

Gracie L. Shepherd

Excel Projects Portfolio

Data Driven Problem Solver With Strong Excel Skills

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Inventory Margin Analysis: Multi-Category Buying Exercise

(Shepherd-EIR3)

Project Overview:

Analyzed product costs, retail pricing, and promotional impacts across sweaters, jewelry, slippers, and backpacks. Calculated IMU, CMU, and MMU using Excel formulas and created clear, formatted tables to support pricing decisions.

Skills Demonstrated:

- Margin Analysis (IMU, CMU, MMU)
- Excel formulas & formatting
- Promo impact forecasting
- Visual data presentation

Excel File Link

[View the Excel link here](#)

4 Create a table showing IMU, CMU and MMU for the following information

Within the table insert the image of the backpack

Rainbow Little Critters 1300 units Cost \$15.00, Retail \$30.00

Lady Bug Little Critters 900 units Cost \$12.00, Retail \$24.00

Mackenzie Disney Princess Castle Summer 2100 units broken down as follows:

Mini	20%	\$12.00	\$30.00
Small	40%	\$16.00	\$36.00
Large	20%	\$18.75	\$40.00
Rolling	10%	\$23.50	\$44.00

Disney Moana 2100 units broken down as follows:

Mini	40%	\$11.75	\$30.00
Small	30%	\$15.00	\$36.00
Large	30%	\$18.50	\$40.00

Sale Price 20% OFF






Description	Quantity	Cost	Retail	IMU%	Total Cost	Total Retail	CMU%	Sale Retail	Total Sales Retail	MMU%
 Rainbow Little Critters	1300	\$15.00	\$30.00	50%	\$19,500.00	\$39,000.00	50%	\$24.00	\$31,200.00	44%
 Lady Bug Little Critters	900	\$12.00	\$24.00	50%	\$10,800.00	\$21,600.00	50%	\$19.20	\$17,280.00	44%
 Mini - Mackenzie De	420	\$12.00	\$30.00	60%	\$5,040.00	\$12,600.00	60%	\$24.00	\$10,080.00	47%
 Small - Mackenzie De	840	\$16.00	\$36.00	56%	\$13,440.00	\$30,240.00	56%	\$28.80	\$24,192.00	41%
 Large - Mackenzie De	420	\$18.75	\$40.00	53%	\$7,950.00	\$16,800.00	53%	\$32.00	\$13,440.00	38%
 Rolling - Mackenzie De	210	\$23.50	\$44.00	51%	\$4,935.00	\$9,240.00	51%	\$35.20	\$7,392.00	30%
 Mini - Disney Moana	840	\$11.75	\$30.00	61%	\$9,870.00	\$25,200.00	61%	\$24.00	\$20,160.00	48%
 Small - Disney Moana	630	\$15.00	\$36.00	56%	\$9,450.00	\$22,680.00	56%	\$28.80	\$18,144.00	44%
 Large - Disney Moana	630	\$18.50	\$40.00	54%	\$11,655.00	\$25,200.00	54%	\$32.00	\$20,160.00	38%
Total	6385				\$92,712.50	\$215,550.00	57%		\$181,662.50	43%

Table showing margin breakdown for backpack categories with promo pricing.

Retail Planning and Open-To-Buy Analysis

(Shepherd_EIR Purchases)

Project Overview:

Built detailed merchandise planning tables to project monthly sales, inventory levels, markdowns, and purchases across multiple retail scenarios. Calculated Open-to-Buy (OTB), Cost Purchases, and Retail Purchases using Excel formulas. Developed and analyzed a complete 6-month merchandise plan with visual support for strategic buying decisions.

Skills Demonstrated:

- ~ Open-to-Buy (OTB) calculation
- ~ Merchandise planning & sales forecasting
- ~ Cost & retail purchase formulas
- ~ Markdown and sales % tracking
- ~ Visual 6-month plan integration

Excel File Link

[View the Excel link here](#)

Problem 3												
Complete the 6 Month Plan												
Actual - Last Year										Markdowns %		
Plan	Aug	Sept	Oct	Nov	Dec	Jan	Total	PLN		ACT	24.1%	
BOM	\$34.5	\$35.4	\$29.3	\$35.5	\$60.4	\$34.3	\$229.4	Sales Change				
Sales	\$19.1	\$20.2	\$15.6	\$19.7	\$37.5	\$19.6	\$131.7	PLN		ACT		
Sales % Total	14.5%	15.3%	11.8%	15.0%	28.5%	14.9%	100.0%	Average Stock				
Markdowns	\$5.6	\$4.1	\$4.4	\$2.8	\$8.6	\$6.3	\$31.8	PLN		ACT	\$37.1	
MD % Total	17.6%	12.9%	13.8%	8.8%	27.0%	19.8%	100.0%	Turnover				
Purchases	\$25.6	\$18.2	\$26.2	\$47.4	\$20.0	\$21.9	\$160.3	PLN		ACT	3.55	
EOM	\$35.4	\$29.3	\$35.5	\$60.4	\$34.3	\$30.3	\$225.2					
S:S	1.81	1.75	1.88	1.80	1.61	1.75						
Plan - This Year								Markdowns				
Plan	Aug	Sept	Oct	Nov	Dec	Jan	Total	PLN	15.3%	ACT		
BOM	\$34.5	\$36.4	\$29.7	\$36.5	\$59.4	\$34.3	\$230.8	Sales Change				
Sales	\$18.4	\$19.5	\$15.0	\$19.0	\$36.1	\$18.9	\$126.9	PLN	-3.6%	ACT		
Sales % Total	14.5%	15.3%	11.8%	15.0%	28.5%	14.9%	100.0%	Average Stock				
Markdowns	\$3.4	\$2.5	\$2.7	\$1.7	\$5.3	\$3.9	\$19.5	PLN		\$37.2	ACT	
MD % Total	17.6%	12.9%	13.8%	8.8%	27.0%	19.8%	100.0%	Turnover				
Purchases	\$23.7	\$15.3	\$24.5	\$43.6	\$16.3	\$18.0	\$141.5	PLN	6.20	ACT		
EOM	\$36.4	\$29.7	\$36.5	\$59.4	\$34.3	\$29.6						
S:S	1.87	1.87	1.98	1.92	1.64	1.82						

6-Month Sales & Inventory Plan showing projected purchases, markdowns, and end-of-month stock.

Basic Sorting & Lookup Functions

(Excel#4_Shepherd)

Project Overview:

Executed sorting tasks including alphabetical, custom sequence, and random sorting on multiple datasets. Applied filters to extract specific data based on multiple criteria. Utilized Excel's lookup functions such as VLOOKUP (both approximate and exact match), HLOOKUP, and INDEX to retrieve and organize data efficiently from reference tables. This project demonstrates proficiency in data manipulation and retrieval using essential Excel functions.

Skills Demonstrated:

- ~ Sorting (alphabetical, custom order, random)
- ~ Data filtering
- ~ VLOOKUP (approximate and exact match)
- ~ HLOOKUP
- ~ INDEX function
- ~ Data analysis and organization

Excel Link

[View the Excel link here](#)

Q7. HLOOKUP: Horizontal Lookup

Using HLOOKUP, find answer for "Total \$ for each order" (in Cell C202 for order 1 and Cell D207 for order 2), based on the given information.

Vendor	Queso Cabrales	Rodney's Scones	Alice Mutton	Boston Crab Meat	Queso Danish	Grandma's Blueberry	Aunt O's Oatmeal	Philadelphia Cheese
Price	\$21.00	\$10.00	\$39.00	\$18.40	\$32.00	\$7.00	\$15.00	\$27.00
In Stock	22	3	0	123	77	2321	8888	11
On Order	30	40	0	18	30	40	22	0
Reorder Level	30	5	0	18	30	5	11	900
Value of Inventory	\$462.00	\$30.00	\$0.00	\$2,263.20	\$1,200.00	\$76,291.00	\$87,901.00	\$31,109.00
Value on Order	\$660.00	\$120.00	\$0.00	\$0.00	\$3,081.00	\$120.00	\$3,211.00	\$0.00
Reorder Cost	\$110.00	\$15.00	\$0.00	\$615.36	\$192.00	\$31.00	\$0.00	\$410.00

Order 1

Vendor: Alice Mutton
Quantity: 100
Total \$ for price: \$ 3,900.00

Order 2

Vendor: Philadelphia Cheese
Quantity: 10
Total \$ for price: \$ 1,350.00

Q8. INDEX

Using INDEX, find and put the value in the following cell address and show it in cell B215:

Row position: 2
Column position: 2
Index: B2

	1	2	3
1	10	11	12
2	20	21	22
3	30	31	32
4	40	41	42
5	50	51	52

In this case, the value we're looking up is the vendor's name in Table 7, horizontally spread out in Row 150. That's why we use HLOOKUP

Index gives you information in a position

Used HLOOKUP and INDEX functions in Excel to retrieve prices and calculate order totals based on specific row and column positions.

Profit & Loss Statement Modeling

(Shepherd_EIR5)

Project Overview:

Built complete P&L statements using Excel to calculate reductions, gross margin %, operating expenses %, and profit across multiple sales scenarios.

Skills Demonstrated:

- ~ P&L construction and analysis
- ~ Margin and profit % calculations
- ~ Excel formula application

Excel File Link

[View the Excel link here](#)

Excel #5: P&L statement

Basic P&L statement

Gross sales - Reductions = Net sales	Net sales - Cost of goods sold = Gross margin	Gross Margin - Operating Expenses = Net Profit	
gross margin % = gross margin \$ / Net Sales \$	Operating Expenses = operating expenses \$ / Net Sales \$	Reduction \$ = Reduction % * net sales \$	Profit% = Profit \$ * Net Sales \$

Q1. Gross Sales are \$990,000.00, cost of goods is \$480,600.00, gross margin is 40.00%, and profit is \$18,000.00. Find gross sales %, profit \$ and % for this business. (Using spreadsheet below, show results with proper formulas.)

	\$	%	\$	%	
Gross Sales	\$990,000.00	123.60%	990000	C16/C12	
-Reductions	\$189,000.00	23.60%	C16/C12	C16/C12	
= Net Sales	\$801,000.00	100.00%	C16/C12	100%	<- Net Sales are always 100%
- Cost of Goods	\$480,600.00	60.00%	480600	C16/C12	
= Gross Margin	\$320,400.00	40.00%	C16/C12	40%	
- Operating Expenses	\$302,400.00	37.75%	C16/C12	C16/C12	
= Profit	\$18,000.00	2.25%	18000	C16/C12	

Q2. Gross Sales are \$478,000.00, operating expenses are 33.00%, net sales are \$330,000.00, and gross margin is 45.00%. Complete a P&L statement and get reduction \$ and %, and profit \$ and %.

(Using spreadsheet below, show results with proper formulas.)

	\$	%	\$	%	
Gross Sales	\$478,000.00	144.85%	478000	C16/C12	
-Reductions	\$148,000.00	44.85%	C16/C12	C16/C12	
= Net Sales	\$330,000.00	100.00%	330000	100%	
- Cost of Goods	\$181,500.00	55%	C16/C12	C16/C12	
= Gross Margin	\$148,500.00	45.00%	C16/C12	45%	
- Operating Expenses	\$108,900.00	33.00%	C16/C12	33%	
= Profit	\$39,600.00	12.00%	C16/C12	C16/C12	

Built a full profit & loss (P&L) model in Excel, using embedded formulas to calculate net sales, gross margin, operating expenses, and profit across multiple scenarios.

Comprehensive Retail Merchandising & Financial Planning Analysis

(Shepherd_Exam2)

Project Overview:

This Excel project simulates a real-world retail buying scenario, analyzing cost, markup, sales, markdowns, inventory, and performance metrics. It demonstrates skills in retail math, Excel data analysis, inventory management, and 6-month merchandise planning.

Skills Demonstrated:

- Markup & Markdown Calculations (IMU, MMU, CMU)
- Sell-Through & Weeks of Supply (WOS) Analysis
- Open-to-Buy (OTB) & Turnover Forecasting
- Data Organization & Conditional Formatting
- Retail Sales & Inventory Planning

Excel File Link

[View the Excel link here](#)

20									
Create a table that summarizes the cost, retail, IMU, CMU and MMU									
500 Scarves from Vendor 1 at \$5.35 each.									
450 Scarves from Vendor 2 at \$5.33 each.									
400 Scarves from Vendor 3 at \$5.33 each.									
800 Scarves from Vendor 4 at \$5.00 each.									
The scarves original price is \$19.99 and will be sold at \$14.99 during key sale events									
Total									
Quantity	Cost	Retail	IMU	TTL Cost	TTL Retail	CMU	Sale Retail	TTL Sale Retail	MMU
Vendor 1	500 \$ 5.35	19.99	73.2%	\$ 2,675.00	\$ 9,995.00	73.2%	\$ 14.99	\$ 4,997,500.00	64.3%
Vendor 2	450 \$ 5.33	19.99	73.2%	\$ 2,398.50	\$ 8,995.50	73.2%	\$ 14.99	\$ 4,047,975.00	64.4%
Vendor 3	400 \$ 5.33	19.99	73.2%	\$ 2,132.00	\$ 7,996.00	73.2%	\$ 14.99	\$ 3,596,400.00	64.4%
Vendor 4	800 \$ 5.00	19.99	75.0%	\$ 4,000.00	\$ 15,992.00	75.0%	\$ 14.99	\$ 12,793,600.00	66.6%
Total				\$ 12,151.50	\$ 46,978.50	74.1%		\$ 29,635,475.00	100.0%

20									
During the life of this scarf program									
200 sold at \$19.99									
1900 sold at the promotional price of \$14.99									
After the sale the balance of the scarves were marked down to \$9.99, and sold out									
Create a table to answer the following questions									
1 Find the total markdown dollar amount taken.									
2 What was the percent deduction from the original amount of \$19.99 to the sale price \$14.99?									
3 What were the total sales on the life of the program									
4 What is the MD% on the life of the program									
Create a Table Below									
	Retail Price	Number Sold	MD\$	TTL MD\$	TTL Sale				
Original	19.99	200	\$ 80.00	\$ 20,000.00	\$ 4,997.50				
Promotional	14.99	1900	\$ 85.01	\$ 161,019.00	\$ 28,491.00				
Clearance	9.99	200	\$ 85.01	\$ 18,002.00	\$ 1,999.00				
Total		2300		\$ 199,021.00	\$ 35,487.50				
				79.99	100	\$ (9.26)			

This section evaluates scarf purchases from multiple vendors, calculating initial and maintained markups (IMU, CMU, MMU). It also tracks sales across full price, promotional, and clearance tiers, summarizing total revenue, markdown dollars, and overall markdown percentage.

Sales & Inventory Analysis - Pivot Dashboard

(Shepherd_Pivot5)

Project Overview:

This Excel workbook uses 8 pivot tables to analyze key retail metrics, including sales by location, category, vendor, and style. It highlights inventory levels, gross margin, and performance trends to support strategic merchandising decisions.

Skills Demonstrated:

- ~ Pivot Table Creation & Customization
- ~ Multi-dimensional Sales & Inventory Analysis
- ~ Data Filtering & Grouping
- ~ Category, Store, and Vendor Performance Breakdown
- ~ Excel Data Visualization & Summary Reporting

Excel File Link

[View the Excel link here](#)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1																
2		How many packages did Aimee Bixby and Alice McCarthy Order for the months March-December?														
3		Sum of Quantity	Column Labels													
4		Row Labels	Jan	Mar	Apr	May	Jun	Jul	Sep	Oct	Nov	Dec	Grand Total			
5		Alice McCarthy		14		7		6		2		19	48			
6		Alyssa Tate			4				1		7	16	28			
7		Caroline Jumper		8	12		43	8	4			8	83			
8		Grand Total		8	26	4	50	8	10	1	2	7	43	159		
9																
10		1. Filters >N/A														
11		2. Column > Months														
12		3. Rows > Customer Name														
13		4. Values > Sum of Quantity														
14		5. Insert slicer for Customer name and select Alice McCarthy, Alyssa Tate and Caroline Jumper														
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Customer Name

Carol Darley

Carol Triggs

Caroline Jumper

Cassandra Brandow

Catherine Glotzbach

Cathy Armstrong

Cathy Hwang

Cathy Prescott

Chad Cunningham

Chad McGuire

Chad Sievert

Charles Crestani

Charles McCrossin

Charles Sheldon

Analyzes sales, inventory, and gross margin by category using a pivot table. Helps identify top-performing product groups and inventory efficiency.

Excel Logic & Filtering Functions Practice

(Shepherd_G_Excel5)

Project Overview:

This project focuses on advanced Excel functions including filtering, lookup, and logical operations. It demonstrates the use of FILTER, VLOOKUP, HLOOKUP, MATCH, INDEX, IF, AND, and OR functions to analyze sales data, customer records, and inventory scenarios.

Skills Demonstrated:

- Dynamic data filtering by value, color, date, and condition
- Lookup functions for horizontal and vertical data searches
- Nested INDEX/MATCH for left lookups
- Logical tests using IF, AND, OR functions
- Real-world scenarios for commission and bonus calculations

Excel File Link

[View the Excel link here](#)

	A	B	C	D	E	F	G	H	I
172									
173									
174									
175									
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210									
211									
212									

Demonstrates use of HLOOKUP to calculate total order values from a product price list, and MATCH to identify matching entries across two data sets. Highlights key lookup and data comparison skills in Excel

Excel Data Analysis and Reporting Exam

(Shepherd_G_Exam1)

Project Overview:

This exam tests essential Excel skills for data analysis and reporting. Conditional formatting and sorting highlight key data quickly, while lookup functions and formulas ensure accurate matching and calculations. Subtotals, percentages, and formatting improve clarity, and charting helps visualize results. These skills are vital for data-driven roles.

Skills Demonstrated:

- ~ Conditional Formatting
- ~ Sorting & Filtering
- ~ Lookup Functions (VLOOKUP, MATCH)
- ~ Formula Writing with Cell References
- ~ Subtotals & Percentages
- ~ Table Formatting
- ~ Basic Charting

Excel File Link

[View the Excel link here](#)

Q5										
Table 1										
Class	Sub-classification	Amount of Sales per month			Monthly Sales percentages to Month total			Percentage of 'This month' Sales Classification Rate % Classification	Percentage of 'This month' Classification Rate % to Grand Total	
		August	Sept	Oct	August	Sept	Oct			
Mista	Full Size	\$ 248.0	\$ 352.0	\$ 200.0	57.97%	57.97%	57.97%	58%		
Mista	Shimmer	\$ 148.8	\$ 211.2	\$ 120.0	34.78%	34.78%	34.78%	35%		
Mista	Mini	\$ 31.0	\$ 44.0	\$ 25.0	7.25%	7.25%	7.25%	7%		
Mista Total		\$ 427.8	\$ 607.2	\$ 345.0	100.00%	100.00%	100.00%	100%	52.13%	
Bodycare	Moisture	\$ 140.0	\$ 210.0	\$ 178.0	45.45%	45.45%	58.87%	50%		
Bodycare	Scrub	\$ 74.0	\$ 105.0	\$ 60.0	24.03%	23.71%	19.17%	22%		
Bodycare	Face	\$ 56.0	\$ 79.0	\$ 45.0	18.18%	17.67%	14.38%	17%		
Bodycare	On the Go	\$ 38.0	\$ 52.0	\$ 30.0	12.34%	11.63%	9.58%	11%		
Bodycare Total		\$ 308.0	\$ 447.0	\$ 313.0	100.00%	100.00%	100.00%	100%	40.38%	
Trend	Bomba	\$ 38.0	\$ 48.0	\$ 20.0	56.72%	52.27%	45.45%	51%		
Trend	Mask	\$ 29.0	\$ 42.0	\$ 24.0	43.28%	47.73%	54.55%	49%		
Trend Total		\$ 67.0	\$ 90.0	\$ 44.0	100.00%	100.00%	100.00%	100%	7.52%	
Grand Total		\$ 803.6	\$ 1,146.2	\$ 702.0						
1. Subtotal by Classification										
2. Complete worksheet.										
3. Format the table using colors to differentiate between Title, Subtotal and Grand Total										
4. Give an explanation as to why you chose the color scheme and how it improves readability										
I chose this color scheme because it is important to have the title of every column highlighted and in bold for best readability to identify each column properly. I did the same thing with the rows of 'class' and 'sub-class' so these titles are also easy to read. I highlighted all numbers of amount of sales per month so these numbers are easily identifiable. I did the same thing to the number under monthly sales percentages to month total. I decided to highlight the entire row of monthly total in a bright color because these values are what we were looking for. These values are important because they are the total for each column. I highlighted the grand total in a bold and bright yellow font to make the most identifiable value in the chart because this number will be used in an equation to find the missing values. It is fast and efficient to make this number easily seen. I highlighted the numbers in the last two columns on the left because these values we also need to find, and it cannot be the same color as another.										

Demonstrates organizing sales data, calculate percentages, and use formatting to highlight key totals and improve readability.

