

Chapter 1 End-of-Chapter Assignment Solutions

Multiple Choice Questions

- (LO 1-2) Which is the lowest level of critical thinking skills in Bloom's Taxonomy?
 - Create
 - Remember**
 - Apply
 - Analyze
- (LO 1-2) Which is the highest level of critical thinking skills in Bloom's Taxonomy?
 - Create**
 - Apply
 - Analyze
 - Understand
- (LO 1-2) Which is the appropriate ordering of critical thinking skills in Bloom's Taxonomy, where the ">" symbol means higher order skills?
 - Remember > Apply
 - Apply > Analyze
 - Analyze > Evaluate
 - Create > Analyze**
- (LO 1-3) Which step of the AMPS model most appropriately addresses the axiom, "Your data won't speak unless you ask it the right data analytics questions"?
 - Ask the Question**
 - Master the Data
 - Perform the Analysis
 - Share the Story
- (LO 1-3) Which step of the AMPS model most appropriately addresses the question of the best way to communicate data analytics findings with a decision maker?
 - Ask the Question
 - Master the Data
 - Perform the Analysis
 - Share the Story**
- (LO 1-3) What type of question is predicting whether a company will go bankrupt in the coming two years?
 - What happened? What is happening?
 - Why did it happen? What are the root causes of past results?
 - Will it happen in the future? What is the probability something will happen? Is it forecastable?**

- d. What should we do based on what we expect will happen? How do we optimize our performance based on potential constraints?”
7. (LO 1-3) What type of question is choosing to take certain tax deductions based on the way managers believe tax legislation will change in the near future?
 - a. What happened? What is happening?
 - b. Why did it happen? What are the root causes of past results?
 - c. Will it happen in the future? What is the probability something will happen? Is it forecastable?
 - d. **What should we do based on what we expect will happen? How do we optimize our performance based on potential constraints?”**
8. (LO 1-3) What type of question is finding the detail to more clearly understand why net income is decreasing when revenues are increasing?
 - a. What happened? What is happening?
 - b. **Why did it happen? What are the root causes of past results?**
 - c. Will it happen in the future? What is the probability something will happen? Is it forecastable?
 - d. What should we do based on what we expect will happen? How do we optimize our performance based on potential constraints?”
9. (LO 1-4) What visualization type is most appropriate for evaluating the relationships between values?
 - a. Bar chart
 - b. Pie chart
 - c. Histogram
 - d. **Scatterplot**
10. (LO 1-5) Which of the following software tools specialize in data visualizations?
 - a. SPSS and Power Query
 - b. Alteryx and Tableau Prep
 - c. **Power BI and Tableau**
 - d. R and Python

Discussion Questions

1. (LO 1-1) The computer is better at automated, repetitive tasks since it can be programmed. The computer is also not subject to fatigue and can process massive amounts of data easier than a human can. Most of the value-added tasks and higher order thinking skills, such as analyzing, evaluating and creating, are performed better by human accountants because they are not easily programmed by a set of fixed rules. The ability

to recognize tradeoffs, evaluating alternatives, and evaluating ad hoc facts are all better performed by humans.

2. (LO 1-2) The skills taught in the introduction to financial accounting were the lower order thinking skills (noted in Bloom’s Taxonomy) such as remembering, understanding and applying. Application of journal entries, computing trial balances, recording transactions, bank reconciliation, etc. are all examples of lower order skills.
3. (LO 1-3) Accountants understand the tradeoffs between relevant data and reliable data (such as that data which might exhibit more representational faithfulness).

Accountants also understand the tradeoffs between unstructured and structured data, data internal or external to the company, and even the potential cost of acquiring and processing the data as compared to the potential value provided by use of the data.

4. (LO 1-3) Mastering the data includes accessing, cleaning, and transforming the data to prepare the data for analysis.
5. (LO 1-3) Data analytics might be viewed as successively peeling the layer of an onion. By peeling the first layer of the onion, you now are able to see the next layer and evaluate it and remove it to get to the third layer, etc. Often times, the AMPS model must be performed multiple times, refining the question (Ask the Question), possibly considering different types of data (Master the Data), performing additional analysis (Perform the Analysis) and retelling the story in each iteration (Sharing the Story) before the issue/problem/challenge can be finally addressed with some confidence.
6. (LO 1-3) Descriptive analysis reports what happened. Generally, evaluating the revenues and earnings performance starts with descriptive analysis and continues with diagnostic analysis to understand “Why it happened?”.
7. (LO 1-4, LO 1-5) Data acquisition and preparation software tools like SQL and Alteryx work to get the data ready for analysis. Data visualization software tools work to both analyze data (as part of "Perform the Analysis" in the AMPS model) and to communicate results (as part of "Share the Story" in the AMPS model).

Brief Exercises

1. (LO1-1, LO1-2): Match the data analytics term to its data analytics definition:

Data Analytics Term	Data Analytics Definition
Bloom’s Taxonomy	An explanation of hierarchical forms of thinking and learning skills in education

Data Analytics Term	Data Analytics Definition
data analytics	The process of evaluating data with the purpose of drawing conclusions to address all types of questions, including accounting questions.
dynamic	Characterized by constant update, change, or activity.
information overload	Access or exposure to too much information to be able to process.
static	Characterized by the lack of constant update, change, or activity.

2. (LO1-3): Match the step of the AMPS model to data analytics tasks.

Data Analytics Task	AMPS Model Step (i.e., Ask the Question, Master the Data, Perform the Analysis, Share the Story)
Dashboard providing daily sales in the Pacific Northwest.	Share the Story
Checking the data for errors and missing data items before the data is analyzed.	Master the Data
Vendor trying to decide which product they should sell at Walmart.	Ask the Question
Using a histogram to evaluate whether journal entries were entered by an unauthorized employee.	Perform the Analysis
Deciding the best way to communicate the data analysis findings to management.	Share the Story

3. (LO1-3): Match the step of the AMPS model to data analytics tasks.

Data Analytics Task	AMPS Model Step (i.e., Ask the Question, Master the Data, Perform the Analysis, Share the Story)
Deciding which question to ask that might help management best assess	Ask the Question

Data Analytics Task	AMPS Model Step (i.e., Ask the Question, Master the Data, Perform the Analysis, Share the Story)
strategy.	
Running a regression analysis to evaluate the impact of advertising.	Perform the Analysis
Extracting data from the financial reporting system and prep for use in a pivot table.	Master the Data
Publishing financial statements store-by-store.	Share the Story
Analyzing how profits will change if gasoline prices go up in the coming year.	Perform the Analysis

4. (LO 1-4): Match the data visualization task to the most appropriate data visualization type.

Data Visualization Task	Appropriate Data Visualization Type (e.g., bar chart, pie chart, histogram, line graph, scatterplot)
What is the proportion of total Apple sales of iPhones, iPads and other products?	Pie chart
What is the trend of total Apple sales over the past five years?	Line graph
What is the relationship between research and development expenditures and sales at Apple?	Scatterplot
Did Apple or Samsung have greater operating cash flows last year?	Bar chart
What is the distribution of accounts receivable days outstanding at Apple?	Histogram

5. (LO 1-5): Match the software tool to the to its primary data analytics task.

Software Tool	Data Analytics Task (e.g., data preparation, data analysis, data visualization)
Alteryx	Data preparation
Power BI	Data visualization
SPSS	Data analysis
Tableau Prep	Data preparation
SQL	Data preparation

Problems

1. (LO1-2): Match the components of the AMPS model to data analytics tasks.

Component of Bloom's Taxonomy	Bloom's Taxonomy Component (Remember, Understand, Apply, Analyze, Evaluate, Create)	Who has the advantage in this component? (Human or Machine)
Judging the value of information or ideas.	Evaluate	Human
Recognizing and recalling facts.	Remember	Machine
Combining parts to make a new whole.	Create	Human
Applying the facts, rules, concepts and ideas.	Apply	Machine
Breaking down information into component parts.	Analyze	Human
Comprehending what the facts mean.	Understand	Machine

2. (LO1-3): For each of the questions below, categorize them as one of the following question types:

- a. What happened? What is happening?
- b. Why did it happen? What are the root causes of past results?
- c. Will it happen in the future? What is the probability something will happen? Is it forecastable?

- d. What should we do, based on what we expect will happen? How do we optimize our performance based on potential constraints?”

Data Analytics Question	Question Type
How much did we pay in federal taxes last year?	a. What happened? What is happening?
If we have all 12/31 year-end audit clients, how will we organize our audit work in the new year?	d. What should we do, based on what we expect will happen? How do we optimize our performance based on potential constraints?”
Can the IRS find those individuals or corporations evading taxes using predictive techniques?	c. Will it happen in the future? What is the probability something will happen? Is it forecastable?
Did the airline company’s on-time departures improve this past month?	a. What happened? What is happening?
Can our variance analysis help explain why the labor expenses increased over the past year?	b. Why did it happen? What are the root causes of past results?

3. **(LO 1-3)** For each of the questions below, categorize the appropriate statistical technique that should be used to perform the analysis.

- a. Regression analysis
- b. Benford’s Law
- c. What-if/Goal Seek
- d. Histogram
- e. PivotTable

Data Analytics Question	Statistical Technique
Finding the frequency of all transactions, from the minimum to the maximum	d. Histogram
Looking for potentially fraudulent transactions	b. Benford’s Law
Minimizing tax payment based on expected changes in tax legislation	c. What-if/Goal Seek

Data Analytics Question	Statistical Technique
Segregating Total Costs into Fixed and Variable Cost Components	a. Regression analysis
Displaying total accounts receivable balance by days overdue (aging)	e. PivotTable

4. **(LO 1-3):** Match the following steps of the AMPS model to the data analytics task.
- Ask the Question
 - Master the Data
 - Perform the Analysis
 - Share the Story

Data Analytics Task	Which step of the AMPS Model?
Management wants answers on why certain products are unprofitable.	Ask the Question
The data has lots of missing data.	Master the Data
Should we report our findings with a graph or in a table?	Share the Story
The analysis was done by sorting the data.	Perform the Analysis
The data comes from last year's financial statements.	Master the Data
A dashboard is used to communicate the results.	Share the Story
Which audit tests were performed on the data?	Perform the Analysis

5. **(LO 1-3, 1-5)** Download the Skydio Drone SKU dataset. Note the sales price and cost of each SKU (product). Use Excel to complete address the following questions. You may want to consider completing the Excel tutorial in Appendix A before completing this assignment.
- What is the SKU with the highest sales price? (Hint: Use =max() function to calculate) **SK2-PRK**
 - What is the highest cost of any SKU? (Hint: Use =max() function to calculate) **\$1,486**
 - What is the SKU with the lowest sales price? (Hint: Use =min() function to calculate) **SK2-USB**

- d. What is the lowest cost of any SKU? (Hint: Use =min() function to calculate) **\$11**
 - e. What is the average sales price of the SKUs offered for sale (round to two digits)? (Hint: Use =average() functions to calculate). **\$569.64**
 - f. What is the median cost of the SKUs offered for sale? (Hint: Use =median() functions to calculate). **\$81.5**
6. (LO 1-3, 1-5) Download the DJI Mavic Drone SKU dataset. In Excel, calculate the gross margin (Sales Price – Cost), and gross margin percentage (Sales Price – Cost)/Sales Price for each SKU (product). You may want to consider completing the Excel tutorial in Appendix A before completing this assignment.
- a. What is the SKU with the highest gross margin? (Hint: Use =max() function to calculate) **DJI-AIF**
 - b. What is the SKU with the highest gross margin percentage? (Hint: Use =max() function to calculate) **DJI-MIN**
 - c. What is the SKU with the lowest gross margin? (Hint: Use =min() function to calculate) **DJI-GBA**
 - d. What is the SKU with the lowest gross margin percentage? (Hint: Use =min() function to calculate) **DJI-IFB**
 - e. What is the average and median gross margin of the SKUs offered for sale? (Hint: Use =average() and =median() functions to calculate). **Average Gross Margin is 183.25; Median Gross Margin is 117.50 (enter with two decimals)**
 - f. What is the average and median gross margin percentage of the SKUs offered for sale (round to three digits)? (Hint: Use =average() and =median() functions to calculate). **Average = 0.387; Median 0.388 (enter with three decimals)**

Chapter 1 Lab Solutions

Lab 1-1 Excel Solution

Take a screenshot of your final trial balance, paste it into a word document named "Lab 1-1 Excel SS.doc", label the screenshot Submission 1.

	Trial Balance	
	Debit	Credit
Cash	\$ 44,228	
Accounts Receivable	22,200	
Allowance for Doubtful Accounts		6,000
Prepaid Insurance		200
Computer Supplies	800	
Supplies	145	
Equipment	19,300	
Building	32,000	
Accumulated Depreciation		1,000
Notes Payable		27,300
Common Stock		50,000
Service Revenue		94,800
Salaries Expense	20,800	
Travel Expense	7,897	
Rent Expense	7,000	
Repairs Expense	7,000	
Depreciation Expense	1,000	
Insurance Expense	1,400	
Misc. Expense	175	
Payroll Tax Expense	4,400	
Supplies Expense	255	
Training Expense	1,800	
Utilities Expense	2,900	
Bad Debt Expense	6,000	
	<u>\$ 179,300</u>	<u>\$ 179,300</u>

Check to ensure that total debits equal total credits and complete the trial balance.

Lab 1-1 Excel Multiple Choice Questions

1. What are the total credits for the final trial balance? **179,300**
2. What is used in Excel to compute total debits and total credits from the transactions?
 - a. SUM() function
 - b. Calculator
 - c. AVG() function
 - d. Pivot Table**

3. What is used in Excel to compute Net Debits and Net Credits?
 - a. **Calculated Fields, Items and Sets**
 - b. Pivot Table
 - c. Calculator
 - d. AVG() function
4. What is the net debit balance for accounts receivable? **\$22,200**
5. What is the net debit balance for cash? **\$44,228**

Lab 1-1 Excel Analysis Questions

1. **Why does the initial pivot table have both debits and credits in it for cash and accounts receivable?**

The pivot table simply sums the total debits and the total credits. Since there are cash inflows and cash outflows included in the journal entries, there will be both debit and credit entries associated with cash. Since there are increases and decreases in accounts receivable included in the journal entries, there will be both debit and credit entries associated with accounts receivable.

2. **What is the reason that supplies would have a credit entry?**

A credit entry would be used as supplies are consumed (or used up).

3. **Why is a pivot table considered to be a cross tabulation tool?**

A pivot table allows a tabular format with rows and columns displaying certain data. The data can be aggregated as sum, count, min or max as desired.

Alt Lab 1-1 Excel Solution

Take a screenshot of your final trial balance, paste it into a word document named "Alt Lab 1-1 Excel SS.doc", label the screenshot Submission 1.

	Debit	Credit
Cash	\$ 50,628	
Accounts Receivable	22,200	
Allowance for Doubtful Accounts	\$	5,000
Prepaid Insurance	850	
Computer Supplies	700	
Supplies	245	
Equipment	17,200	
Building	30,000	
Accumulated Depreciation		1,100
Notes Payable		26,200
Common Stock		50,000
Sales Revenue		93,800
Salaries Expense	15,900	
Travel Expense	7,397	
Rent Expense	7,000	
Repairs Expense	8,300	
Depreciation Expense	1,100	
Insurance Expense	1,350	
Misc. Expense	325	
Payroll Tax Expense	4,200	
Supplies Expense	255	
Training Expense	1,700	
Utilities Expense	1,500	
Bad Debt Expense	5,000	
Postage Expense	250	
	\$ 176,100	\$ 176,100

Alt Lab 1-1 Excel Multiple Choice Questions

Assessment 1	What are the total debits for the final trial balance?	\$ 176,100
Assessment 2	How much are the total liabilities in the final trial balance?	\$ 26,200
Assessment 3	How much is bad debt expense in the final trial balance?	\$ 5,000
Assessment 4	What is the amount for net accounts receivable in the final trial balance?	\$ 17,200

Assessment 5	What is the amount for cash in the final trial balance?	\$ 50,628
Assessment 6	What is the balance of sales revenues in the final trial balance?	\$ 93,800
Assessment 7	What is the balance of postage expense in the final trial balance?	\$ 250
Assessment 8	What is the balance of salaries expense in the final trial balance?	\$ 15,900
Assessment 9	What is the balance of travel expense in the final trial balance?	\$ 7,397
Assessment 10	What is the balance of utilities expense in the final trial balance?	\$ 1,500
Assessment 11	What is the balance of notes payable in the final trial balance?	\$ 26,200
Assessment 12	What is the balance of depreciation expense in the final trial balance?	\$ 1,100
Assessment 13	What is the amount for gross accounts receivable in the final trial balance?	\$ 22,200
Assessment 14	What is the balance of common stock in the final trial balance?	\$ 50,000
Assessment 15	What is the balance of payroll tax expense in the final trial balance?	\$ 4,200

Alt Lab 1-1 Excel Analysis Questions

1. **What does the calculated field do? Why is it needed to find a final account balance?**

The calculated field is an item in a pivot field, that allows calculation from the sum of other items in the same field.

2. **The trial balance contains final balances for balance sheet and income statement accounts? Why does it not include balances for the Statement of Cash Flows?**

Since the accrual basis of accounting is what is used in financial accounting, it is, by definition, not recorded on a cash basis. The statement of cash flows documents the change in cash during the year as a result of operating, investing and financial activities.

Lab 1-2 Excel Solution

Lab 1-2 Excel Submission

1. Take a screenshot of the depreciation schedule for 2025, paste it into a word document named "Lab 1-2 Excel SS.doc", label the screenshot Submission 1.

	A	B	C	D	E	F	G	H
1	Current Year	2025						
2				Original				
3	Year Placed in Service	Useful Life	Description	Cost	Salvage Value	SLN	DDB	SYD
4	2022	5	Shovel	50	10	8	7	8
5	2024	5	Garden fork	50	10	8	20	13
6	2022	5	Rake	50	10	8	7	8
7	2022	5	Dutch hoe	50	10	8	7	8
8	2023	5	Garden fork	50	10	8	12	11
9	2021	7	Lawn Shears	20	5	2	2	2
10	2019	7	Pruners	80	10	10	4	5
11	2022	5	Trowel	20	5	3	2	3
12	2023	5	Chain Saw	650	50	120	156	160
13	2022	5	Power Trimmer	650	50	120	94	120
14	2020	10	Trailer for Equipment	2,000	200	180	164	196
15	2023	5	Push Lawnmower 1	1,100	150	190	264	253
16	2022	7	Dump Trailer	15,000	3,500	1,643	2,187	2,054
17	2022	5	Truck 1	35,000	3,000	6,400	5,040	6,400
18	2024	5	Truck 2	35,000	3,000	6,400	14,000	10,667
19	2023	5	Riding Lawnmover	4,500	500	800	1,080	1,067
20	2023	5	Push Lawnmower 2	500	100	80	120	107
21						15,988	23,166	21,081

2. The lab presumes the depreciation expense for the year 2025. If we replace “2026” for “2025” in cell B1, we can compute the depreciation expense for the year 2026. Take a screenshot of the depreciation schedule for 2026, paste it into a word document named "Lab 1-2 Excel SS.doc", label the screenshot Submission 2.

	A	B	C	D	E	F	G	H
1	Current Year	2026						
2				Original				
3	Year Placed in Service	Useful Life	Description	Cost	Salvage Value	SLN	DDB	SYD
4	2022	5	Shovel	50	10	8	1	5
5	2024	5	Garden fork	50	10	8	12	11
6	2022	5	Rake	50	10	8	1	5
7	2022	5	Dutch hoe	50	10	8	1	5
8	2023	5	Garden fork	50	10	8	7	8
9	2021	7	Lawn Shears	20	5	2	0	2
10	2019	7	Pruners	80	10	10	1	3
11	2022	5	Trowel	20	5	3	-	2
12	2023	5	Chain Saw	650	50	120	94	120
13	2022	5	Power Trimmer	650	50	120	56	80
14	2020	10	Trailer for Equipment	2,000	200	180	131	164
15	2023	5	Push Lawnmower 1	1,100	150	190	158	190
16	2022	7	Dump Trailer	15,000	3,500	1,643	1,562	1,643
17	2022	5	Truck 1	35,000	3,000	6,400	3,024	4,267
18	2024	5	Truck 2	35,000	3,000	6,400	8,400	8,533
19	2023	5	Riding Lawnmower	4,500	500	800	648	800
20	2023	5	Push Lawnmower 2	500	100	80	72	80
21						15,988	14,168	15,917

Lab 1-2 Excel Multiple Choice Questions

- Which truck had higher straight-line depreciation expense than double-declining balance depreciation expense in 2025?
 - Truck 1**
 - Truck 2
 - Dump Trailer
- Which method calculated the most depreciation expense for the “Trailer for Equipment” in 2025?
 - Sum-of-the-Year’s Digits**
 - Double Declining Depreciation
 - Straight-Line Depreciation
- Overall, for 2025, which depreciation method had the most depreciation expense?
 - Straight-Line Depreciation
 - Sum-of-the-Year’s Digits
 - Double Declining Depreciation**

4. The lab presumes the depreciation expense for the year 2025. If we replace “2026” for “2025” in cell B1, we can compute the depreciation expense for the year 2026. What is the straight-line depreciation for 2026 assuming no assets are added or disposed during the year? **\$15,988**
5. The lab presumes the depreciation expense for the year 2025. If we replace “2026” for “2025” in cell B1, we can compute the depreciation expense for the year 2026. What is the double declining balance depreciation for 2026 assuming no assets are added or disposed during the year? **\$14,168**

Lab 1-2 Excel Analysis Questions

1. **Why does the depreciation policy the first year make a difference in the calculation of depreciation?**

Depreciation taken or not taken the first year will have implications on the future year's depreciation. In particular, the first year of the sum-of-the-year's digits and the first year of the double-declining-balance depreciation have significantly more depreciation the first year of depreciation taken since they are accelerated methods.

2. If the salvage value is increased, would that increase or decrease the straight-line depreciation taken each year?

The greater the salvage value, the less depreciable base that needs to be depreciated. That said, the greater the salvage value, the lower the annual depreciation expense on a straight-line basis.

Alt Lab 1-2 Excel Submission

1. Take a screenshot of the depreciation schedule for 2025, paste it into a word document named "Alt Lab 1-2 Excel SS.doc", label the screenshot Submission 1.

	A	B	C	D	E	F	G	H
1	Current Year	2025						
2				Original				
3	Year Placed in Service	Useful Life	Description	Cost	Salvage Value	SLN	DDB	SYD
4	2022	10	Conveyer Oven 1	18,000	2,500	1,550	2,304	2,255
5	2024	7	Reach-in Refrigerator	4,500	800	529	1,286	925
6	2022	7	Freezer	3,500	700	400	510	500
7	2022	5	Work table	200	50	30	22	30
8	2023	5	Pizza Prep Table	300	50	50	72	67
9	2021	7	Dough Mixer	500	100	57	52	57
10	2019	7	Dough Prep Equipment	400	20	54	21	27
11	2022	5	Hot Holding Cabinet 1	150	50	20	4	20
12	2023	5	Hot Holding Cabinet 2	200	50	30	48	40
13	2022	5	Delivery Bags	200	-	40	29	40
14	2020	10	Conveyer Oven 2	15,000	2,000	1,300	1,229	1,418
15	2022	5	Pizza Prep Table	350	150	40	-	40
16	2022	5	Assorted utensils	300	-	60	43	60
17						4,160	5,620	5,479

- The lab presumes the depreciation expense for the year 2025. If we replace “2025” with “2026” in cell B1, we can compute the depreciation expense for the year 2026. Take a screenshot of the depreciation schedule for 2026, paste it into a word document named "Alt Lab 1-2 Excel SS.doc", label the screenshot Submission 2.

	A	B	C	D	E	F	G	H
1	Current Year	2026						
2				Original				
3	Year Placed in Service	Useful Life	Description	Cost	Salvage Value	SLN	DDB	SYD
4	2022	10	Conveyer Oven 1	18,000	2,500	1,550	1,843	1,973
5	2024	7	Reach-in Refrigerator	4,500	800	529	918	793
6	2022	7	Freezer	3,500	700	400	364	400
7	2022	5	Work table	200	50	30	-	20
8	2023	5	Pizza Prep Table	300	50	50	43	50
9	2021	7	Dough Mixer	500	100	57	30	43
10	2019	7	Dough Prep Equipment	400	20	54	15	14
11	2022	5	Hot Holding Cabinet 1	150	50	20	-	13
12	2023	5	Hot Holding Cabinet 2	200	50	30	22	30
13	2022	5	Delivery Bags	200	-	40	17	27
14	2020	10	Conveyer Oven 2	15,000	2,000	1,300	983	1,182
15	2022	5	Pizza Prep Table	350	150	40	-	27
16	2022	5	Assorted utensils	300	-	60	26	40
17						4,160	4,263	4,610

Alt Lab 1-2 Excel Multiple Choice Questions

Assessment 1	What is the 2025 double-declining balance depreciation expense for conveyer oven 1?	\$ 2,304
Assessment 2	What is the 2026 double-declining balance depreciation expense for conveyer oven 1?	\$ 1,843
Assessment 3	What is the total depreciation expense for the total company using sum-of-the-years' digits for 2025?	\$ 5,479
Assessment 4	What is the total depreciation expense for the total company using sum-of-the-years' digits for 2026?	\$ 4,610
Assessment 5	What is the total depreciation expense using double declining balance for 2025?	\$ 5,620
Assessment 6	What is the total depreciation expense using double declining balance for 2026?	\$ 4,263
Assessment 7	What is the SYD depreciation for the reach-in refrigerator for 2025?	\$ 925
Assessment 8	What is the SYD depreciation for the reach-in refrigerator for 2026?	\$ 793
Assessment 9	What is the SLN depreciation for the hot holding cabinet 1 for 2025?	\$ 20
Assessment 10	What is the SLN depreciation for the hot holding cabinet 1 for 2026?	\$ 20
Assessment 11	What is the DDB depreciation for the hot holding cabinet 1 for 2025?	\$ 4
Assessment 12	What is the DDB depreciation for the hot holding cabinet 1 for 2026?	\$ 0
Assessment 13	What is the SYD depreciation for the hot holding cabinet 1 for 2025?	\$ 20
Assessment 14	What is the SYD depreciation for the hot holding cabinet 1 for 2026?	\$ 13
Assessment 15	What is the SYD depreciation for the hot holding cabinet 2 for 2025?	\$ 40

Alt Lab 1-2 Excel Analysis Questions

1. How is salvage value used in a DDB computation?

In DDB, you need to deduct the salvage value to arrive at the depreciable base. But care must be taken when performing DDB, to not depreciate an asset beyond its depreciable base.

2. Why would a company choose to use accelerated depreciation (like DDB or SYD) for tax purposes and straight-line depreciation for GAAP purposes?

All other things equal, a company would like to minimize taxes by having more depreciation expense. Thus, they would use DDB or SYD to minimize taxes. All other things equal, a company would generally like to minimize depreciation expense for financial accounting purposes. This would allow the company to maximize their income.

Lab 1-3 Excel Solution

Lab 1-3 Excel Submission

1. Take a screenshot of the top 20 lines of your 360-month amortization schedule, paste it into a word document named "Lab 1-3 Excel SS.doc", label the screenshot Submission 1.

	A	B	C	D	E	F
1	Annual Interest Rate	6%				
2	Monthly Interest Rate (rate)	0.005		Total		Principal and
3	Number of periods (nper)	360		Interest Paid		Interest Paid
4	Amount of Loan (pv)	200,000		231,676.38		431,676.38
5	Monthly Payment	(\$1,199.10)				
6		Beginning	Monthly	Towards	Towards	Ending
7	Monthly payment number	Principal	Payment	Interest	Principal	Principal
8		1 200,000	(\$1,199.10)	1,000.00	(\$199.10)	199,800.90
9		2 199,800.90	(\$1,199.10)	999.00	(\$200.10)	199,600.80
10		3 199,600.80	(\$1,199.10)	998.00	(\$201.10)	199,399.71
11		4 199,399.71	(\$1,199.10)	997.00	(\$202.10)	199,197.60
12		5 199,197.60	(\$1,199.10)	995.99	(\$203.11)	198,994.49
13		6 198,994.49	(\$1,199.10)	994.97	(\$204.13)	198,790.36
14		7 198,790.36	(\$1,199.10)	993.95	(\$205.15)	198,585.21
15		8 198,585.21	(\$1,199.10)	992.93	(\$206.17)	198,379.04
16		9 198,379.04	(\$1,199.10)	991.90	(\$207.21)	198,171.83
17		10 198,171.83	(\$1,199.10)	990.86	(\$208.24)	197,963.59
18		11 197,963.59	(\$1,199.10)	989.82	(\$209.28)	197,754.31
19		12 197,754.31	(\$1,199.10)	988.77	(\$210.33)	197,543.98
20		13 197,543.98	(\$1,199.10)	987.72	(\$211.38)	197,332.60
21		14 197,332.60	(\$1,199.10)	986.66	(\$212.44)	197,120.16
22		15 197,120.16	(\$1,199.10)	985.60	(\$213.50)	196,906.66
23		16 196,906.66	(\$1,199.10)	984.53	(\$214.57)	196,692.09
24		17 196,692.09	(\$1,199.10)	983.46	(\$215.64)	196,476.45
25		18 196,476.45	(\$1,199.10)	982.38	(\$216.72)	196,259.73
26		19 196,259.73	(\$1,199.10)	981.30	(\$217.80)	196,041.93
27		20 196,041.93	(\$1,199.10)	980.21	(\$218.89)	195,823.04

Lab 1-3 Excel Multiple Choice Questions

1. What is the amount of interest paid in monthly payment number 25? \$974.68
2. What is the amount that goes toward paying down principal in monthly payment number 20? **\$218.89**
3. What is the amount of ending principal after the 359th monthly payment? **\$1,193.14**
4. What is the amount of ending principal after the 360th monthly payment?
 - a. **\$0**
 - b. \$1,330.60
 - c. \$200,000
 - d. \$1,193.14

5. What would be the monthly payment for a \$200,000 mortgage loan for 360 months, and at 7% annual interest? **\$1,330.60**

Lab 1-3 Excel Analysis Questions

1. Why did the payment increase when the interest rate increases?
As the interest rate increases, so does the needed interest to be paid. As the interest increases, so does the payment increase.
2. Why does the payment function require the monthly interest rate instead of the annual interest rate to determine the payment?
Since the payment is made each month, the monthly interest rate would need to be used. If the payment is made each year, an annual interest rate would be used.
3. What is the amount of total principal paid over the life of the loan? Why does that make sense?
The total principal to be paid over the life of the loan is equal to the amount of the original loan. The rest of the money paid is just for interest!

Alt Lab 1-3 Excel Submission

1. Take a screenshot of the top 20 lines of your 180-month amortization schedule based on \$200,000 loan, paste it into a word document named "Alt Lab 1-3 Excel SS.doc", label the screenshot Submission 1.

	A	B	C	D	E	F
1	Annual Interest Rate	6%				
2	Monthly Interest Rate (rate)	0.005		Total		Principal and
3	Number of periods (nper)	180		Interest Paid		Interest Paid
4	Amount of Loan (pv)	200,000		103,788.46		303,788.46
5	Monthly Payment	(\$1,687.71)				
6		Beginning	Monthly	Towards	Towards	Ending
7	Monthly payment number	Principal	Payment	Interest	Principal	Principal
8		1 200,000	(\$1,687.71)	1,000.00	(\$687.71)	199,312.29
9		2 199,312.29	(\$1,687.71)	996.56	(\$691.15)	198,621.13
10		3 198,621.13	(\$1,687.71)	993.11	(\$694.61)	197,926.53
11		4 197,926.53	(\$1,687.71)	989.63	(\$698.08)	197,228.45
12		5 197,228.45	(\$1,687.71)	986.14	(\$701.57)	196,526.87
13		6 196,526.87	(\$1,687.71)	982.63	(\$705.08)	195,821.79
14		7 195,821.79	(\$1,687.71)	979.11	(\$708.60)	195,113.19
15		8 195,113.19	(\$1,687.71)	975.57	(\$712.15)	194,401.04
16		9 194,401.04	(\$1,687.71)	972.01	(\$715.71)	193,685.33
17		10 193,685.33	(\$1,687.71)	968.43	(\$719.29)	192,966.05
18		11 192,966.05	(\$1,687.71)	964.83	(\$722.88)	192,243.16
19		12 192,243.16	(\$1,687.71)	961.22	(\$726.50)	191,516.67
20		13 191,516.67	(\$1,687.71)	957.58	(\$730.13)	190,786.53
21		14 190,786.53	(\$1,687.71)	953.93	(\$733.78)	190,052.75
22		15 190,052.75	(\$1,687.71)	950.26	(\$737.45)	189,315.30
23		16 189,315.30	(\$1,687.71)	946.58	(\$741.14)	188,574.17
24		17 188,574.17	(\$1,687.71)	942.87	(\$744.84)	187,829.32
25		18 187,829.32	(\$1,687.71)	939.15	(\$748.57)	187,080.76
26		19 187,080.76	(\$1,687.71)	935.40	(\$752.31)	186,328.45
27		20 186,328.45	(\$1,687.71)	931.64	(\$756.07)	185,572.38

- Take a screenshot of the top 20 lines of your 72-month amortization schedule based on \$200,000 loan, paste it into a word document named "Alt Lab 1-3 Excel SS.doc", label the screenshot Submission 2.

	A	B	C	D	E	F
1	Annual Interest Rate	6%				
2	Monthly Interest Rate (rate)	0.005		Total		Principal and
3	Number of periods (nper)	72		Interest Paid		Interest Paid
4	Amount of Loan (pv)	200,000		38,649.59		238,649.59
5	Monthly Payment	(\$3,314.58)				
6		Beginning	Monthly	Towards	Towards	Ending
7	Monthly payment number	Principal	Payment	Interest	Principal	Principal
8	1	200,000	(\$3,314.58)	1,000.00	(\$2,314.58)	197,685.42
9	2	197,685.42	(\$3,314.58)	988.43	(\$2,326.15)	195,359.27
10	3	195,359.27	(\$3,314.58)	976.80	(\$2,337.78)	193,021.49
11	4	193,021.49	(\$3,314.58)	965.11	(\$2,349.47)	190,672.02
12	5	190,672.02	(\$3,314.58)	953.36	(\$2,361.22)	188,310.80
13	6	188,310.80	(\$3,314.58)	941.55	(\$2,373.02)	185,937.78
14	7	185,937.78	(\$3,314.58)	929.69	(\$2,384.89)	183,552.89
15	8	183,552.89	(\$3,314.58)	917.76	(\$2,396.81)	181,156.08
16	9	181,156.08	(\$3,314.58)	905.78	(\$2,408.80)	178,747.28
17	10	178,747.28	(\$3,314.58)	893.74	(\$2,420.84)	176,326.44
18	11	176,326.44	(\$3,314.58)	881.63	(\$2,432.95)	173,893.49
19	12	173,893.49	(\$3,314.58)	869.47	(\$2,445.11)	171,448.38
20	13	171,448.38	(\$3,314.58)	857.24	(\$2,457.34)	168,991.05
21	14	168,991.05	(\$3,314.58)	844.96	(\$2,469.62)	166,521.43
22	15	166,521.43	(\$3,314.58)	832.61	(\$2,481.97)	164,039.46
23	16	164,039.46	(\$3,314.58)	820.20	(\$2,494.38)	161,545.08
24	17	161,545.08	(\$3,314.58)	807.73	(\$2,506.85)	159,038.22
25	18	159,038.22	(\$3,314.58)	795.19	(\$2,519.39)	156,518.84
26	19	156,518.84	(\$3,314.58)	782.59	(\$2,531.98)	153,986.85
27	20	153,986.85	(\$3,314.58)	769.93	(\$2,544.64)	151,442.21

Alt Lab 1-3 Excel Multiple Choice Questions

Assessment 1	If the loan principal is \$200,000, 6% annual interest and paid over 180 months, what would be the monthly payment?	\$ 1,687.71
Assessment 2	If the loan principal is \$200,000 and 6% annual interest paid over 180 months, what is the amount that goes toward paying down principal in monthly payment number 20?	\$ 756.07
Assessment 3	If the loan principal is \$200,000 and 6% annual interest paid over 180 months, what is the total amount of interest paid over the life of the mortgage?	\$ 103,788.46
Assessment 4	If the loan principal is \$200,000, 6% annual interest and paid over 72 months, what would be the monthly payment?	\$ 3,314.58

Assessment 5	If the loan principal is \$200,000, 6% annual interest and paid over 72 months, what is the amount of interest expense in monthly payment number 3?	\$ 976.80
Assessment 6	If the loan principal is \$205,000, 6% annual interest and paid over 180 months, what would be the monthly payment?	\$ 1,729.91
Assessment 7	If the loan principal is \$205,000 and 6% annual interest paid over 180 months, what is the amount that goes toward paying down principal in monthly payment number 20?	\$ 774.97
Assessment 8	If the loan principal is \$205,000 and 6% annual interest paid over 180 months, what is the total amount of interest paid over the life of the mortgage?	\$ 106,383.17
Assessment 9	If the loan principal is \$205,000, 6% annual interest and paid over 72 months, what would be the monthly payment?	\$ 3,397.44
Assessment 10	If the loan principal is \$205,000, 6% annual interest and paid over 72 months, what is the amount of interest expense in monthly payment number 3?	\$ 1,001.22
Assessment 11	If the loan principal is \$220,000, 6% annual interest and paid over 180 months, what would be the monthly payment?	\$ 1,856.49
Assessment 12	If the loan principal is \$220,000 and 6% annual interest paid over 180 months, what is the amount that goes toward paying down principal in monthly payment number 20?	\$ 831.68
Assessment 13	If the loan principal is \$220,000 and 6% annual interest paid over 180 months, what is the total amount of interest paid over the life of the mortgage?	\$ 114,167.30
Assessment 14	If the loan principal is \$220,000, 6% annual interest and paid over 72 months, what would be the monthly payment?	\$ 3,646.04
Assessment 15	If the loan principal is \$220,000, 6% annual interest and paid over 72 months, what is the amount of interest expense in monthly payment number 3?	\$ 1,074.48

Alt Lab 1-3 Excel Analysis Questions

- Why does the monthly mortgage payment go down if the number of months increases?** The more monthly payments to be paid, the lower the needed payment each month.
- Why does the amount of money going towards principal increase over time?** As time progresses and more loan payments are being made, there is less interest to be paid. With an equal monthly payment and less interest to be paid, more of the loan payment can be put forward toward the loan.

- 3. Why is the total interest paid over the life of the 72-month loan so much lower than the 180-month loan?** With less monthly payments for a loan with the same principal, the 72-month loan will pay off principal quicker than the 180-month loan. The more principal paid, means less interest paid. For this reason, the total interest paid over the life of the 72-month loan is lower than that of a 180-month loan.