F Accounting method: (1) ☐ Cash (2) ☐ Accrual (3) ☐ Other (specify) ►

G Did you "materially participate" in the operation of this business during 2021? If "No," see instructions for limit on losses ☐ Yes ☐ No

H If you started or acquired this business during 2021, check here ☐

I Did you make any payments in 2021 that would require you to file Form(s) 1099? See instructions ☐ Yes ☐ No

J If "Yes," did you or will you file required Form(s) 1099? ☐ Yes ☐ No

Part I Income

1 Gross receipts or sales. See instructions for line 1 and check the box if this income was reported to you on Form W-2 and the "Statutory employee" box on that form was checked <input type="checkbox"/>	1
2 Returns and allowances	2
3 Subtract line 2 from line 1	3
4 Cost of goods sold (from line 42)	4
5 Gross profit. Subtract line 4 from line 3	5
6 Other income, including federal and state gasoline or fuel tax credit or refund (see instructions)	6
7 Gross income. Add lines 5 and 6	7

Part II Expenses. Enter expenses for business use of your home **only** on line 30.

8 Advertising	8	18 Office expense (see instructions)	18
9 Car and truck expenses (see instructions)	9	19 Pension and profit-sharing plans	19
10 Commissions and fees	10	20 Rent or lease (see instructions):	
11 Contract labor (see instructions)	11	a Vehicles, machinery, and equipment	20a
12 Depletion	12	b Other business property	20b
13 Depreciation and section 179 expense deduction (not included in Part III) (see instructions)	13	21 Repairs and maintenance	21
14 Employee benefit programs (other than on line 19)	14	22 Supplies (not included in Part III)	22
15 Insurance (other than health)	15	23 Taxes and licenses	23
16 Interest (see instructions):		24 Travel and meals:	
a Mortgage (paid to banks, etc.)	16a	a Travel	24a
b Other	16b	b Deductible meals (see instructions)	24b
17 Legal and professional services	17	25 Utilities	25
		26 Wages (less employment credits)	26
		27a Other expenses (from line 48)	27a
		b Reserved for future use	27b

28 Total expenses before expenses for business use of home. Add lines 8 through 27a	28
29 Tentative profit or (loss). Subtract line 28 from line 7	29

30 Expenses for business use of your home. Do not report these expenses elsewhere. Attach Form 8829 unless using the simplified method. See instructions.

Simplified method filers only: Enter the total square footage of (a) your home:

and (b) the part of your home used for business: Use the Simplified Method Worksheet in the instructions to figure the amount to enter on line 30

31 **Net profit or (loss).** Subtract line 30 from line 29.

• If a profit, enter on both **Schedule 1 (Form 1040), line 3**, and on **Schedule SE, line 2**. (If you checked the box on line 1, see instructions). Estates and trusts, enter on **Form 1041, line 3**.

• If a loss, you **must** go to line 32.

32 If you have a loss, check the box that describes your investment in this activity. See instructions.

• If you checked 32a, enter the loss on both **Schedule 1 (Form 1040), line 3**, and on **Schedule SE, line 2**. (If you checked the box on line 1, see the line 31 instructions.) Estates and trusts, enter on **Form 1041, line 3**.

• If you checked 32b, you **must** attach **Form 6198**. Your loss may be limited.

32a ☐ All investment is at risk.
32b ☐ Some investment is not at risk.

For Paperwork Reduction Act Notice, see the separate instructions.

Cat. No. 11334P

Schedule C (Form 1040) 2021

Part III Cost of Goods Sold (see instructions)

33	Method(s) used to value closing inventory: a <input type="checkbox"/> Cost b <input type="checkbox"/> Lower of cost or market c <input type="checkbox"/> Other (attach explanation)		
34	Was there any change in determining quantities, costs, or valuations between opening and closing inventory? If "Yes," attach explanation <input type="checkbox"/> Yes <input type="checkbox"/> No		
35	Inventory at beginning of year. If different from last year's closing inventory, attach explanation <table border="1" style="display: inline-table; vertical-align: bottom;"><tr><td style="width: 50px; text-align: center;">35</td><td style="width: 200px;"></td></tr></table>	35	
35			
36	Purchases less cost of items withdrawn for personal use <table border="1" style="display: inline-table; vertical-align: bottom;"><tr><td style="width: 50px; text-align: center;">36</td><td style="width: 200px;"></td></tr></table>	36	
36			
37	Cost of labor. Do not include any amounts paid to yourself <table border="1" style="display: inline-table; vertical-align: bottom;"><tr><td style="width: 50px; text-align: center;">37</td><td style="width: 200px;"></td></tr></table>	37	
37			
38	Materials and supplies <table border="1" style="display: inline-table; vertical-align: bottom;"><tr><td style="width: 50px; text-align: center;">38</td><td style="width: 200px;"></td></tr></table>	38	
38			
39	Other costs <table border="1" style="display: inline-table; vertical-align: bottom;"><tr><td style="width: 50px; text-align: center;">39</td><td style="width: 200px;"></td></tr></table>	39	
39			
40	Add lines 35 through 39 <table border="1" style="display: inline-table; vertical-align: bottom;"><tr><td style="width: 50px; text-align: center;">40</td><td style="width: 200px;"></td></tr></table>	40	
40			
41	Inventory at end of year <table border="1" style="display: inline-table; vertical-align: bottom;"><tr><td style="width: 50px; text-align: center;">41</td><td style="width: 200px;"></td></tr></table>	41	
41			
42	Cost of goods sold. Subtract line 41 from line 40. Enter the result here and on line 4 <table border="1" style="display: inline-table; vertical-align: bottom;"><tr><td style="width: 50px; text-align: center;">42</td><td style="width: 200px;"></td></tr></table>	42	
42			

Part IV Information on Your Vehicle. Complete this part **only** if you are claiming car or truck expenses on line 9 and are not required to file Form 4562 for this business. See the instructions for line 13 to find out if you must file Form 4562.

43	When did you place your vehicle in service for business purposes? (month/day/year) ▶ / /
44	Of the total number of miles you drove your vehicle during 2021, enter the number of miles you used your vehicle for:
	a Business _____ b Commuting (see instructions) _____ c Other _____
45	Was your vehicle available for personal use during off-duty hours? <input type="checkbox"/> Yes <input type="checkbox"/> No
46	Do you (or your spouse) have another vehicle available for personal use? <input type="checkbox"/> Yes <input type="checkbox"/> No
47a	Do you have evidence to support your deduction? <input type="checkbox"/> Yes <input type="checkbox"/> No
	b If "Yes," is the evidence written? <input type="checkbox"/> Yes <input type="checkbox"/> No

Part V Other Expenses. List below business expenses not included on lines 8–26 or line 30.

48 Total other expenses. Enter here and on line 27a	48

Income Statement- Student Driven Activity

Student Driven Activity: Using the same scenario you developed in the Budget lesson add the additional information you need to complete it as an income statement. After adding the additional information the teacher will collect the scenarios and give them to someone different than the previous lesson. The new student will fill out an income statement and Schedule C utilizing the information given. Be sure to create an answer sheet to check your classmate's work!

Lesson 5

Enterprise Budgets-Note Organizer

What is an Enterprise?

- ▶ A specific aspect of a business
- ▶ Each _____ or _____
- ▶ Example:
 - ▶ Grocery store enterprises
 - _____
 - Fruits
 - Dairy, etc.
 - ▶ Dairy farm enterprises:
 - Cows
 - _____
 - Alfalfa hay
 - Pasture, etc.
 - ▶ Lawn care business enterprises:
 - _____
 - Installation
 - Maintenance of lawns (spraying, etc.)

Why Do We Care?

- ▶ Income statements show the _____ for the ENTIRE business
 - But you can't easily see where you are _____ or _____ money from an income statement

Enterprise Budgets

- ▶ Enterprise budgets show the _____ of each SECTION of the business
- ▶ Enterprise budgets allow _____
- ▶ Show the profitability of one specific aspect of the business
 - ▶ Main sections:
 - _____
 - Operating (_____) Costs
 - Gross Margin (Return Above Operating Costs)
 - Overhead (_____) Costs
 - Net Income (Return Above Total Costs)
- ▶ Usually constructed on a per-unit basis
 - Per _____
 - Per head (or per herd)

- Per _____
- Per lawn (or per square foot)

Use the unit that makes it easiest for you

Revenue Section

- ▶ Shows all products associated with that enterprise
 - Quantity produced & sold
 - Selling price or value of each product
 - Revenue for each product
 - _____
- ▶ Total Revenue (_____)
 - Total value of the enterprise's products

Operating (Variable) Expenses

- ▶ Shows all of the operating inputs used in that enterprise
 - _____
 - Cost/unit of each input
 - Total cost for each input
- ▶ Total Operating Expenses
 - _____
 - Referred to as "short run cost of production"

Gross Margin

- ▶ aka _____
- ▶ Gross Margin:
 - Total Revenues – _____
 - Shows how much money is left over after you pay all of your operating expenses
 - _____
- ▶ You want Gross Margin > \$0
 - If it's less than \$0, you are losing money for every unit you produce

Overhead (Fixed) Expenses

- ▶ Shows all of the overhead costs for the enterprise
 - _____
 - Insurance, interest on term loans
- ▶ Total Overhead Expenses
 - _____
- ▶ Total Expenses
 - Total Operating Expenses + Total Overhead Expenses

Net Income

- ▶ aka Return Above Total Costs
 - _____
- ▶ $\text{Net Income} = \text{Total Revenues} - \text{Total Expenses}$
- ▶ Shows how much money is left after you pay all of your expenses for the enterprise

Using an Enterprise Budget

- ▶ Improving the profitability of the enterprise
 - _____
 - What can you reduce without hurting production?
 - Can you increase your selling price?
 - Will this “scare off” some clients?
 - _____?
 - Without increasing costs too much

Enterprise Budget In-Class Exercise

Andy has been working for his neighbor, growing tomatoes, for the past 3 years. Now, Andy is thinking that he would like to start producing and selling fresh-market tomatoes at the local market. But he isn't quite sure whether he can make money at this or not. So, he has come to you for help.

You told Andy to make a list of all the inputs (fertilizer, transplants, mulch, etc.) that he would be using to produce tomatoes and what they will cost. He came up with this production information as shown on the attached enterprise budget. Please help him complete the budget and help him make the decision whether he should start growing tomatoes or not.

1. Calculate the **Revenue** (sales income) that Andy can earn by selling 500 cartons of tomatoes at \$10/carton. Enter your answer in the Total column of the budget.
2. There are no other sources of revenue for the tomato enterprise. Calculate the **Total Revenues** that Andy can earn from growing and selling 1 acre of tomatoes. Enter your answer in the Total Column.
3. Andy thinks he will need 80 lbs. of nitrogen for his acre of tomatoes. Nitrogen costs \$0.45/lb. How much will Andy need to spend on **nitrogen** for his one acre of tomatoes? Enter your answer in the Total Column of the Nitrogen row of the budget.
4. Andy will have to borrow the money to buy the inputs necessary to grow one acre of tomatoes. He thinks it will cost him \$4,239 to grow one acre of tomatoes (by adding up the variable costs in the total column). He can borrow the money at a 6% annual interest rate from his lender. He will only need to money for 3 months, after which he will repay all of the money, plus interest, to the lender. Calculate the amount of interest Andy will owe for borrowing the money for 3 months at 6% interest. Enter your answer in the Total Column on the **Interest on Operating Capital** row of the budget.

Interest on = Amount x Interest x Portion of the Year the
Operating Capital borrowed rate money is borrowed

5. Calculate the Total Operating Costs for this tomato enterprise by adding all of the operating costs on the budget.

6. What are 3-4 actions that Andy can take to improve the profitability of the tomato enterprise?

Fresh-Market Tomatoes (1 acre)						
		25 lbs/carton				
Revenues		Quantity	Units/Acre	Price	Total	
	Tomatoes	500	cartons	\$10.00 /carton		
	Other				\$0.00	
	Total Revenues					/acre
Variable Costs:						
	Fertilizer					
	Nitrogen	80	lbs	\$0.45 /lb		
	Phosphorus	100	lbs	\$0.32 /lb	\$32.00	
	Potassium	150	lbs	\$0.30 /lb	\$45.00	
	Lime	0.5	tons	\$30.00 /ton	\$15.00	
	Custom Application	1	acre	\$21.00 /acre	\$21.00	
	Pest Scouting	8	times	\$10.00 /time	\$80.00	
	Herbicides	1	acre	\$95.00 /acre	\$95.00	
	Fungicides	1	acre	\$500.00 /acre	\$500.00	
	Insecticides	1	acre	\$207.00 /acre	\$207.00	
	Land Preparation	1	acre	\$53.00 /acre	\$53.00	
	Plastic Mulch install	1	acre	\$70.00 /acre	\$70.00	
	Plastic Mulch	1	acre	\$300.00 /acre	\$300.00	
	Drip Irrigation (tape	1	acre	\$150.00 /acre	\$150.00	
	Tomato Transplants	5000	acre	\$100.00 /1,000	\$500.00	
	Stakes	2500	acre	\$100.00 /1,000	\$250.00	
	Labor					
	Planting transplants	1	acre	\$90.00 /acre	\$90.00	
	Staking & tying	16	hours	\$8.50 /hour	\$136.00	
	Marketing & advert	1	acre	\$50.00 /acre	\$50.00	
	Hand harvest	1	acre	\$800.00 /acre	\$800.00	
	Pest Control	1	acre	\$17.00 /acre	\$17.00	
	Cartons, lids, shipping	500	cartons	\$1.50 /carton	\$750.00	
	Fuel	15	gallons	\$2.20 /gallon	\$33.00	
	Repairs - Tractors &	1	acre	\$9.00 /acre	\$9.00	
	Interest on	6%	3 months	\$4,239.00 /acre		
	Total Variable Costs					/acre
	Return Above Variable Costs					/acre
	Minimum Yield Necessary to Cover Variable Costs					cartons/acre
	Minimum Price Necessary to Cover Variable Costs					/carton
Fixed Costs						
	Tractors & Implem	1	acre	\$125 /acre	\$125.00	
	Drip Irrigation Equipn	1	acre	\$500 /acre	\$500.00	
	Land Charge	1	acre	\$150 /acre	\$150.00	
	Total Fixed Costs				\$775.00	/acre
	Total Costs					/acre
	Return Above Total Costs					/acre
	Minimum Yield Necessary to Cover Total Costs					cartons/acre
	Minimum Price Necessary to Cover Total Costs					/carton

Enterprise Budget Homework Exercise

Harold "Handy" Browning owns Handy's Hardware Store. Handy has several different divisions (or enterprises) in his store. He sells hardware (nuts/ bolts, etc.), power tools, hand tools, lawn & garden equipment, and building supplies (lumber, paint, etc.). Handy is concerned that his lawn & garden division is not as profitable as he wants it to be. But he doesn't know how to analyze its profitability. So he has asked you to help him develop an enterprise budget for the lawn & garden division. Here's the information that he gave you:

Insurance	\$1,500/year
Depreciation	\$9,000/year

Riding Mowers Sold	100 mowers at \$1,500/mower
Push Mowers Sold	150 mowers at \$400/mower
String Trimmers Sold	200 trimmers at \$350/trimmer

Cost of buying his inventory:

Riding Mowers	100 mowers at \$1,200/mower
Push Mowers	150 mowers at \$300/mower
String Trimmers	200 trimmers at \$300/trimmer

Property Taxes	\$3,000/year
Office Expenses	\$2,500/year
Interest on his operating expenses	5% of total operating expenses for 4 months/year
Interest on his term loans	\$4,000/year
Hired Labor	\$8,000/year
Owner Labor	\$5,000/year
Legal & Professional Fees	\$2,000/year

1. Use this information to develop an enterprise budget for Handy's lawn & garden division. All of the expenses represent the portion that is associated with just the lawn & garden division. Please use the attached budget form.
2. Using your lawn & garden enterprise budget, should Handy keep operating this division for the next several years? Please explain how you got your answer.

3. Use Handy's Power Tool enterprise budget that is on the spreadsheet. Let's look at the impact of some management decisions on the profitability of this enterprise. **Reset the spreadsheet to the original numbers after each question.**
- a. Handy thinks he was too optimistic in his projection of sales of riding mowers. He thinks he will only be able to sell 75 riding mowers. How will this impact Handy's Return Above Total Costs?
- b. Reset the number of Riding Mowers sold to 100. Handy has been looking at what his competitors are charging for riding mowers – they are selling the riding mowers at an average price of \$1,300 each. If Handy drops his riding mower price to \$1,300 each, will this lawn and garden division be profitable for the next several years? What is his expected Return Above Total Costs?
- c. Reset the Riding Mower price to \$1,500. Due to the economy, the cost of purchasing the lawn & garden equipment has increased as follows:
- Riding Mowers – Handy will purchase them for \$1,350 each
Push Mowers – Handy will purchase them for \$350 each
String Trimmers – Handy will purchase them for \$325 each

Handy doesn't think he can increase his prices at all. If he does he will lose customers. What is the impact of these higher purchase costs of the lawn & garden equipment on Return Above Total Cost?

Handy's Hardware Store						
Lawn & Garden Enterprise						
Revenues		Quantity	Units	Price/Unit		Total
			units/year	/unit		
			units/year	/unit		
			units/year	/unit		
	Other					
	Total Revenues					
Operating (Variable) Costs:						
	Cost of Goods Sold:					
			units/year	/unit		
			units/year	/unit		
			units/year	/unit		
		%	months	/year		
	Total Operating Costs					
	Return Above Operating Costs					
Overhead Costs						
			year	/year		
			year	/year		
			year	/year		
			year	/year		
			year	/year		
			year	/year		
			year	/year		
			owner	/year		
	Total Overhead Costs					
	Total Costs					
	Return Above Total Costs					

Enterprise Budgets Take- Student Driven Activities

Student Driven Learning Activity: Work through the homework exercise with a partner. After completing this exercise on Handy's lawn and garden division take a look at his hardware enterprise. You and your partner come up with three things that could bring Handy's RATC below 0. Be sure to think about competition, economy etc... After naming and describing why these would affect his RATC be sure to identify if these are variable or fixed costs and how they could be adjusted.

Lesson 6

Breakeven Analysis & Sensitivity Analysis- Notes Organizer

Breakeven Analysis

- Estimates the minimum performance a manager needs to cover the costs of an enterprise
- Main types:
 - _____
 - Breakeven Selling Price/Unit
- Personal Breakevens
 - You have living expenses of \$500/month
 - Your job pays \$10/hour (take-home)
 - You only have _____ that you can work
 - What is the minimum number of hours you need to work to cover your living expenses ("breakeven quantity")?
 - $\$500/\text{month} / \$10/\text{hr} = \underline{\hspace{2cm}}$
 - But you can only work 40 hours/month – uh oh!
 - You have living expenses of \$500/month
 - Your job pays \$10/hour (_____)
 - You only have 40 hours/month that you can work
 - What is the minimum take-home wage that you must earn to cover your living expenses ("breakeven price")?
 - $\$500/\text{month} / 40 \text{ hrs/month} = \underline{\hspace{2cm}}$
 - You need a higher paying job to meet your needs!
- Using Breakevens
 - Compare your breakeven estimates to your planned sales quantity or price
 - If your breakeven is **less** than your planned – Good!
 - _____
 - If your breakeven is higher than your planned – Bad!
 - _____
 - Personal example:
 - You planned on \$10/hr but you NEED to earn \$12.50/hr
 - You planned on 40 hrs/month, but you need to work 50 hrs/month
- Short Run vs Long Run
 - _____
 - Refers to the next year or so
 - Only consider the _____ expenses!
 - Long Run
 - Refers to a long term decision (> 5 yrs)
 - Consider _____ expenses

- Short Run Breakeven Quantity
 - aka "_____"
 - Use your enterprise budget
 - Assume the only thing that changes is quantity sold
 - _____
 - $\text{Total Operating Expenses} / \text{Selling Price/Unit}$
 - You need to sell this amount to cover your _____
- Lawn Care Example
 - Short Run Breakeven Quantity
 - $\text{Total Operating Expenses} / \text{Selling Price/Lawn}$
 - $\$19,814/\text{year} / \$100/\text{lawn} = 198 \text{ lawns/year}$
 - You need to mow at least 198 lawns/year to cover your operating expenses
 - You plan to mow 750 lawns/year – good sign!
 - Assumes the total operating expenses will be \$19,814/yr
 - Assumes you've purchased most of the operating inputs already
- Long Run Breakeven Quantity
 - aka "LR Breakeven Yield"
 - _____
 - Assume the only thing that changes is quantity sold
 - _____
 - $\text{Total Expenses} / \text{Selling Price/Unit}$
 - You need to sell this amount to cover your total expenses
- Lawn Care Example
 - Long Run Breakeven Quantity
 - _____ / Selling Price/_____
 - $\$61,315/\text{year} / \$100/\text{lawn} = 613 \text{ lawns/year}$
 - You need to mow at least 613 lawns/year to cover your total expenses
 - You plan to mow 750 lawns/year – good sign!
- Short Run Breakeven Price
 - aka "_____"
 - Use your enterprise budget
 - Assume the only thing that changes is selling price
 - Everything else stays the same
 - $\text{Total Operating Expenses} / \text{_____}$
 - You need to charge this price to cover your operating expenses
 - Assumes the quantity sold stays the same
- Lawn Care Example
 - Short Run Breakeven Price
 - $\text{Total Operating Expenses} / \text{_____}/\text{year}$
 - $\$19,814/\text{year} / 750 \text{ lawns} = \$26.40/\text{lawn}$
 - You need to charge at least \$26.40/lawn to cover your operating expenses
 - You plan to charge _____ – good sign!

- Long Run Breakeven Price
 - aka “LR Breakeven Selling Price”
 - _____
 - Assume the only thing that changes is selling price
 - Everything else stays the same
 - Total Expenses / _____
 - You need to charge this price to cover your total expenses
 - Assumes the quantity sold stays the same
- Lawn Care Example
 - Long Run Breakeven Price
 - Total Expenses / Lawns/year
 - \$61,315/year / 750 lawns = \$81.75/lawn
 - You need to charge at least \$81.75/lawn to cover your total expenses
 - You plan to charge \$100/lawn— good sign!
- Know Your Breakevens!
 - Every manager needs to have a good idea about the breakeven price and quantity
 - _____
 - Helps identify problems before it’s too late
 - Helps get a loan from a lender
- Sensitivity Analysis
 - Looking at changes in profits due to changes in key areas of an enterprise
 - _____
 - Quantity sold
 - _____
 - Look at changes of _____ %
 - Individually, not everything at once!
 - Lawn Care Example
 - Look at a 10% decrease in selling price
 - Currently charging \$100/lawn
 - 10% decrease
 - $\$100 - (\$100 \times 10\%) = \$90/\text{lawn}$
 - Or $\$100 \times (100\% - 10\%) = \$90/\text{lawn}$
 - At 750 lawns/year
 - Revenue = $\$90/\text{lawn} \times 750 \text{ lawns} = \$67,500$
 - A decrease of \$7,500 per year!
 - Lawn Care Example
 - Impact on gross margin (RAOC)
 - Decreases from \$55,185 to \$47,685

- Decrease of \$7,500
 - Simply due to charging a lower price/lawn
- But!
 - Will you gain more customers by charging a lower price?
- Using the Spreadsheet
 - Look at the Lawn Mowing Business enterprise budget
 - Change the selling price from \$100 to \$90
 - Move your cursor to cell "F5"
 - Type in 90
 - The spreadsheet automatically does the calculations
 - Revenue drops to \$67,500
 - Return Above Operating Costs drops to \$47,685
- Other Sensitivity Analysis
 - Reset the price to \$100/lawn
 - Let's look at a 10% increase in the number of lawns mowed
 - You get 10% more customers than you planned!
 - Move the cursor to cell "D5"
 - Enter 900 for the number of lawns mowed
 - Look at the impact on revenues and RAOC

Breakeven and Sensitivity Analysis In-Class Exercise

Let's look at Andy's Fresh-Market Tomato enterprise budget.

You will need the Excel Spreadsheet for this exercise.

1. Andy isn't quite sure that all of his production estimates are accurate, so he wants to know how much "wiggle room" he has with this operation. Calculate the lowest tomato yield that Andy can get and still be able to pay ("cover") all of his operating costs.

Minimum Yield Necessary to Cover Operating Costs = Total Operating Costs / Price/carton

2. Andy isn't sure what price (\$/carton) to charge for his tomatoes. What is the lowest price than Andy needs to charge to cover all of his operating costs?

Minimum Price Necessary to Cover Operating Costs = Total Operating Costs / Cartons Sold

3. Andy is thinking long term. What is the lowest price that he can charge for his tomatoes and still cover all of the expenses of growing tomatoes?

Long-Run Breakeven Price = Total Costs / Cartons Sold/acre

4. What is the lowest number of cartons that Andy needs to grow and sell per acre to cover all of the expenses of growing tomatoes?

Long-Run Breakeven Price = Total Costs / Selling Price/carton

5. There has been a bumper crop of tomatoes this year. This greater supply of tomatoes has caused the selling price of tomatoes to drop significantly. What is the change in Return Above Operating Costs if Andy's selling price drops by 20%?

Breakeven and Sensitivity Analysis Homework Exercise

You will need the Excel Spreadsheet for this exercise.

Use the attached Horse Boarding Enterprise Budget to answer the following questions. Nellie has estimated the revenues and expenses of her horse boarding operation on this enterprise budget. But she didn't know a few of the numbers so she had to make some "educated guesses". Help Nellie make management decisions for her horse boarding operation. **Show your work to receive full credit.**

1. What is the minimum monthly boarding price that Nellie must charge her customers to breakeven in the short run?
(Hint: Total Revenues = Number of Head x 12 months x Monthly Boarding Price)
2. What is the minimum number of horses that Nellie needs to board per month so that she can cover her operating costs. Assume that she charges \$500/horse per month and that all costs remain the same.
3. Nellie wants to be able to cover her total costs so that she can stay in business for many years (the long run). What monthly price per horse does she need to charge her customers so that she can cover her total costs?
4. Calculate the minimum monthly rate per horse that Nellie needs to charge so that she can cover her total costs and pay herself a salary of \$20,000 per year.
5. It is supposed to be a very dry year, so Nellie expects her grass hay price to increase. What will happen to her Return Above Variable Costs if her grass hay price increases by 20%? Use the spreadsheet to do the calculations for you.

- a. What is her new grass hay price going to be if it increases by 20%?
 - b. What is her new Return Above Variable Costs after you plug in the new grass hay price?
 - c. How much did her Return Above Variable Costs decrease due to the higher grass hay price?
6. What will happen to Nellie's Return Above Total Cost if she can reduce the hours of labor needed per horse by 15%? (Assume her grass hay price is the original \$185/ton)
- a. What is her new labor per horse (hours) going to be if it decreases by 15%?
 - b. What is her new Return Above Variable Costs after you plug in the new labor needs?
 - c. How much did her Return Above Variable Costs increase due to the lower labor needs?

Extra Credit

Use Goal Seek in Excel to answer the following questions.

- A. Calculate the minimum boarding price that Nellie needs to charge so that she can cover her total costs in the long run. Show the information you entered into Goal Seek:

Set Cell: _____ (enter the correct cell reference – example: H5)

Equal To: _____ (enter the correct number – example \$0)

By Changing Cell: _____ (enter the correct cell reference)

Minimum Boarding Price: \$_____/month

- B. Calculate the minimum boarding price that Nellie must charge to earn a Return Above Total Costs of \$30,000/year.

Set Cell: _____ (enter the correct cell reference – example: H5)

Equal To: _____ (enter the correct number – example \$0)

By Changing Cell: _____ (enter the correct cell reference)

Minimum Boarding Price: \$_____/month

- C. We haven't done an example like this, but I know that you can figure it out on your own. Nellie expects that she will have to pay a higher price for her grass hay this year. What is the maximum price (\$/ton) that she can pay for grass hay and still be able to cover her total variable costs?

Set Cell: _____ (enter the correct cell reference – example: H5)

Equal To: _____ (enter the correct number – example \$0)

By Changing Cell: _____ (enter the correct cell reference)

Maximum Grass Hay Price: \$_____/ton

Break-even & Sensitivity Analysis – Student Driven Activity

Student Driven Learning Activity: You will have to have access to a computer and the excel program per group or per student to complete this exercise.

Utilizing the additional reading portion of the lesson have students divide into groups and read through the exercise and develop several scenarios that will test the sensitivity of Greta's enterprise. Be sure to test the sensitivity for the good (increased price/decreased inputs) and for the bad (decreased price/increased inputs). Be sure to lay out the scenario that caused these prices to fluctuate. Share your scenarios with the rest of the class and utilize the excel file that is in associated with this lesson. Show the class how my simply adjusting the numbers how it will affect the breakeven.

Lesson 7

Introduction to Loans- Notes Organizer

What is a Loan?

- A loan is a debt (liability) to purchase an asset
 - _____
 - To a borrower
 - Repaid in regular payments (installments) over time
- Loans are used to:
 - _____
 - House, car, college education, personal assets
 - Purchase business assets
 - Land, buildings, vehicles, equipment, inventories
 - Pay certain _____
 - Rent, utilities, hired labor

Why Do Businesses Use Loans

- To purchase expensive assets
 - Most businesses don't have enough money to pay in cash
- To purchase assets today vs waiting to save enough money
- _____
 - When you don't have enough cash
- To improve the profitability of the business
 - This is called " _____ "

Alternatives to Loans

- Instead of loans, a manager can use:
 - _____
 - Do not use all of your cash and savings
 - Leave enough cash to meet your monthly expenses & emergency needs!
- Leases
 - _____
 - You can lease:
 - Equipment
 - Structures and/or land
 - _____
 - Advantages
 - You can lease the exact asset that you need
 - You can lease it for a specified period of time
 - _____
 - Ex. You only need a delivery van for 6 months out of the year
 - You can lease it for 6 months instead of buying it and having it sit idle for the rest of the year
 - You may get more tax advantages by leasing vs buying
 - Leasing may require less out-of-pocket cash
 - Lower down payment, fees, etc.
 - Disadvantages
 - You cannot make major alterations to leased assets

- _____
- Because you don't actually own the asset
- It may be hard to lease the asset you want
- There may be "over-use" fees
- _____
- These are usually expensive
- Getting out of a lease may be very expensive
- Versus simply selling an asset that you own

Terms

- _____
- Cash that is paid by the borrower at the time of purchase
- Down payments are usually 10-20% of the purchase price
- Principal
- Principal is the term for the amount of the loan
 - Principal = "_____"
- Principal is a liability on the balance sheet
- _____
- The assets that are "pledged" to the lender in case the borrower cannot repay the loan
 - If so, these assets will be "_____ " by the lender
- Example: You have an auto loan for your car. The car is the collateral for the loan.
 - If you cannot make your loan payments, the lender may repossess the car.
- NOTE: Lenders do NOT want to repossess assets. They want borrowers to be able to repay the loans in full.

Down Payments

- Lenders usually require the borrower to make a down payment
 - Usually between _____ of the purchase price
- Example: You want to buy a \$25,000 trailer.
 - The lender requires a 20% down payment.
 - Down payment = \$5,000 (\$25,000 x 20%)
 - Loan Principal = Purchase Price – Down Payment
= \$25,000 - \$5,000 = \$20,000 loan

Types of Loans

- _____
- Auto Loans
 - Repaid over 3-7 years
- _____
- Repaid over 10-20 years
- Home Mortgages
 - Repaid over 15-30 years
- Credit Cards
 - A "credit limit" is set – _____
 - You can borrow up to that limit and repay the principal on in a flexible manner
 - Should be repaid as soon as possible (< 1 year)
- Business Loans
 - _____
 - Repaid over 3-10 years

- Real Estate Loans
 - To purchase land, buildings, facilities
 - Repaid over 15-30 years
- _____
 - Used to purchase or pay for operating inputs
 - Repaid within a 1-year period
- Operating Line of Credit
 - _____

Loan Applications

- Borrowers need to submit a loan application
 - Helps determine their ability to repay the loan
 - Determines if the loan is a good idea for both parties (_____)
- Typically includes:
 - Balance Sheet(s)
 - Income Statement(s) or proof of income
 - _____
 - Credit score

Interest Payments

- Interest is the cost of borrowing money
 - Stated as APR (Annual Percentage Rate)
- _____
 - You only owe interest on the amount of principal you still owe the lender
- Interest calculation
 - _____ = Principal Owed x APR
- Interest Calculation Example
 - You borrow \$50,000 to buy a delivery truck
 - The loan is at 5% APR for 4 years
 - Interest = Principal Owed x _____
 $= \$50,000 \times 5\% = \$2,500$
 - 2 years later, you still owe \$26,200 on the loan
 - Interest = \$26,200 x 5% = \$1,310

Loan Payments

- Several types of loan repayment plans
 - Most common is "_____ "
 - The payment stays the same each period
 - Example: Car loan has payments of \$400/month
 - \$400/month for the life of the loan
- Loan payments consist of interest and principal
 - All of the interest owed since the last payment
 - _____
- Components of a Loan Payment
 - Assume your annual loan payment is \$5,000 and you owe \$3,000 of interest since the last loan payment was made
 - Payment = \$5,000
 - Interest = \$3,000
 - Principal = \$3,000 (\$5,000 - \$3,000)

Calculating Annual Loan Payments

- Using the Time Value of Money Tables
- Table 3 Annuity Factors: Annual Loan Payments
- Need to know:
 - _____ (APR)
 - Life of the loan in years (the "term" of the loan)
 - Amount of the loan (_____)
- Find the loan payment factor in Table 3
 - Example: 10-year loan at 6% APR
 - Find the 6% column of the table
 - Go down to the 10 row ($n = 10$ in left column)
 - Factor = 0.1359
- Multiply the loan principal by the factor
 - For a \$40,000 loan at 6% for 10 years
 - Annual Payment = $\$40,000 \times 0.1359 = \$5,436/\text{year}$
 - You will repay the loan and all interest in full if you pay \$5,436/year for the next 10 years
 - This is called "amortizing" the loan
 - _____ = paying back the principal slowly over time
- Practice Using Table 3
 - Find the annual loan payment factors for the following loans:
 - 8% APR for 20 years
 - 4% for 30 years
 - 7% for 8 years
- Practice Using Table 3
 - Find the annual loan payment factors for the following loans:
 - 8% APR for 20 years factor = 0.1019
 - 4% for 30 years factor = 0.0578
 - 7% for 8 years factor = 0.1675

Breaking Down a Loan Payment

- Remember, loan payments contain interest and principal
- For the \$40,000 loan at 6% for 10 years
- _____:
 - Annual Loan Payment = \$5,436
 - Interest Due = $\$40,000 \times 6\% = \$2,400$
 - Principal Due = $\$5,436 - \$2,400 = \$3,036$
 - You will still owe \$36,964 after you make this first payment
 - $\$40,000$ principal borrowed - $\$3,036$ principal due

Monthly Loan Payments

- Use Table 4
 - Monthly Payments Required to Amortize a \$1,000 Loan
 - NOTE: we use this table differently than Table 3
- Step 1. Find the factor in the same manner
 - Assume a 5-year loan at 5.5% APR
 - Monthly Payment Factor = 19.10
 - This means the monthly payment for a \$1,000 loan at 5.5% APR for 5 years is \$19.10/month
- Step 2. Divide the loan principal by \$1,000
 - Example: \$20,000 car loan
 - $\$20,000 / \$1,000 = 20$

- Step 3. Multiply the factor from Step 1 by the answer from Step 2.
 - Monthly Payment = $19.10 \times 20 = \$382/\text{month}$

Using a Spreadsheet

- It is easy to calculate loan payments on a spreadsheet
 - _____
 - The spreadsheet does the rest!
- Find the monthly payment for a \$55,000 tractor loan at 5.25% APR for 6 years
 - Loan Principal = \$55,000
 - Interest Rate = 5.25
 - Life of Loan = 6 Payment = \$892.16
 - Payments/Year = 12
- Calculate the quarterly payment for a \$30,000 loan at 6.25% APR for 4 years
 - Loan Principal = \$30,000 Interest Rate = 6.25
 - Life of Loan = 4 Payment = \$2,133.67
 - Payments/Year = 4
- Look at the table below the calculator to see how the interest and principal payments change for each payment

Loans and Loan Payments In-Class Exercise

1. Jack borrowed \$15,000 to purchase a used tractor. The loan is for 4 years at 6% APR.
 - a. Estimate how much interest Jack will owe in the first year.
 - b. Calculate the annual loan payment for this tractor loan.
 - c. Calculate how much principal Jack will be repaying in the 1st loan payment.
2. Emily borrowed \$150,000 to buy a house. The mortgage is for 30 years at 7% APR. Calculate the monthly payment on Emily's mortgage.
3. Dustin wants to start his veterinary practice. He will need to borrow \$300,000 to get the necessary equipment and facilities. He will make a down payment of \$50,000 and borrow the remaining amount at 6% for 20 years.
 - a. Calculate the amount of the loan Dustin will be borrowing.
 - b. Calculate the monthly loan payment on Dustin's loan.

NOTE: the loan payments using the tables may be different from the spreadsheet due to rounding errors.

Loans and Loan Payments Homework Exercise

Use the Loan Repayment Tables (Tables 3-5) to answer these questions. Feel free to use the spreadsheet to double-check your answers.

1. Ally just borrowed \$28,000 to purchase a small shed and some honey-extracting equipment. The loan is for 5 years at 6.5% APR with annual payments.
 - a. Estimate how much interest Ally will owe in the first year.
 - b. Calculate the annual loan payment for this car loan.
 - c. Calculate how much principal Ally will be repaying in the 1st loan payment.
2. Bob & Jane borrowed \$135,000 to buy some farm land. The mortgage is for 25 years at 7% APR.
 - a. Calculate the monthly payment on Bob & Jane's mortgage.
 - b. Estimate how much interest Bob & Jane will pay over the 25-year life of this loan.
3. Andrew really wants to buy a car for \$17,000. The car dealer has offered him 2 different loans. Loan A is a 5-year loan at 6.5% APR with monthly payments. Loan B is a 3-year loan at 5.5% APR with monthly payments.
 - a. Calculate the monthly loan payment for Loan A. Show your work.
 - b. Calculate the monthly loan payment for Loan B. Show your work.

- c. Which loan would you choose if you were in Andrew's position? Briefly explain why you chose either Loan A or Loan B.
-
4. Greta needs help with the Liabilities section of her balance sheet. She has just taken out a loan for \$45,000 to buy a new refrigerator. The loan is for 5 years at 5% APR. It has annual payments. Help Greta determine what to list on her balance sheet for this loan. Use the 3-Step Process
 - a. Calculate the annual loan payment for this loan.
 - b. Calculate the amount of interest she is supposed to pay this year. (Step 1)
 - c. Calculate the amount of principal due within 1 year (the current liability portion of this loan). (Step 2)
 - d. Calculate the amount of principal Greta will owe after this payment is made (the non-current liability). (Step 3)

Introduction to Loans Student Driven Activity

Student Driven Learning Activity: Work with your local branch and secure a loan officer to come meet with your students and go over the parts of a loan, what they look for when writing loans and discuss the differences between payments, calculating interest, etc... After the presentation from the loan officer have students write up their takeaways and make a visual to display to the class on the parts of a loan and the repayment process. Visuals can include charts, picture depictions, flow charts, etc...

Lesson 8

Time Value of Money- Note Organizer

\$10 Today vs. \$10 Next Year?

- Most people would rather have \$10 today rather than waiting to be paid \$10 next year
- 3 main reasons:
 - _____
 - You may not get paid in the future!
 - Inflation
 - As prices increase, that \$10 will buy less in the future
 - _____
 - You can do something with that \$10 today
 - Save, pay down loans, invest, spend, donate, etc.

Time Value of Money

- Having money in hand today is more valuable than waiting to maybe receive money in the future
 - RIO (Risk, Inflation, Opportunities)
- This is called the “_____”

Compound Interest

- Powerful financial tool!
- _____:
 - “Earning interest on top of interest”
 - The interest you earn in period 1 will earn interest in period 2...
- Example: You invest \$1,000 today in an account that earns 10% annual return
 - How much will you earn over the next 3 years?
 - Year 1: $\$1,000 \times 10\% = \100 of interest
 - Year 2: $(\$1,000 + \$100) \times 10\% = \$110$ of interest
 - Notice you earned \$10 more dollars of interest in Year 2
 - The \$100 of interest in Year 1 is treated as principal for the Year 2 calculation
 - Year 3: $(\$1,000 + \$100 + \$110) \times 10\% = \121 of interest
 - Compound Interest
 - Year 1 = \$100 earned
 - Year 2 = \$110 earned
 - Year 3 = \$121 earned
 - Total interest earned = \$331
 - If you earned “simple interest” you would only earn \$300 of interest
 - $\$1,000 \times 10\% \times 3 \text{ years} = \300

Terms

- _____ = a one-time investment
 - Ex. You invest \$500 today and invest nothing else after that
- Annuity = stream of regular payments

- Ex. Car loan payments – they are the same amount every month for a stated number of years
- _____ = what you will have in your account in the future
- Present Value = what something is worth today

Types of Time Value Problems

- _____
 - Determines how much money an investment will be worth in the future if you invest money today
- Present Value of a Lump Sum
 - Determines how much you would rather have today instead of waiting to be paid (maybe) in the future
 - Also, it determines how much you need to invest today to reach a specific future value
- _____
 - Determines how much you will have in your account in the future if you invest regularly over time
 - Example: You invest \$500/year into a retirement account that earns 8% return. How much will you have in your account after 50 years?

Solving Time Value Problems

- 4 methods:
 - Time Value of Money tables
 - _____
 - Financial calculators
 - Time Value of Money formulas
- **We will focus on the tables and spreadsheets

Using the Time Value Tables

- Same as the annual loan payment table
- Look up the column with the _____
- Follow the column down to the row with the number of years
- Multiply that factor by the _____ of the investment

Future Value of a Lump Sum

- Use Table 1
- Example: You invest \$1,000 today in an account that earns 5%. How much will you have in your account after 5 years?
 - Factor for 5% for 5 years = 1.2763
 - $FV = 1.2763 \times \$1,000 = \underline{\$1,276.30}$
 - Your \$1,000 grew to almost \$1,300 in 5 years!!

- Assume that you leave your money in the account for 40 years – you do NOT add any more money. How much will you have in your account after 5 years at a 5% return?
 - Factor for 5% for 40 years = 7.0400
 - $FV = 7.0400 \times \$1,000 = \underline{\$7,040.00}$
 - Your initial investment of \$1,000 grew to more than \$7,000!!

Present Value of a Lump Sum

- Use Table 2
- PV is the “_____” of FV
- Example: You want to have \$10,000 available after 5 years for a down payment on some land. How much do you need to invest today to reach this goal at a 6% return?
 - Factor for 6% for 5 years = 0.7473
 - $PV = 0.7473 \times \$10,000 = \underline{\$7,473}$
- From this example:
 - If you invest \$7,473 today
 - It earns 6% each year (compound interest)
 - It will grow to \$10,000 in 5 years

Future Value of an Annuity

- Use Table 6
- Example: You invest \$1,000/yr for 30 years. It earns 7% return. How much will you have after 30 years?
 - You might think somewhere around \$30,000
 - $\$1,000/\text{yr} \times 30 \text{ yr} = \$30,000$
 - Factor for 7% for 30 years = 101.0730
 - $FV = \$101.0730 \times \$1,000/\text{yr} = \underline{\$101,073}$
 - That’s a lot more than the \$30,000 you invested!!

Using a Time Value Spreadsheet

- _____!
- You can change key factors to see the impact
- For Future Value calculations
 - Click on the “_____” tab
 - You can change any number with a blue font
 - It will automatically recalculate the FV

Future Value Spreadsheet

- Example: You want to invest \$300/yr at 6%. What will you have after 5 years?
 - Number of Years Cell C3 Enter 5

- Annual Rate (%) Cell C7 Enter 6
- Annuity Cell C9 Enter 300
- Present Value Cell C10 Enter 0

- $FV = \$1,792.60$
- What is your FV if you earn 10% instead of 6%?
 - Simply change Cell C7 (Annual Rate) to 10

Present Value Spreadsheet

- Click on the "PV Calculator" tab
- Use the same as the FV calculator
- Example: You want to have a future value of \$40,000 after 10 years. How much do you need to invest today earning 7%?
 - Years = 10
 - Annual Rate = 7%
 - Annuity = 0
 - FV (Lump Sum) = 40,000
 - PV = \$20,333.97

Keep in Mind

- Lump sum = only investing 1 time
- _____ = several constant investments
- If you know the FV, _____
- If you know the PV, solve for the FV
- If it helps, draw a timeline
 - This can help you figure out what to solve for!

Time Value In-Class Exercise

1. You deposit \$1,000 in a mutual fund (a one-time deposit) that earns 8% compounded annually.
 - a. How much will you have in your account at the end of 10 years?
 - b. At the end of 40 years?
 - c. What if you had invested the \$1,000 in a savings account that earned 2% annually – how much would you have in your account after 40 years?
2. You just bought a plot of land for \$4,000/acre in hopes that it will increase in value 7% each year.
 - a. How much will the land be worth in 10 years assuming it increases in value by 7% each year?
 - b. How much will it be worth after 40 years?
- 3a. You want to have \$50,000 at the end of 10 years in order to make a down payment on your business. How much do you need to invest today (today only), earning 8% per year, to have \$50,000 in your account after 10 years?

- 3b. Similar to 3a, you want to have \$50,000 at the end of 10 years. You can invest \$4,000/year for each of the next 10 years. Your investment will earn a return of 8% per year. Will you be able to reach your goal?
4. You want to contribute \$5,000/year to an IRA (Individual Retirement Account) – investing in assets that earn about 8 percent annually. How much will you have in the IRA after 20 years? 40 years?
5. The average American family has annual living expenses (food, rent, utilities, etc.) of \$50,000 per year. Let's assume that the annual inflation rate is 3% per year. How much will it cost an average American family to have the same level of living (\$50,000/year) 50 years from now? (50 years is approximately when you will be retiring!)

Time Value of Money Homework Exercise

Use the Time Value of Money tables to answer the following questions. Show your work!

1. You just purchased a house for \$130,000. Similar houses in your area are going up in value at a rate of 5% per year.
 - a. How much will your house be worth at the end of 15 years?

 - b. How much will it be worth at the end of 30 years?

2. Your elderly neighbor just told you that he purchased his first new car for \$1,500 about 50 years ago. That has you wondering how much a new car will cost you when you are older. Car prices today average \$20,000. It appears that car prices increase at a rate of 6% every year. How much will a new car cost 50 years from today?

3. You just won a prize!! The company that sponsored the prize will pay you \$4,000, but you won't get this \$4,000 until 3 years from today. Rather than waiting 3 years to collect this money, you are thinking of selling your rights to this prize to someone else so that you will receive some cash today. You can earn a return of 8% on your money. What is the lowest amount of money that you would sell your rights to this prize?

4. What are the three main reasons that money has a time value?
5. Your church wants to build a new community education center, so they have set a goal of collecting \$250,000 over the next 8 years to pay for the building. They can invest their money in account that earns 5% each year. They hope to collect contributions of \$25,000/year over the next 8 years. Will the church be able to reach their goal? (Assume BGN payments)
6. Your grandparents started investing for your college tuition as soon as you were born. They invested \$2,000/year every year since you were born. Their college investment account earned a return of 7% each year. How much money will be in your college education account after 18 years of contributions? (Assume BGN payments)
7. Use the TVM Calculator spreadsheet to double-check your answers. List the answers to each question that you get from using the spreadsheet:
- Question 1: _____
- Question 2: _____
- Question 3: _____
- Question 5: _____
- Question 6: _____

Time Value of Money- Student Driven Activity

Student Driven Learning Activity: Have students complete the in class exercises together as a group with the teacher as the facilitator. Then have the students break into groups and complete the homework exercises together. After completing the exercises have each group come up and solve the exercise for the rest of the class. After completing that have each group come up with 3 scenarios/exercises on their own, make copies and hand out to the remainder of the class to solve. After completing all the exercises the original group will lead the rest of the class through how to come up with the answer to their scenario/exercise.

Lesson 9

Financial Analysis- Notes Organizer

What is Financial Analysis?

- Using financial tools:
 - Enterprise budgets
 - _____
 - Income statements
- To identify a business' strengths and weaknesses
 - Helps the manager improve the business

Why is it Necessary?

- Financial Analysis:
 - Helps a manager take actions to improve the business
 - Identifies potential problems before they occur
 - Helps lenders analyze loan applications for _____
 - Helps the manager understand the business more fully

Types of Financial Analysis

- _____
 - Use ratios and figures (net income, RAVC, etc.)
 - Compare those ratios and figures to "benchmarks"
 - Benchmarks are "goals" or "standards"
- Trend Analysis
 - Look at changes in ratios and figures over time
 - _____

Main Areas of Analysis

- Liquidity
 - Having enough current assets to cover your current liabilities
- _____
 - Having enough total assets to cover your total liabilities
- Profitability
 - "Are we making money above our expenses?"
- _____
 - How well are we controlling our costs?

Liquidity Analysis

- Use the Balance Sheet
- Current Ratio is the main measure
 - $\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities}$
- Like to see:

- _____
- Greater than 2.0 is strong
- Interpretation:
 - A Current Ratio of 2 means that you have \$2 of current assets for every \$1 of liabilities that are due within the next year (current liabilities)

Solvency Analysis

- Use the Balance Sheet
- Debt/Asset Ratio is the main measure
 - $\text{Debt/Asset Ratio} = \text{Total Liabilities} / \text{Total Assets}$
- Like to see:
 - Less than 40% for an existing business
 - Less than 70% for a new or start-up business
 - _____
 - The lower it is, the less risk you face
- Interpretation:
 - A Debt/Asset Ratio of 40% shows that you owe your lenders 40% of the value of your assets
 - Or – _____
 - Another way to look at it:
 - Your lenders “own” 40% of your assets
 - You own 60% of your assets

Profitability Analysis

- Use the Income Statement or Enterprise Budget
 - _____ or Return Above Variable Costs
 - Net income _____ or Return Above Total Costs
- _____
- Main ratio is Rate of Return on Assets (ROA)
 - $\text{ROA} = (\text{Net Income} + \text{Interest}) / \text{_____}$
- Like to see:
 - $\text{ROA} > 0\%$ at a minimum
 - $\text{ROA} > \text{interest rate (APR) on your loans}$
 - $\text{ROA} > 8\%$ is strong
 - Growing over time
 - The higher, the more profitable your business
- Interpretation:
 - An ROA of 10% means that you earned \$0.10 of profit for every \$1 of asset used in your business.

Financial Efficiency Analysis

- We’re just focusing on cost control here
- _____
- Operating Expense/Receipt Ratio
 - $\text{Op. Exp/Rec} = (\text{Total Exp.} - \text{Int.} - \text{Dep.}) / \text{Total Revenue}$
- Like to see:

- _____
- Interpretation:
 - A ratio of 75% means that the business spends \$0.75 in expenses to generate \$1 of revenue

Summary

- Look at your ratings for each area
- For the Floral Shop example:

Area	Rating	Strength or Weakness?
Liquidity	Strong/Okay	~ Strength
Solvency	Poor/Okay	~ Weakness
Profitability	Poor/Okay	~ Weakness
Financial Efficiency	Poor/Okay	~ Weakness

- Now the manager can see what areas need to be improved!
- Main ways to improve a business:
 - _____
 - Without hurting production
 - Increase revenues
 - More units produced & sold
 - _____
 - Get rid of unneeded or un-used assets
- A manager must look at the financial and the production aspects of the business
 - _____
 - Too often the financial aspects are ignored
- Lenders use this same analysis to review loan applications
 - Managers should know their own strengths and weaknesses _____ meeting with the lender!

Financial Analysis – In-Class Exercise

Floral Business Balance Sheet

As of: August 30

Assets			Liabilities		
	2016	2017		2016	2017
Current Assets			Current Liabilities		
<u>Cut Flowers</u>	<u>\$800</u>	<u>\$1,200</u>	<u>Operating Loan</u>	<u>\$20,000</u>	<u>\$25,000</u>
<u>Cash</u>	<u>\$3,000</u>	<u>\$5,000</u>	<u>Wages Payable</u>	<u>\$5,000</u>	<u>\$7,500</u>
<u>Seed & Fertilizer inventory</u>	<u>\$25,000</u>	<u>\$23,000</u>	<u>Accrued Interest</u>	<u>\$4,500</u>	<u>\$5,200</u>
<u>Accounts Receivable</u>	<u>\$35,000</u>	<u>\$40,000</u>			
Total Current Assets	<u>\$63,800</u>	<u>\$69,200</u>	Total Current Liabilities	<u>\$29,500</u>	<u>\$37,700</u>
Non-Current Assets			Non-Current Liabilities		
<u>Greenhouse, Land, Bldings</u>	<u>\$265,000</u>	<u>\$265,000</u>	<u>Mortgage Remainin</u>	<u>\$200,000</u>	<u>\$193,000</u>
<u>Equipment</u>	<u>\$75,000</u>	<u>\$75,000</u>	<u>Equipment Loans R</u>	<u>\$45,000</u>	<u>\$38,000</u>
Total Non-Current Assets	<u>\$340,000</u>	<u>\$340,000</u>	Total Non-Current Liab	<u>\$245,000</u>	<u>\$231,000</u>
			Total Liabilities	<u>\$274,500</u>	<u>\$268,700</u>
			Net Worth (Owners Eq	<u>\$129,300</u>	<u>\$140,500</u>
			(Total Assets - Total Liabilities)		
Total Assets	<u>\$403,800</u>	<u>\$409,200</u>	Total Liabilities & Net V	<u>\$403,800</u>	<u>\$409,200</u>
	2016	2017			
Current Ratio					
(Current Assets/Current Liabilities)					
Debt/Asset Ratio					
(Total Liabilities/Total Assets)					

o

Income Statement

Floral Business

For the Years Ending December 31

	2016	2017
Revenues		
Cut Flowers	\$30,000	\$40,000
Arrangements	\$70,000	\$95,000
Total Revenues	\$100,000	\$135,000
Cost of Goods Sold:	\$25,000	\$40,000
Gross Margin	\$75,000	\$95,000
Overhead Expenses:		
Administrative	\$10,000	\$10,000
Labor (wages)	\$30,000	\$35,000
Rent	\$12,000	\$12,000
Interest	\$8,000	\$7,000
Depreciation	\$5,000	\$5,000
Other	\$4,000	\$6,000
Total Overhead Expenses	\$69,000	\$75,000
Total Expenses	\$94,000	\$115,000
Net Income	\$6,000	\$20,000

	2016	2017
Rate of Return on Assets (ROA)	_____	_____
(Net Income + Interest Expense)/Total Assets		
Operating Expense/Receipt	_____	_____
(Total Expenses - Interest - Depreciation)/Total Revenues		

Financial Analysis - Homework

Use the information on the attached financial statements to identify the strengths and weaknesses of this restaurant business. Calculate the main financial ratios on each balance sheet and income statement. Compare the ratios to the appropriate benchmark, and look at the trend in ratios over the past 3 years.

Restaurant Business

	2014		2015		2016	
	Ratio	Rating	Ratio	Rating	Ratio	Rating
Liquidity (Current Ratio)						
Solvency (Debt/Asset)						
Profitability (ROA)						
Financial Efficiency (Op. Exp/Rec)						

How would you rate this restaurant's overall financial condition?

Liquidity

Solvency

Profitability

Financial Efficiency

Overall

Restaurant Balance Sheet

As of:

August 30

Assets	2014	2015	2016
Current Assets			
<u>Cash</u>	<u>\$10,000</u>	<u>\$28,000</u>	<u>\$25,000</u>
<u>Food & Drink Inventory</u>	<u>\$75,000</u>	<u>\$68,000</u>	<u>\$70,000</u>
<u>Supplies</u>	<u>\$25,000</u>	<u>\$23,000</u>	<u>\$26,000</u>
<u>Accounts Receivable</u>	<u>\$15,000</u>	<u>\$14,000</u>	<u>\$12,000</u>
Total Current Assets	<u>\$125,000</u>	<u>\$133,000</u>	<u>\$133,000</u>
Non-Current Assets			
<u>Building & facilities</u>	<u>\$750,000</u>	<u>\$750,000</u>	<u>\$750,000</u>
<u>Equipment</u>	<u>\$325,000</u>	<u>\$320,000</u>	<u>\$315,000</u>
Total Non-Current Assets	<u>\$1,075,000</u>	<u>\$1,070,000</u>	<u>\$1,065,000</u>
Total Assets	<u><u>\$1,200,000</u></u>	<u><u>\$1,203,000</u></u>	<u><u>\$1,198,000</u></u>

Liabilities

Current Liabilities			
<u>Operating Loan</u>	<u>\$60,000</u>	<u>\$50,000</u>	<u>\$55,000</u>
<u>Wages Payable</u>	<u>\$12,000</u>	<u>\$14,000</u>	<u>\$15,000</u>
<u>Accrued Interest</u>	<u>\$7,500</u>	<u>\$5,200</u>	<u>\$6,300</u>
Total Current Liabilities	<u>\$79,500</u>	<u>\$69,200</u>	<u>\$76,300</u>
Non-Current Liabilities			
<u>Mortgage Remaining</u>	<u>\$350,000</u>	<u>\$294,000</u>	<u>\$225,000</u>
<u>Equipment Loans Remaining</u>	<u>\$75,000</u>	<u>\$48,000</u>	<u>\$22,000</u>
Total Non-Current Liabilities	<u>\$425,000</u>	<u>\$342,000</u>	<u>\$247,000</u>
Total Liabilities	<u>\$504,500</u>	<u>\$411,200</u>	<u>\$323,300</u>
Net Worth (Owners Equity)	<u>\$695,500</u>	<u>\$791,800</u>	<u>\$874,700</u>
(Total Assets - Total Liabilities)			
Total Liabilities & Net Worth	<u><u>\$1,200,000</u></u>	<u><u>\$1,203,000</u></u>	<u><u>\$1,198,000</u></u>

	2014	2015	2016
Current Ratio			
(Current Assets/Current Liabilities)			
Debt/Asset Ratio			
(Total Liabilities/Total Assets)			

Income Statement

Restaurant

For the Years Ending December 31

	2014	2015	2016
Revenues			
Food Sales	\$450,000	\$550,000	\$575,000
Beverage Sales	\$240,000	\$270,000	\$265,000
Total Revenues	\$690,000	\$820,000	\$840,000
Cost of Goods Sold:	\$425,000	\$435,000	\$440,000
Gross Margin	\$265,000	\$385,000	\$400,000
Overhead Expenses:			
Administrative	\$25,000	\$35,000	\$35,000
Labor (wages)	\$80,000	\$82,500	\$85,000
Rent	\$40,000	\$45,000	\$45,000
Interest	\$22,000	\$20,000	\$18,000
Depreciation	\$15,000	\$15,000	\$15,000
Other	\$10,000	\$12,000	\$9,000
Total Overhead Expenses	\$192,000	\$209,500	\$207,000
Total Expenses	\$617,000	\$644,500	\$647,000
Net Income	\$73,000	\$175,500	\$193,000

	2014	2015	2016
Rate of Return on Assets (ROA)			
(Net Income + Interest Expense)/Total Assets			
Operating Expense/Receipt			
(Total Expenses - Interest - Depreciation)/Total Revenues			

Financial Analysis- Student Driven Activity

Student Driven Learning Activity: Have students complete the financial breakdown chart independently. After completing have them divide into 4 groups and assign each one of the areas of the financial analysis. The students need to develop ways to reinforce the concepts to the rest of the class. It can be through examples they come up with on their own, visuals, etc...

Financial Analysis Breakdown

Areas	Definition	What financial sheet to use	Ratio equation	Needs to be greater than (minimum):	Ideal Ratio:
Liquidity					
Solvency					
Profitability					
Financial Efficiency					

Lesson 10

Introduction to Personal Banking- Notes Organizer

Introduction to Personal Banking			
Personal Liquidity	Details	Advantages	Disadvantages
1. Checking Accounts			
2. Student Checking Accounts			
3. Business Checking Account			
4. Savings Account			
5. Cash			
6. Certificates of Deposit (CD)			

Checkbook Balancing Exercise

You opened a checking account on Feb 1, 2016. Your opening balance was \$835.25. During the month you had the following activity in your checking account:

Feb 2	Check #1001 – rent	\$500.00
Feb 2	Deposit	\$100.00
Feb 5	Check # 1002 – insurance	\$65.50
Feb 12	Check # 1003 – groceries	\$45.35
Feb 15	ATM withdrawal	\$50.00
Feb 20	Check #1004 – credit card	\$120.85
Feb 20	Service charge – bank	\$5.00
Feb 28	Deposit	\$25.00

First thing to do is enter all of these transactions into your checkbook register – see the next page. Keep a running total of your checking account balance – do this for each of the transactions. You should end up with \$173.55 as the ending balance in your register.

It's Feb. 23, 2016 and you've just received your monthly statement from the bank, along with 2 canceled checks (checks that have cleared your account). Now it's time to balance your check book. Use the following monthly statement to balance your checkbook. Here's how:

1. In the "X" column of your checkbook register, clearly mark (with an X) all of the transactions that are listed on your monthly statement.
2. Use the checkbook balancing worksheet on the monthly statement.
 - a. Write the ending balance from the statement on the first line (Line A) of the worksheet.
 - b. Total all deposits to your account that have NOT cleared (are not listed on your statement). Write this total on Line B.
 - c. Add Lines A and B to calculate the subtotal and enter the result on Line C.

- d. Total all withdrawals from your account that are not listed on your monthly statement. Enter the total on Line D.
- e. Subtract Line D from Line C. This amount should be exactly equal to the ending balance in your checkbook register. If not, you have made a mistake – go back and do it again!

[illegible]

Canceled Checks

Joe Smith

SSN: 215-66-1098
Phone: (919) 515-6092
3500 Broadway
Raleigh, NC 27777

1001
Feb 2 20 16

Pay to the

Order of Foxridge Apartments \$ 500.00

Five Hundred and 00/100 **DOLLARS**

First State Bank of North Carolina
5000 Hillsborough St.
Raleigh, NC 27898

FOR _____

Joe Smith

SSN: 215-66-1098
Phone: (919) 515-6092
3500 Broadway
Raleigh, NC 27777

1002
Feb 5 20 16

Pay to the

Order of Farm State Insurance \$ 65.50

Sixty-five and 50/100 **DOLLARS**

First State Bank of North Carolina
5000 Hillsborough St.
Raleigh, NC 27898

FOR _____

First State Bank of North Carolina

Monthly Bank Statement for the Period Jan 20 - Feb 20, 2016

Beginning Balance:	\$835.25
Deposits:	\$100.00
Withdrawals:	\$620.50
Ending Balance:	\$314.75

Transactions

Deposits:	Feb 5	\$100.00	
Checks:	Feb 4	\$500.00	# 1001
	Feb 8	\$65.50	# 1002

Service Charges & ATM Withdrawals:

Feb 15	\$50.00
Feb 20	\$5.00

Checkbook Balancing Worksheet

- A. Ending Balance from Monthly Statement: _____
- B. Add Any deposits made, but not
Recorded on Monthly Statement: + _____
- C. Subtotal: = _____
- D. Minus Any Checks Written, but not
Recorded on Monthly Statement: - _____
- E. Ending Balance: = _____

Personal Finance- Student Driven Activity

Student Driven Learning Activity: After going through the PPT and utilizing the chart for the students to fill out as the teacher reviews students will then be divided into groups and create advertisements for the bank and market their product to the rest of the class utilizing the information they read about. They may want to include advantages/disadvantages, special features and if they have used the product before. They can design a radio ad, TV ad or flier just as examples.