

# MERGING MULTIPLE DATASETS

BY

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# LAB 1: MERGING MULTIPLE DATA SETS

You have been tasked to use Power Query to merge multiple datasets together from different systems.

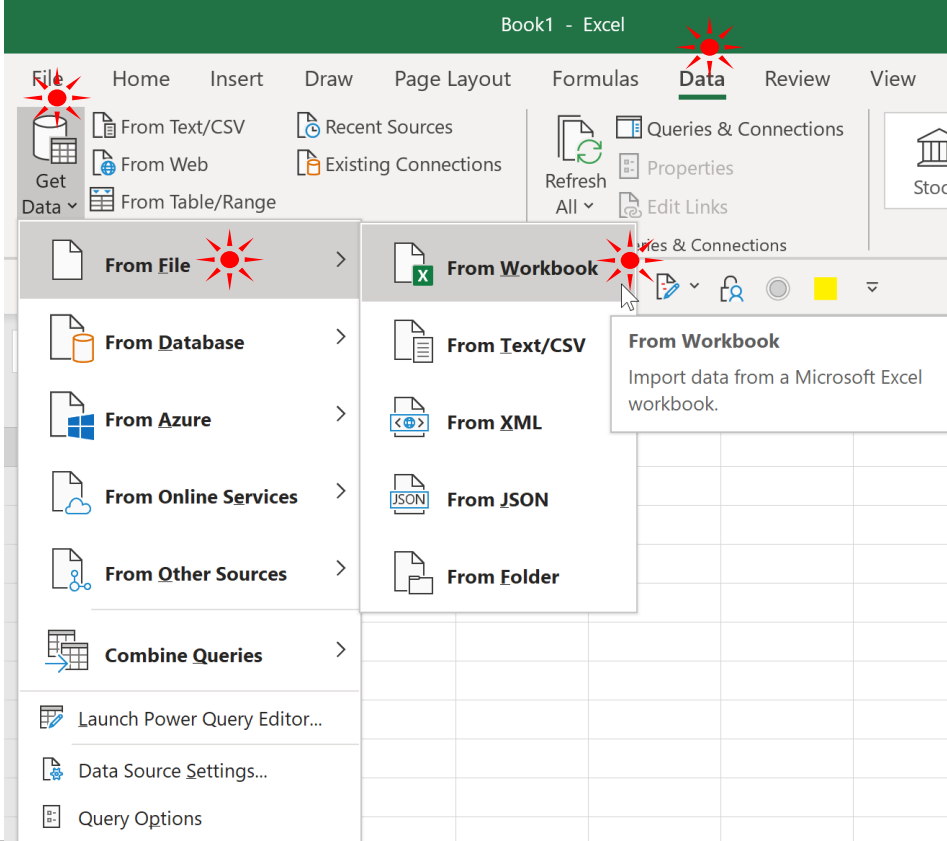
## MODULE REQUIREMENTS

- ▶ Pulling in multiple types of data into Power Query
- ▶ Using a merge queries
- ▶ Creating a final table with results from both datasets

HINTS

Watch both videos in the module first before attempting this lab.

STEP-BY-STEP INSTRUCTIONS

Click Steps	Screen Shots
<div>1. Create a new fresh Excel File</div> <div>2. Save it Transactions Final or another name of your choice.</div> <div>3. From on the Data tab, select Get Data &gt; From File &gt; From Workbook</div>	

Click Steps

Screen Shots

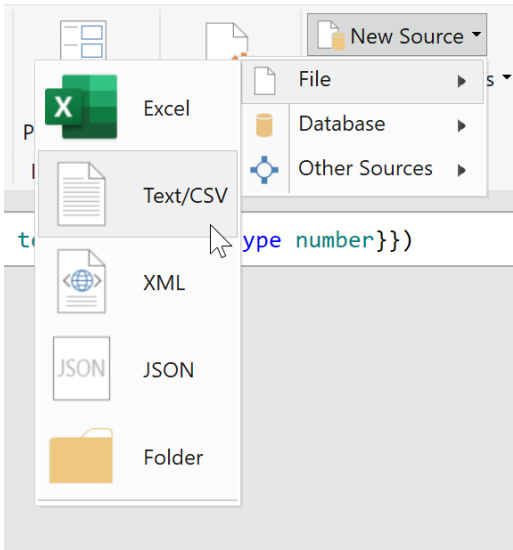
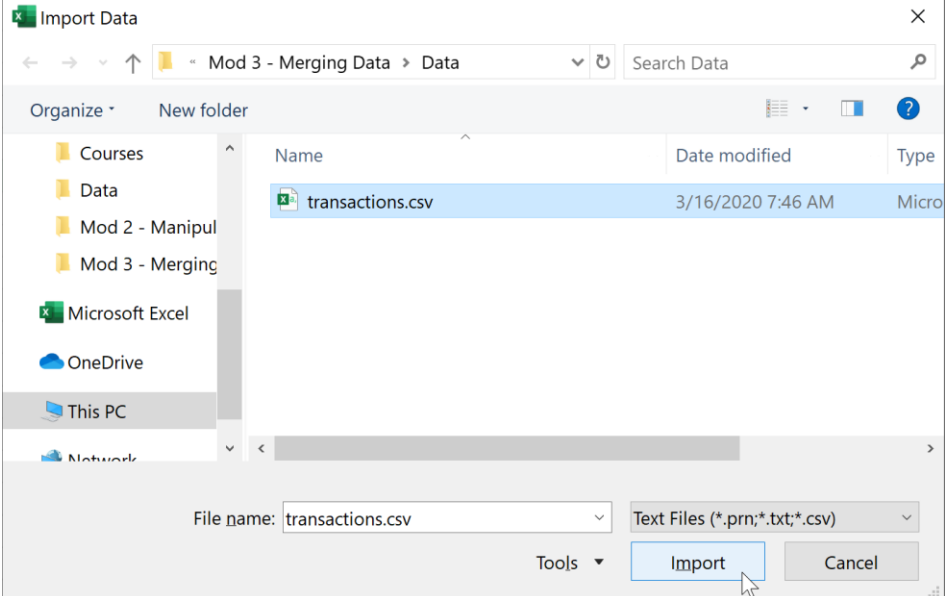
- From the class files, navigate to ....\Courses\Intro to Power Query\Mod 3 - Merging Data\Data in the Import Data file selection box.
- Select products worksheet.xlsx.
- Press Import.

The screenshot shows the 'Import Data' window in Excel. The left sidebar shows the file explorer with 'Data' selected. The main pane shows 'products worksheet.xlsx' selected. The 'File name' field contains 'products worksheet.xlsx' and the file type is 'Excel Files (\*.xl\*;\*.\*xlsx;\*.\*xlsm;\*.\*xls)'. The 'Import' button is highlighted with a mouse cursor.

- In the Navigator window, select the products tab worksheet.
- Then click Transform Data.

The screenshot shows the 'Navigator' window in Excel. The 'products' worksheet is selected under 'products worksheet.xlsx [1]'. The 'Transform Data' button is highlighted with a mouse cursor.

product_id	product_name	msrp
1	Pleated Dress	19.99
2	Chiffon Dress	24.99
3	Wide-cut Dress	24.99
4	Satin Wrap Dress	39.99
5	Crêped Jersey Dress	24.99
6	V-neck Camisole Top	24.99
7	Satin Top with Lace	24.99
8	V-neck Top	12.99
9	Cotton T-shirt	12.99
10	Ribbed Top	8.99
11	T-shirt with Printed Text	19.99
12	Jersey T-shirt	8.99
13	Airy Balloon-sleeved Blouse	24.99
14	V-neck Blouse	24.99
15	Long-sleeved Blouse	34.99
16	Blouse with Tie Belt	24.99
17	Knit Turtleneck Sweater	44.99
18	Oversized Sweater	24.99
19	Knit Sweater	44.99
20	Wrap-front Cardigan	24.99
21	Mock Turtleneck Mesh Top	19.99
22	Off-the-shoulder Sweater	34.99
23	Jacket	89.99

Click Steps	Screen Shots
<p>9. Wait until Power Query is finished loading.</p> <p>10. Now it's time to bring the associated CSV file.</p> <p>11. From on the Home tab, select New Source &gt; Text / CSV</p> <p>New Source can be found on the far right of the ribbon tab.</p>	
<p>12. When the Import Data dialog box opens, navigate to ... \Intro to Power Query \Mod 3 - Merging Data \Data from within the project files.</p> <p>13. Select transactions.csv</p> <p>14. Click Import.</p>	

Click Steps	Screen Shots																																																																																				
<p>15. Click OK to import the csv with no additional properties set.</p>	<div><div>transactions.csv</div><div><div>File Origin</div><div>1252: Western European (Windows)</div></div><div><div>Delimiter</div><div>Comma</div></div><div><div>Data Type Detection</div><div>Based on first 200 rows</div></div><div><table><thead><tr><th>date</th><th>time</th><th>product_id</th><th>qty</th></tr></thead><tbody><tr><td>9/20/2016</td><td>1:43:00 PM</td><td>12</td><td>5</td></tr><tr><td>5/10/2014</td><td>3:26:00 PM</td><td>55</td><td>9</td></tr><tr><td>6/14/2013</td><td>1:31:00 PM</td><td>22</td><td>1</td></tr><tr><td>11/28/2013</td><td>10:36:00 AM</td><td>40</td><td>2</td></tr><tr><td>12/23/2016</td><td>12:10:00 PM</td><td>50</td><td>3</td></tr><tr><td>6/15/2016</td><td>10:13:00 AM</td><td>2</td><td>1</td></tr><tr><td>6/25/2015</td><td>3:29:00 PM</td><td>47</td><td>6</td></tr><tr><td>10/23/2014</td><td>2:33:00 PM</td><td>51</td><td>9</td></tr><tr><td>5/26/2013</td><td>9:35:00 AM</td><td>31</td><td>9</td></tr><tr><td>11/16/2014</td><td>2:35:00 PM</td><td>48</td><td>3</td></tr><tr><td>1/10/2013</td><td>10:38:00 AM</td><td>26</td><td>6</td></tr><tr><td>1/5/2015</td><td>2:05:00 PM</td><td>7</td><td>9</td></tr><tr><td>3/8/2014</td><td>10:04:00 AM</td><td>27</td><td>6</td></tr><tr><td>8/19/2013</td><td>2:09:00 PM</td><td>48</td><td>6</td></tr><tr><td>12/25/2016</td><td>12:10:00 PM</td><td>53</td><td>8</td></tr><tr><td>2/21/2015</td><td>10:42:00 AM</td><td>8</td><td>10</td></tr><tr><td>2/26/2014</td><td>9:52:00 AM</td><td>44</td><td>8</td></tr><tr><td>5/24/2014</td><td>11:09:00 AM</td><td>25</td><td>5</td></tr><tr><td>8/30/2016</td><td>12:41:00 PM</td><td>15</td><td>4</td></tr><tr><td>9/24/2016</td><td>4:03:00 PM</td><td>12</td><td>1</td></tr></tbody></table><div><div>The data in the preview has been truncated due to size limits.</div></div><div><div>OK</div><div>Cancel</div></div></div></div>	date	time	product_id	qty	9/20/2016	1:43:00 PM	12	5	5/10/2014	3:26:00 PM	55	9	6/14/2013	1:31:00 PM	22	1	11/28/2013	10:36:00 AM	40	2	12/23/2016	12:10:00 PM	50	3	6/15/2016	10:13:00 AM	2	1	6/25/2015	3:29:00 PM	47	6	10/23/2014	2:33:00 PM	51	9	5/26/2013	9:35:00 AM	31	9	11/16/2014	2:35:00 PM	48	3	1/10/2013	10:38:00 AM	26	6	1/5/2015	2:05:00 PM	7	9	3/8/2014	10:04:00 AM	27	6	8/19/2013	2:09:00 PM	48	6	12/25/2016	12:10:00 PM	53	8	2/21/2015	10:42:00 AM	8	10	2/26/2014	9:52:00 AM	44	8	5/24/2014	11:09:00 AM	25	5	8/30/2016	12:41:00 PM	15	4	9/24/2016	4:03:00 PM	12	1
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<p>16. Now it's time to merge both datasets together.</p> <p>17. From on the Home tab, select the Merge Queries dropdown &gt; Merge Queries as New</p>	<div><div><div>Merge Queries</div><div>Merge Queries</div><div>Merge Queries as New</div><div>Combine</div></div><div>lers",{"date", type date}, {"time"</div><div><div>product_id</div><div>123</div><div>qty</div></div></div>																																																																																				

Click Steps

Screen Shots

18. In the merge dialog box, set the following properties:

- transactions in the top dropdown
- product\_id selected in the top table
- products selected in lower dropdown
- product\_id selected in the bottom table
- Join Kind is set to Left Outer...

19. Click OK

Merge

Select tables and matching columns to create a merged table.

transactions

date	time	product_id	qty
9/20/2016	1:43:00 PM	12	5
5/10/2014	3:26:00 PM	55	9
6/14/2013	1:31:00 PM	22	1
11/28/2013	10:36:00 AM	40	2
12/23/2016	12:10:00 PM	50	3

products

product_id	product_name	msrp
1	Pleated Dress	19.99
2	Chiffon Dress	24.99
3	Wide-cut Dress	24.99
4	Satin Wrap Dress	39.99
5	Crêped Jersey Dress	24.99

Join Kind

Left Outer (all from first, matching from second)

☐ Use fuzzy matching to perform the merge

> Fuzzy matching options

✓ The selection matches 34000 of 34000 rows from the first table.

OK Cancel

20. When the new table appears, immediately rename it to Final Table

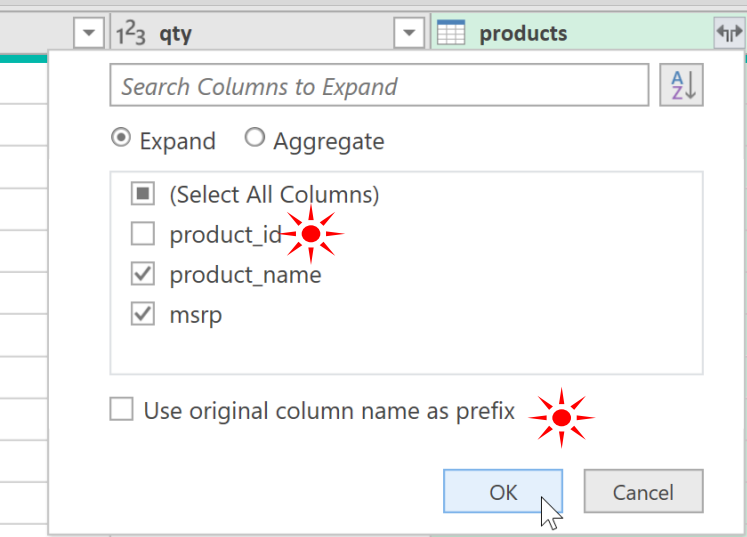
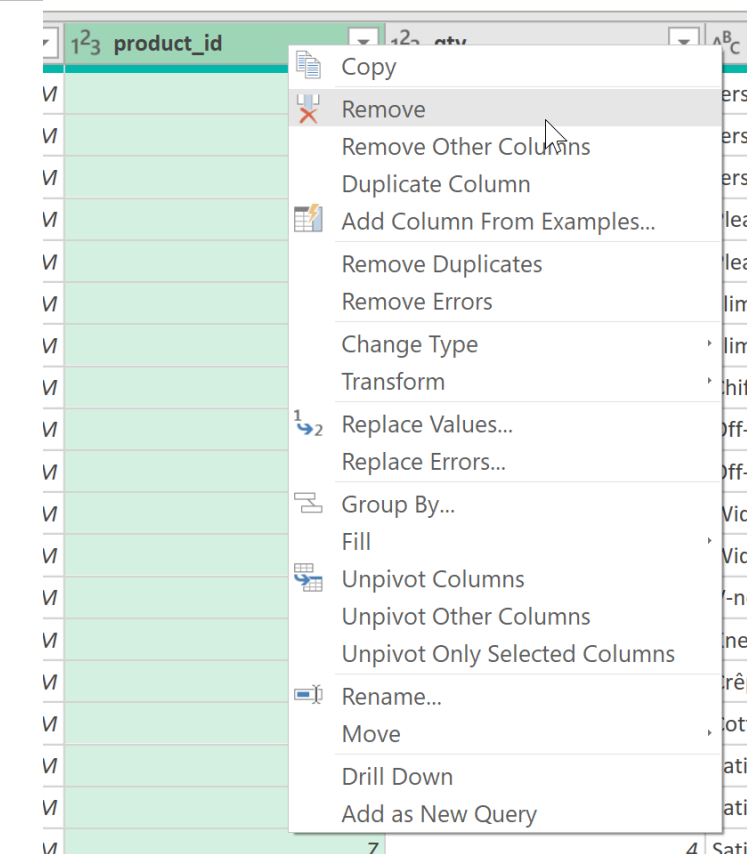
Query Settings

PROPERTIES

Name

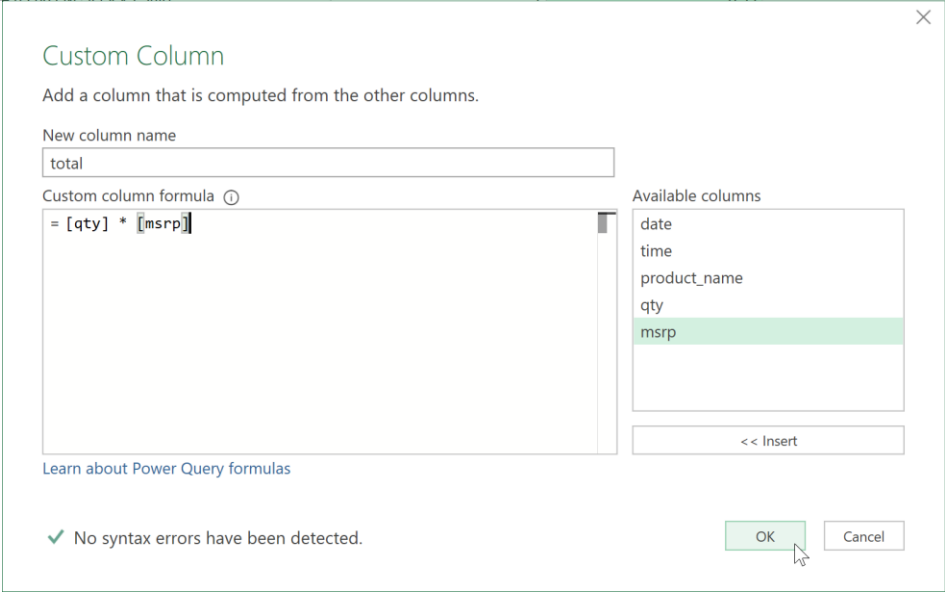
Final Table

All Properties

Click Steps	Screen Shots
<p>21. Click on the expansion icon to the right of the products header</p> <p>22. Uncheck product_id</p> <p>23. Uncheck Use original name as prefix</p> <p>24. Click OK</p>	 <p>The screenshot shows the 'Expand' dialog box in Power BI. The 'Search Columns to Expand' field is empty. The 'Expand' radio button is selected. The list of columns includes '(Select All Columns)', 'product_id', 'product_name', and 'msrp'. The 'product_id' checkbox is unchecked. The 'Use original column name as prefix' checkbox is also unchecked. The 'OK' button is highlighted with a red starburst.</p>
<p>25. Remove the product_id column by right-clicking the header and selecting Remove.</p>	 <p>The screenshot shows a data view in Power BI with a table containing columns 'product_id' and 'qty'. A right-click context menu is open over the 'product_id' header. The 'Remove' option is selected and highlighted with a red starburst. Other options in the menu include 'Copy', 'Remove Other Columns', 'Duplicate Column', 'Add Column From Examples...', 'Remove Duplicates', 'Remove Errors', 'Change Type', 'Transform', 'Replace Values...', 'Replace Errors...', 'Group By...', 'Fill', 'Unpivot Columns', 'Unpivot Other Columns', 'Unpivot Only Selected Columns', 'Rename...', 'Move', 'Drill Down', and 'Add as New Query'.</p>



Click Steps	Screen Shots																																																																																																									
<p>26. Switch qty and product_name by clicking and holding the qty header and then dragging it to the right.</p>	<div><div><div><div><div></div><div>Data Type: Whole Number ▾</div></div><div><div></div><div>Use First Row as Headers ▾</div></div><div><div></div><div>Group By ▾</div></div><div><div></div><div>Replace Values</div></div></div><div>Transform</div><div><div><div></div><div>Merge Queries ▾</div></div><div><div></div><div>Append Queries ▾</div></div><div><div></div><div>Combine Files</div></div></div><div>Combine</div><div><div><div></div><div>Manage Parameters ▾</div></div></div><div>Parameters</div><div><div><div></div><div>Data source settings</div></div></div><div>Data Sources</div><div><div><div></div><div>New Source ▾</div></div><div><div></div><div>Recent Sources ▾</div></div></div><div>New Query</div></div><div><div>expanded products",{"product_id"})</div><table><thead><tr><th></th><th>123 qty</th><th>A8C product_name</th><th>qty</th><th></th></tr></thead><tbody><tr><td>1:43:00 PM</td><td></td><td>5 Jersey T-shirt</td><td></td><td>8.99</td></tr><tr><td>4:03:00 PM</td><td></td><td>1 Jersey T-shirt</td><td></td><td>8.99</td></tr><tr><td>3:44:00 PM</td><td></td><td>9 Jersey T-shirt</td><td></td><td>8.99</td></tr><tr><td>11:49:00 AM</td><td></td><td>1 Pleated Dress</td><td></td><td>19.99</td></tr><tr><td>1:33:00 PM</td><td></td><td>3 Pleated Dress</td><td></td><td>19.99</td></tr><tr><td>3:26:00 PM</td><td></td><td>9 Slim Jeans</td><td></td><td>19.99</td></tr><tr><td>10:01:00 AM</td><td></td><td>2 Slim Jeans</td><td></td><td>19.99</td></tr><tr><td>10:13:00 AM</td><td></td><td>1 Chiffon Dress</td><td></td><td>24.99</td></tr><tr><td>1:31:00 PM</td><td></td><td>1 Off-the-shoulder Sweater</td><td></td><td>34.99</td></tr><tr><td>1:34:00 PM</td><td></td><td>6 Off-the-shoulder Sweater</td><td></td><td>34.99</td></tr><tr><td>9:32:00 AM</td><td></td><td>7 Wide-cut Dress</td><td></td><td>24.99</td></tr><tr><td>10:01:00 AM</td><td></td><td>6 Wide-cut Dress</td><td></td><td>24.99</td></tr><tr><td>10:36:00 AM</td><td></td><td>2 V-neck Cotton Sweater</td><td></td><td>19.99</td></tr><tr><td>12:10:00 PM</td><td></td><td>3 Knee-length Cotton Shorts</td><td></td><td>24.99</td></tr><tr><td>4:32:00 PM</td><td></td><td>9 Crêped Jersey Dress</td><td></td><td>24.99</td></tr><tr><td>3:29:00 PM</td><td></td><td>6 Cotton Piqué T-shirt</td><td></td><td>15.99</td></tr><tr><td>2:05:00 PM</td><td></td><td>9 Satin Top with Lace</td><td></td><td>24.99</td></tr><tr><td>2:56:00 PM</td><td></td><td>2 Satin Top with Lace</td><td></td><td>24.99</td></tr><tr><td>12:47:00 PM</td><td></td><td>4 Satin Top with Lace</td><td></td><td>24.99</td></tr><tr><td>2:33:00 PM</td><td></td><td>9 Sweatshorts with Side Stripes</td><td></td><td>19.99</td></tr></tbody></table></div></div>		123 qty	A8C product_name	qty		1:43:00 PM		5 Jersey T-shirt		8.99	4:03:00 PM		1 Jersey T-shirt		8.99	3:44:00 PM		9 Jersey T-shirt		8.99	11:49:00 AM		1 Pleated Dress		19.99	1:33:00 PM		3 Pleated Dress		19.99	3:26:00 PM		9 Slim Jeans		19.99	10:01:00 AM		2 Slim Jeans		19.99	10:13:00 AM		1 Chiffon Dress		24.99	1:31:00 PM		1 Off-the-shoulder Sweater		34.99	1:34:00 PM		6 Off-the-shoulder Sweater		34.99	9:32:00 AM		7 Wide-cut Dress		24.99	10:01:00 AM		6 Wide-cut Dress		24.99	10:36:00 AM		2 V-neck Cotton Sweater		19.99	12:10:00 PM		3 Knee-length Cotton Shorts		24.99	4:32:00 PM		9 Crêped Jersey Dress		24.99	3:29:00 PM		6 Cotton Piqué T-shirt		15.99	2:05:00 PM		9 Satin Top with Lace		24.99	2:56:00 PM		2 Satin Top with Lace		24.99	12:47:00 PM		4 Satin Top with Lace		24.99	2:33:00 PM		9 Sweatshorts with Side Stripes		19.99
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<p>27. Create a column that reflects the final sale price.</p> <p>28. From on the Add Column tab select Custom Column</p>	<div><div><div><div><div></div><div>😊 ▾</div><div>Final Table - Power Query Editor</div></div><div><div>File</div><div>Home</div><div>Transform</div><div>Add Column</div></div><div><div><div></div><div>Column From Examples ▾</div></div><div><div><div></div><div>Custom Column</div></div><div><div></div><div>Invoke Custom Function</div></div><div><div></div><div>Duplicate Column</div></div></div><div>General</div><div><div><div>Custom Column</div><div>Create a new column in this table, based on a custom formula.</div><div>transactions</div><div>Final Table</div></div><div><div></div><div></div></div><div><div><div></div><div>dat</div></div><div><div>1</div><div></div></div><div><div>2</div><div></div></div></div></div></div></div></div></div>																																																																																																									

Click Steps	Screen Shots
<p>29. In the Custom Column pop up type total in the New Column name field.</p> <p>30. Click into the custom column formula</p> <p>31. Type =</p> <p>32. Double-click the qty selection from Available columns. This will insert the field into the custom formula.</p> <p>33. Type *</p> <p>34. Double-click msrp to insert he field into the formula.</p> <p>35. Click OK.</p>	
<p>36. Select File &gt; Close &amp; Load To...</p> <p>37. Click Table and New Worksheet. Click OK.</p> <p>38. The updated table now appears on a new worksheet.</p>	