

Guided Project 6-3

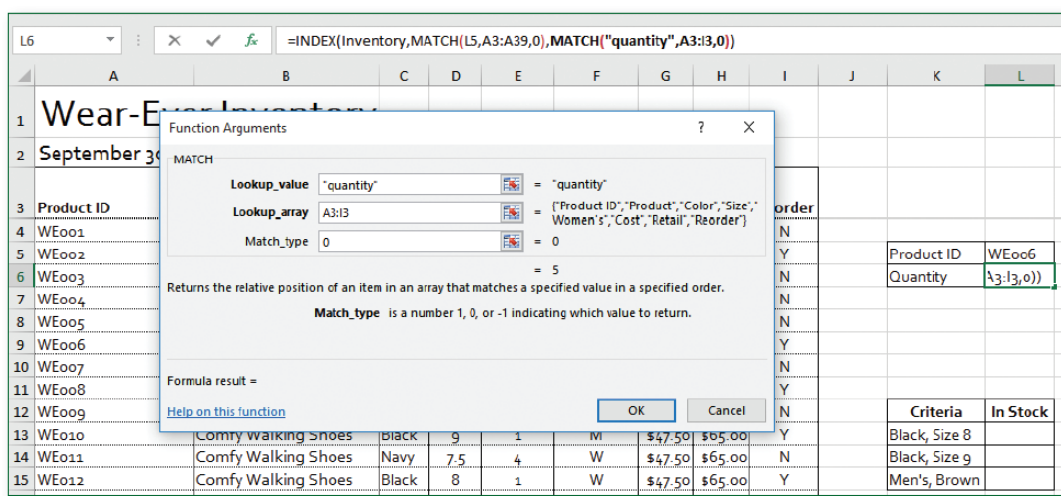
The Wear-Ever Shoes company maintains inventory data and customer satisfaction survey results in your workbook. You use Lookup & Reference, Database, and Logical functions to complete the data. You also use a Financial function to calculate depreciation and a Text function to enter email addresses.

Skills Covered in This Project

- Nest the INDEX and MATCH functions.
- Use SUMIFS from the Math & Trig category.
- Use DAVERAGE.
- Create an IFS formula.
- Use a Text function to concatenate text strings.
- Calculate depreciation with the DB function.

Step 1:
Download
start file

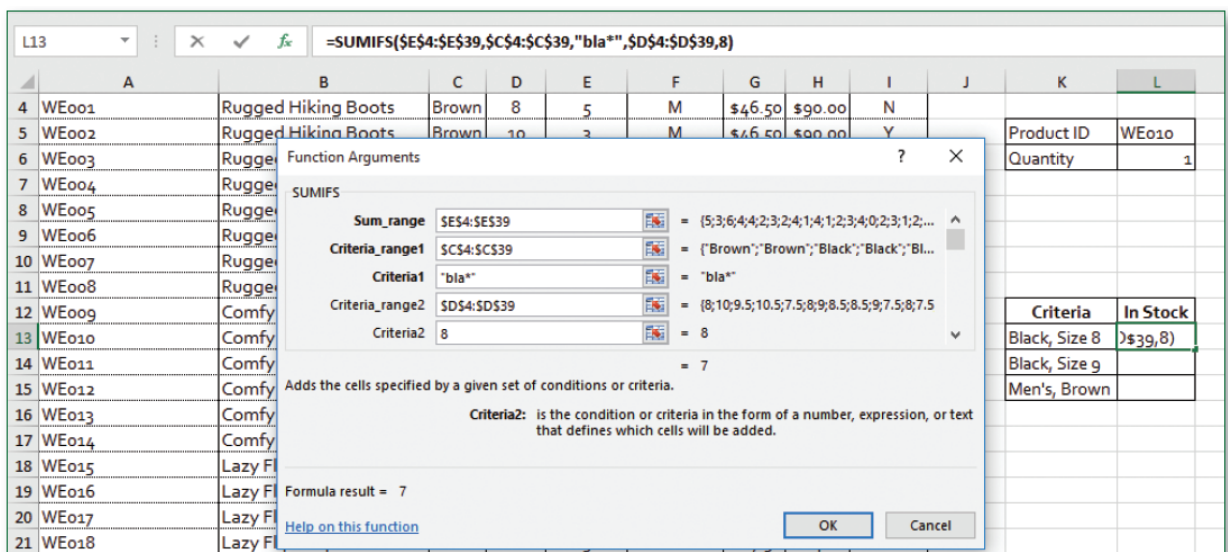
1. Open the **WearEverShoes-06** start file. Click the **Enable Editing** button. The file will be renamed automatically to include your name. Change the **project file** name if directed to do so by your instructor, and **save** it.
2. Click the **Inventory** sheet tab.
3. Select cells **A3:I39**, click the **Name** box, type **Inventory** as the range name, and press **Enter**.
4. Select cell **L5** and type **WE006**.
5. Create a nested function with **INDEX** and **MATCH** to display inventory for a product.
 - a. Select cell **L6**.
 - b. Click the **Lookup & Reference** button [*Formulas tab, Function Library group*] and choose **INDEX**. Select the first argument list **array**, **row_num**, **column_num** and click **OK**.
 - c. For the **Array** argument, type **Inventory**.
 - d. Click the **Row_num** box and click the **Name** box arrow. Choose **MATCH** in the list or choose **More Functions** to find and select **MATCH**. The **INDEX** function uses this **MATCH** statement to find the row.
 - e. Click cell **L5** for the **Lookup_value** argument.
 - f. Click the **Lookup_array** box and select cells **A3:A39**. This **MATCH** function finds the row that matches cell **L5** in column **A**.
 - g. Click the **Match_type** argument and type **0**.
 - h. Click **INDEX** in the *Formula bar*.
 - i. Click the **Column_num** argument, click the **Name** box arrow, and choose **MATCH** (Figure 6-91).



6-91 MATCH is nested twice

- j. Type **quantity** in the **Lookup_value** box.

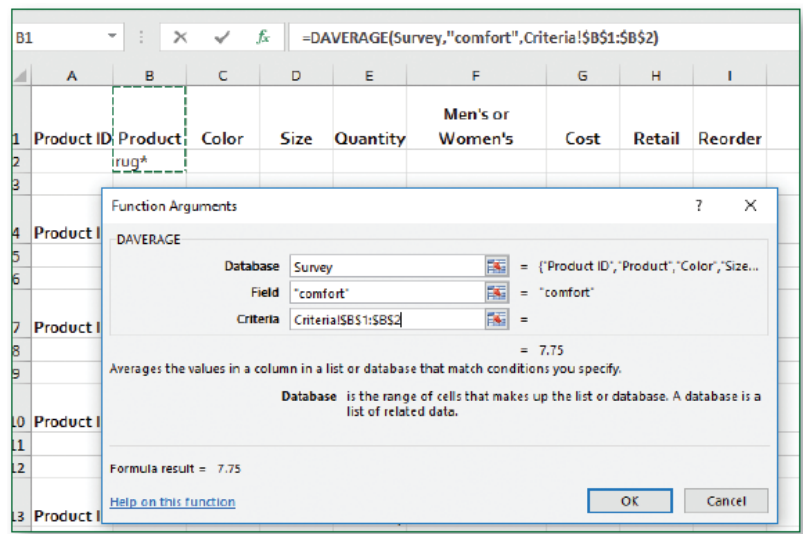
- k. Click the **Lookup_array** box and select cells **A3:I3**. This *MATCH* function finds the cell in the "Quantity" column after the row is located by the first *MATCH* function.
 - l. Click the **Match_type** box and type **0**. The formula is
`=INDEX(Inventory,MATCH(L5,A3:A39,0),MATCH("quantity",A3:I3,0)).`
 - m. Click **OK**. The result is 2.
 - n. Click cell **L5**, type **WE010**, and press **Enter**. The quantity is updated.
6. Use *SUMIFS* to calculate total pairs in stock by specific criteria.
 - a. Select cell **L13**.
 - b. Click the **Math & Trig** button [*Formulas* tab, *Function Library* group] and choose **SUMIFS**.
 - c. Select cells **E4:E39** for the *Sum_range* argument and press **F4** to add the absolute reference.
Important: Be sure that to add the absolute reference to both the start cell and the end cell in the range.
 - d. Click the **Criteria_range1** box, select cells **C4:C39**, the *Color* field, and press **F4**.
 - e. Click the **Criteria1** box and type **bla***.
 - f. Click the **Criteria_range2** box, select cells **D4:D39**, and press **F4**.
 - g. Click the **Criteria2** box and type **8**. This criteria specifies the number of black pairs, size 8 (Figure 6-92).



6-92 SUMIFS to calculate number by color and size

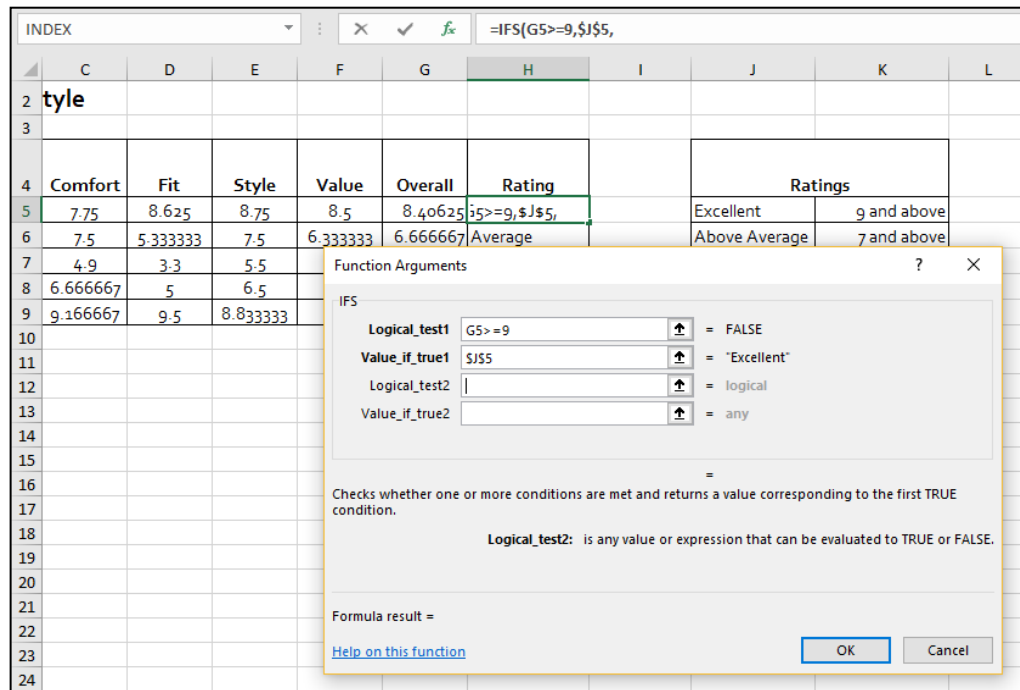
- h. Click **OK**. The result is 7.
 - i. Select cell **L14** and use *SUMIFS* to sum black, size 9 shoes in stock.
 - j. Select cell **L15** and use *SUMIFS* to sum men's brown shoes in stock.
7. Click the **Satisfaction Survey** worksheet tab and review the data.
8. Select cells **A4:H40** and name the range as **Survey**.
9. Use *DAVERAGE* to summarize customer survey data.
 - a. Click the **Average Ratings** worksheet tab and select cell **C5** to calculate an average comfort rating for the Rugged Hiking Boots.
 - b. Click the **Criteria** sheet tab.
 - c. Select cell **B2** and type **rug***.
 - d. Click the **Average Ratings** sheet tab and verify that cell **C5** is selected.
 - e. Click the **Insert Function** button [*Formulas* tab, *Function Library* group].

- f. Choose **Database** in the *Or select a category list*.
 - g. Select **DAVERAGE** and click **OK**.
 - h. Type **Survey** for the *Database* argument.
 - i. Click the **Field** box and type **comfort**.
 - j. Click the **Criteria** box, select the **Criteria** sheet tab, select cells **B1:B2**, and press **F4** (Figure 6-93).
 - k. Click **OK**. The result is 7.75.
 - l. Copy the formula in cell **C5** to cells **D5:F5**.
 - m. Select cell **D5** and edit the *Field* argument in the formula to show "fit."
 - n. Repeat step m for cells **E5:F5** to use the correct *Field* argument.
10. Use **DAVERAGE** to summarize survey data.
- a. Select the **Criteria** sheet tab.
 - b. Select cell **B5** and type **com*** to specify the Comfy Walking Shoes.
 - c. Click the **Average Ratings** sheet tab and select cell **C6**.
 - d. Click the **Recently Used** button [*Formulas* tab, *Function Library* group] and select **DAVERAGE**.
 - e. Type **Survey** for the *Database* argument.
 - f. Click the **Field** argument box and type **comfort**.
 - g. Click the **Criteria** box, select cells **B4:B5** on the **Criteria** sheet, and press **F4**.
 - h. Click **OK**. The result is 7.5.
 - i. Copy the formula in cell **C6** to cells **D6:F6**.
 - j. Edit the formulas in cells **D6:F6** to use the correct *Field* argument.
11. Build **DAVERAGE** functions for the remaining shoe styles on the **Average Ratings** sheet.
12. Select cells **G5:G9** on the **Average Ratings** sheet, click the **AutoSum** arrow [*Home* tab, *Editing* group], and choose **Average**.
13. Create an **IFS** function.
- a. Select cell **H5**, click the **Logical** button [*Formulas* tab, *Function Library* group], and choose **IFS**.
- IMPORTANT:** If you are using a version of **Excel** that does not have the **IFS** function available, create a formula using nested **IF** functions instead, where each *Value_if_false* argument is the next **IF** statement. The innermost nested **IF** statement should have a *Logical_test* argument of **G5>=9**, *Value_if_true* argument of **\$J\$5**, and *Value_if_false* argument of 0.
- b. Click the *Logical_test1* argument, select cell **G5**, and type **>=9**.



6-93 DAVERAGE for comfort rating

- c. Click the *Value_if_true1* box, click cell **J5**, and press **F4** (Figure 6-94).



6-94 First logical test and result for *IFS*

- d. Click the *Logical_test2* box, click cell **G5**, and type **>= 7**.

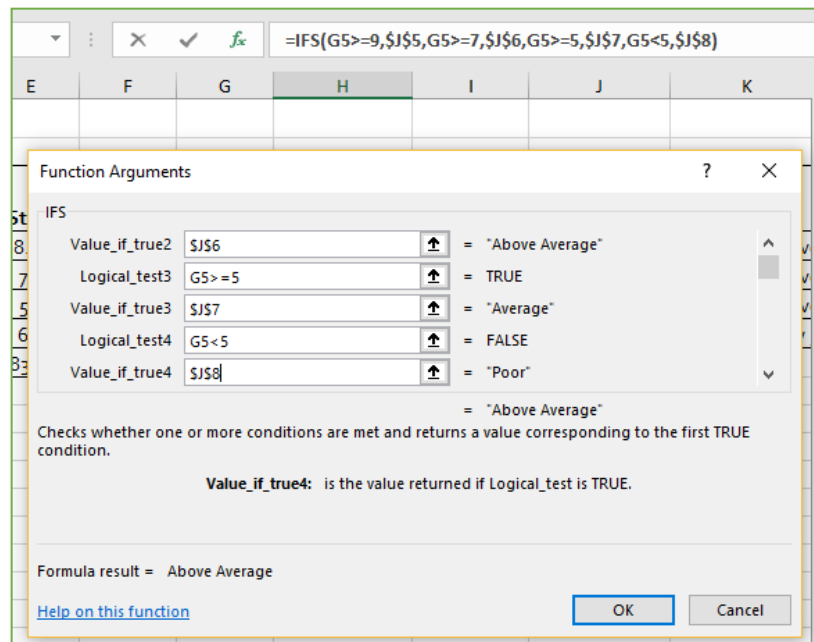
- e. Click the *Value_if_true2* box, click cell **J6**, and press **F4**.

- f. Click the *Logical_test3* box, click cell **G5**, and type **>= 5**.

- g. Click the down scroll arrow to reveal the *Value_if_true3* box, click cell **J7**, and press **F4**.

- h. Click the down scroll arrow to reveal the *Logical_test4* box, click cell **G5**, and type **< 5**.

- i. Click the down scroll arrow to reveal the *Value_if_true4* box, click cell **J8**, and press **F4** (Figure 6-95).



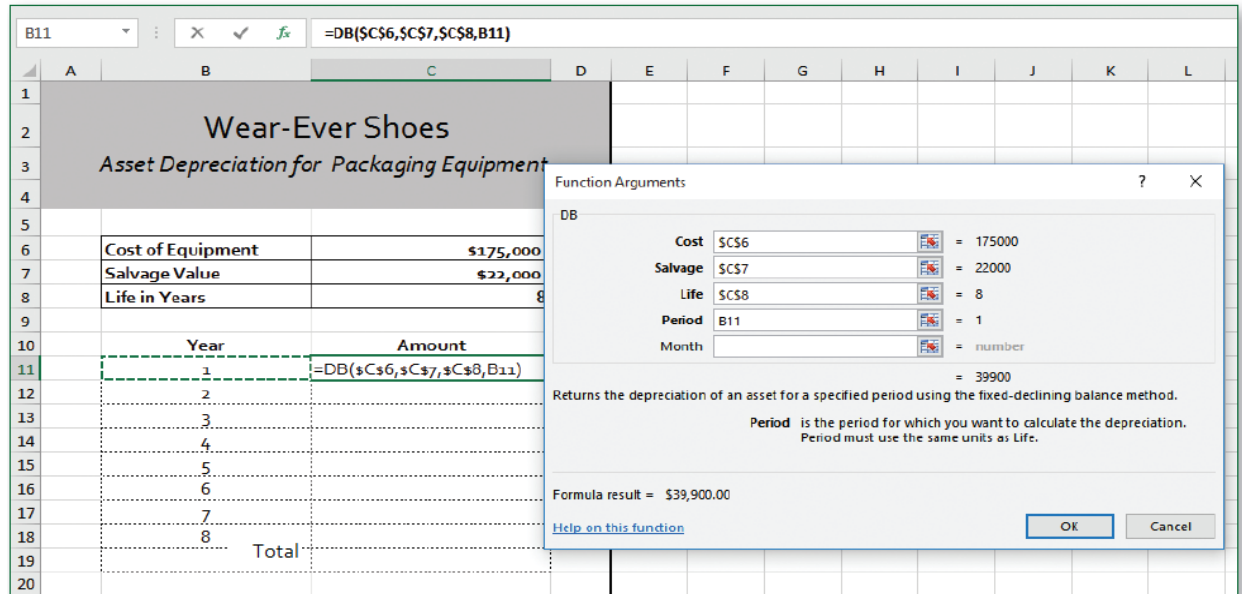
6-95 *IFS* function with four logical tests

The complete formula is:

=IFS(G5>=9,\$J\$5,G5>=7,\$J\$6,G5>=5,\$J\$7,G5<5,\$J\$8)

- j. Click OK and copy the formula to cells **H6:H9**.
k. Make column **H** **13.57 (100 pixels)** wide.

14. Calculate depreciation for an asset using a *Financial* function.
 - a. Click the **Depreciation** sheet tab and select cell **C11**. Depreciation is the decrease in the value of an asset as it ages. The **DB** function calculates the loss in value over a specified period of time at a fixed rate.
 - b. Click the Financial button [Formulas tab, Function Library group] and choose **DB**.
 - c. For the Cost argument, select cell **C6** and press **F4**.
 - d. Click the **Salvage** box, select cell **C7**, and press **F4**. This is the expected value of the equipment at the end of its life.
 - e. Click the **Life** box, select cell **C8**, and press **F4**. This is how long the equipment will be in use.
 - f. Click the **Period** box and select cell **B11**. The first formula calculates depreciation for the first year (Figure 6-96).

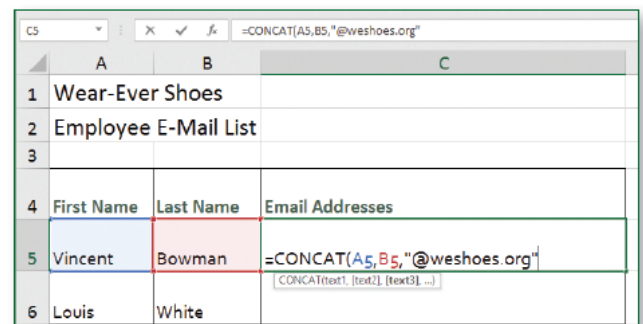


6-96 DB function to calculate asset depreciation

- g. Click **OK**.
 - h. Copy the formula in cell **C11** to cells **C12:C18**. Each year's depreciation is less than the previous year's.
 - i. Select cell **C19** and use **AutoSum**. The total depreciation plus the salvage value is approximately equal to the original cost. It is not exact due to rounding.
15. Use **CONCAT** to build an email address.

IMPORTANT: The **CONCAT** function is new for the 2016 version of **Excel**. If you are using Excel 2013, use the **CONCATENATE** function instead.

- a. Right-click any worksheet tab, choose **Unhide**, select **E-Mail**, and click **OK**.
- b. Select cell **C5**, type **=con**, and press **Tab**. The text1 argument is first.
- c. Select cell **A5** and type a comma (,) to move to the text2 argument.
- d. Select cell **B5** and type a comma (,) to move to the text3 argument.
- e. Type **"@weshoes.org"** including the quotation marks (Figure 6-97).
- f. Type the closing parenthesis **)** and press **Enter**.
- g. Copy the formula in cell **C5** to cells **C6:C8**.



6-97 CONCAT references and typed data

Step 2:
Upload &
Save

Step 3:
Grade my
Project

16. Save and close the workbook (Figure 6-98).

17. Upload and save your project file.

18. Submit project for grading

Wear-Ever Inventory

September 30

Product ID	Product	Color	Size	Quantity	Men's or Women's	Cost	Retail	Reorder
WE001	Rugged Hiking Boots	Brown	8	5	M	\$46.00	\$90.00	N
WE002	Rugged Hiking Boots	Brown	10	5	M	\$46.00	\$90.00	Y
WE003	Rugged Hiking Boots	Black	8.5	5	M	\$46.00	\$90.00	N
WE004	Rugged Hiking Boots	Black	10.5	5	M	\$46.00	\$90.00	N
WE005	Rugged Hiking Boots	Black	7.5	4	W	\$53.00	\$95.00	N
WE006	Rugged Hiking Boots	Black	8	2	W	\$53.00	\$95.00	N
WE007	Rugged Hiking Boots	Brown	9	2	W	\$53.00	\$95.00	N
WE008	Rugged Hiking Boots	Brown	9.5	2	W	\$53.00	\$95.00	Y
WE009	Comfy Walking Shoes	Brown	8.5	4	M	\$47.50	\$85.00	N
WE010	Comfy Walking Shoes	Black	9	3	M	\$47.50	\$85.00	Y
WE011	Comfy Walking Shoes	Navy	7.5	4	W	\$47.50	\$85.00	N
WE012	Comfy Walking Shoes	Black	8	3	W	\$47.50	\$85.00	Y
WE013	Comfy Walking Shoes	Tan	7.5	2	W	\$47.50	\$85.00	N
WE014	Comfy Walking Shoes	Brown	8.5	2	W	\$51.00	\$94.00	Y
WE015	Comfy Walking Shoes	Pink	6	3	W	\$7.00	\$10.00	Y
WE016	Lazy Flip-Flops	Pink	7	5	W	\$7.00	\$10.00	N
WE017	Lazy Flip-Flops	Pink	8	2	W	\$7.00	\$10.00	Y
WE018	Lazy Flip-Flops	White	6	2	W	\$7.00	\$10.00	N
WE019	Lazy Flip-Flops	White	7	2	W	\$7.00	\$10.00	N
WE020	Lazy Flip-Flops	White	8	2	W	\$7.00	\$10.00	Y
WE021	Lazy Flip-Flops	Brown	8	2	M	\$7.00	\$10.00	Y
WE022	Lazy Flip-Flops	Brown	9	5	M	\$7.00	\$10.00	N
WE023	Lazy Flip-Flops	Brown	10	5	M	\$7.00	\$10.00	Y
WE024	Lazy Flip-Flops	Brown	11	2	M	\$7.00	\$10.00	Y
WE025	Seriously Tall Boots	Black	6	5	W	\$40.00	\$80.00	Y
WE026	Seriously Tall Boots	Black	6.5	5	W	\$40.00	\$80.00	Y
WE027	Seriously Tall Boots	Black	7	5	W	\$40.00	\$80.00	Y
WE028	Seriously Tall Boots	Black	7.5	5	W	\$40.00	\$80.00	Y
WE029	Seriously Tall Boots	Black	8	2	W	\$40.00	\$80.00	Y

Product ID	WE010
Quantity	5

Criteria	In Stock
Black, Size 8	7
Black, Size 9	4
Men's, Brown	33

Wear-Ever Shoes

Average Ratings by Shoe Style

Product ID	Product	Comfort	Fit	Style	Value	Overall	Rating
WE001	Rugged Hiking Boots	7.5	8.5	8.5	8.5	8.4000	Above Average
WE009	Comfy Walking Shoes	7.5	8.0000	7.5	8.0000	6.6666	Average
WE015	Lazy Flip-Flops	4.5	5.5	5.5	5.5	4.5000	Poor
WE025	Seriously Tall Boots	6.6666	5	6.5	8.5	6.6666	Average
WE029	Glide Running Shoes	9.0000	9.5	8.0000	9	9.1333	Excellent

Ratings	
Excellent	Between 8 and 9
Average	Between 6 and 7
Poor	Below 5

Wear-Ever Shoes Employee E-Mail List

First Name	Last Name	Email Addresses
Vincent	Bowman	VincentBowman@weshoes.org
Louis	White	LouisWhite@weshoes.org
Patricia	Lynwood	PatriciaLynwood@weshoes.org
Drew	Cronin	DrewCronin@weshoes.org

Wear-Ever Shoes Asset Depreciation for Packaging Equipment

Cost of Equipment	\$175,000
Salvage Value	\$22,000
Life in Years	8

Year	Amount
1	\$39,900.00
2	\$30,802.80
3	\$23,779.76
4	\$18,357.98
5	\$14,172.35
6	\$10,941.06
7	\$8,446.50
8	\$6,520.70
	\$152,921.15

6-98 Completed worksheets for Excel 6-3