

Concepts Review

True/False Questions

Each of the following statements is either true or false. Indicate your choice by circling T or F.

- T F 1. A template opens as a new workbook with the template name and a letter.
- T F 2. You can apply one-, two-, and three-color scales to a range.
- T F 3. The multiplication symbol in a formula is /.
- T F 4. To multiply by a percent, you must key the decimal equivalent of the percent.
- T F 5. You can control the order of precedence in a formula with parentheses.
- T F 6. Division is calculated before addition in a formula without parentheses.
- T F 7. Column widths adjust automatically when you display formulas.
- T F 8. An absolute reference does not adjust when the formula is copied to another cell.

Short Answer Questions

Write the correct answer in the space provided.

1. What is the keyboard shortcut to display or hide formulas?

2. Which page orientation is taller than it is wide?

3. How would the cell reference **\$F\$3** be described?

4. What are the four arithmetic symbols that can be used in a formula?

5. What type of operation is being performed in the formula = A4*B4?

6. What command option allows you to print a worksheet on a smaller piece of paper?

7. What term describes a model workbook used as the basis for other workbooks?

8. How can you start Edit mode to edit a formula?

Critical Thinking

Answer these questions on a separate page. There are no right or wrong answers. Support your answers with examples from your own experience, if possible.


1. Why is it helpful to adjust the Zoom percentage while working? How is this different from scaling the worksheet?
2. Why is it necessary to have an absolute cell reference in some formulas? Why can't all formulas use relative references?

Skills Review

Exercise 5-21

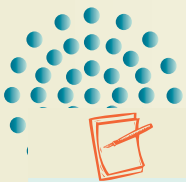
Use a template to create a new workbook. Build addition and subtraction formulas.



1. Create a workbook from a template by following these steps:
 - a. Click the Microsoft Office Button  and choose **New**.
 - b. Click **My templates**.
 - c. Choose **ChkBk** and click **OK**.


2. In cell A4, key today's date in mm/dd/yy format. Key tomorrow's date in cell A5 in the same format. Adjust the column width if necessary.

3. Press **[F12]** and save the workbook as **[your initials]5-21** in your Lesson 5 folder.




NOTE

Copy the **ChkBk** template file into the appropriate folder for your computer before starting this exercise.



TIP

The formula subtracts amounts in column D and adds amounts in column E.



NOTE

Key dates in this style: mm/dd/yy

4. Build addition and subtraction formulas by following these steps:
 - a. Click cell F5. Key = to start a formula.
 - b. Click cell F4 and key - for subtraction.
 - c. Click cell D5 and key + for addition.
 - d. Click cell E5. Press **[Enter]** and ignore any error triangles.
5. Copy the formula in cell F5 to cells F6:F15. The results are all the same at this point.
6. Key the following information, starting in cell A6.

Figure 5-16


	Date	Check #	Payee	Credit Amount	Deposit
6	[2 days from today]	1002	Helpful Hand Computers	1250	
7	[3 days from today]				2500
8	[4 days from today]	1003	Greenberg and Whitefield	575	
9	[5 days from today]	1004	[your school name]	435	
10	[6 days from today]				1200

7. Hide rows 11 through 15.
8. Add a footer with your name at the left and the filename at the right.
9. In Page Layout View, adjust the margins if necessary to fit the worksheet on a single portrait page.
10. Press **[Ctrl]+[Home]**. Prepare and submit your work. Save and close the workbook.

Exercise 5-22

Build multiplication and division formulas. Set the order of precedence.

1. Open **TasteTest**. Save the workbook as *[your initials]5-22* in your Lesson 5 folder.
2. Build a multiplication formula by following these steps:
 - a. Click cell F4 and key =. Click cell D4. This is a taste-tester's regular hourly pay rate.
 - b. Key +. Click cell E4. The tester receives a holiday rate increase, added to the regular pay rate.
 - c. Key *. Click cell C4. The hourly rate is multiplied by the number of hours worked to determine pay.
 - d. Press **[Enter]**.



NOTE

This pay formula is not correct. You will correct it later.

3. Copy the formula in cell F4 to cells F5:F8.
4. Build a division formula by following these steps:
 - a. Click cell H4 and key **=**. Click cell F4. The pay is divided by the number of items tested.
 - b. Key **/**. Click cell G4. Press **[Enter]**.

**REVIEW**

Multiplication is calculated before addition.

- c. Copy the formula to cells H5:H8.
5. Set the order of precedence by following these steps:
 - a. Click cell F4. This formula should first add cells D4 and E4 and then multiply that sum by cell C4.
 - b. Press **[F2]**. Click between **=** and **D**.
 - c. Key **(** and click before *****. Key **)** and press **[Enter]**.
 - d. Recopy the formula in cell F4 to cells F5:F8. Column H is recalculated.

**REVIEW**


Use Center Across Selection to center multiple rows over data.

6. Apply the Accounting format to cells D4:F8 and cells H4:H8.
7. Apply bold to cells A3:H3 and use Wrap Text. Center-align these labels. Make row 3 **45.00 (60 pixels)** tall.
8. Make column A **13.57 (100 pixels)** wide. AutoFit the other columns.
9. Center the labels in rows 1:2 over the worksheet data. Apply a medium tint of one of the accent colors to these cells and **Outside Borders**.
10. Select cells A9:H9 and apply a **Bottom Border**. Make this row **7.50 (10 pixels)** tall. Apply a **Bottom Border** to the labels in row 3 and set row 4 to a height of **20.25 (27 pixels)**.
11. Add a header with your name at the left, the filename in the center, and the date at the right. Use a left margin that allows the sheet to fit on one portrait page and makes the data appear to be horizontally centered.
12. Press **[Ctrl]+[Home]**. Prepare and submit your work. Save and close the workbook.

Exercise 5-23

Build formulas. Use an absolute reference.



1. Open **InsClaims**. Save it as **[your initials]5-23** in your Lesson 5 folder.
2. Right-click the row 21 heading and choose **Insert**. Click the Insert Options button  and choose **Format Same as Below**. A row without fill is inserted.
3. Insert two more rows without fill so that there are four empty rows above the row with solid black fill.
4. In cell B22, key **Total Number of Claims** and make it bold. If Excel copies the fill used in the rows, set the cell to use **No Fill**.
5. Build formulas by following these steps:
 - a. Click cell C22. Key **=** to start the formula.
 - b. Click cell C7 and click **+** to build an addition formula.

- c. Click C10 and click **+** to continue.
- d. Continue by adding each cell in column C with a value. When all cells are listed, press **Enter**.
6. Create similar formulas in cells D22 and E22. Center-align the results.
7. In cell B23, key **Total Processing Cost**. In cell B24, key **Single Claim Processing**. Make these labels bold.
8. In cell C24, key **15.45** and format it as Accounting.
9. Use an absolute reference in a formula by following these steps:
 - a. Click cell C23. Key **=** to start the formula.
 - b. Click C24 and press **F4** to make it absolute.
 - c. Key ***** and click cell C22. Press **Ctrl+Enter**.
10. Copy this formula to cells D23:E23.
11. Select all cells with currency values and apply **Currency** format from the Format Cells dialog box to show the dollar sign (\$) next to the first digit.
 12. Add a footer with your name at the left, the sheet name and the filename in the center, and the date at the right. Adjust the margins to fit the sheet to a single page.
 13. Press **Ctrl+Home**. Prepare and submit your work. Save and close the workbook.

**TIP**

A dollar sign that is next to the first digit is known as a “floating” symbol.



Exercise 5-24

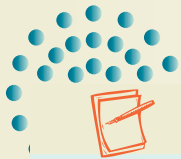
Use relative, absolute, and mixed references. Change page orientation and margins. Display formulas. Save a Web page.

1. Open **Henderson** and save it as *[your initials]5-24* in your Lesson 5 folder. Change to the **Opulent** document theme.
2. Click cell G3 and click after the **m** in **Cream** in the formula. Press **Alt+Enter** and then press **Enter**. Adjust the column width to show **Ice Cream** on one line and **Cost** on the second.
3. Center the labels in row 3.
4. Key the values shown below.

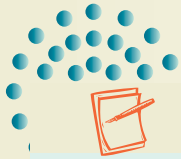
	Friday	Saturday	Sunday
4 One scoop	100	150	125
5 Two scoops	155	175	135
6 Three scoops	70	85	55



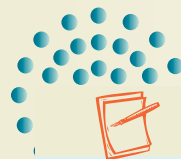
5. Use relative references by following these steps:
 - a. Click cell B7 and click the AutoSum button .
 - b. Copy the formula to cells B7:G7.
 - c. Click cell E4 and click the AutoSum button .
 - d. Copy the formula to cell E5:E6.

**NOTE**

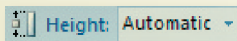
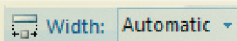
The first formula determines the total costs of the cones.



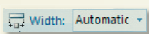
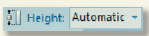

**NOTE**

The formula in column G determines the ice cream cost.



**NOTE**

To AutoFit a range of columns, double-click the right border of the last or rightmost column.



6. Use absolute references by following these steps:
 - a. Click cell F4 and key **=** to start a formula.
 - b. Click cell E4 and key ***** to multiply.
 - c. Click cell B10 and press **[F4]**. Press **[Ctrl]+[Enter]**.
 - d. Copy this formula to cells F5:F6.
 7. Use mixed references by following these steps:
 - a. Click cell G4 and key **=** to start.
 - b. Click cell E4 and key ***** to multiply.
 - c. Click cell B11 and press **[F4]** three times to show **\$B11**. Press **[Ctrl]+[Enter]**.
 - d. Copy this formula to cells G5:G6.
 8. In cell E9, key **Grand Total** and make it bold. In cell G9, create a formula to add the total cone and ice cream costs. Copy formatting as needed.
 9. Change the page orientation and margins by following these steps:
 - a. Click the **Page Layout** tab.
 - b. In the **Page Setup** group, click the Page Orientation button . Choose **Landscape**.
 - c. In the **Page Setup** group, click the Margins button . Choose **Custom Margins**.
 - d. Double-click in the **Left** box and key **2.5**. Double-click in the **Top** box and key **2**. Click **Print Preview**.
 - e. Close Print Preview.
 10. Add a footer.
 11. Display formulas by following these steps:
 - a. Right-click the **Sheet1** tab and choose **Move or Copy**.
 - b. Click to select **Create a copy**. Click **OK**.
 - c. Rename the copied sheet **Formulas**. Press **[Ctrl]+[-]**.
 - d. Click the column A heading. Scroll the worksheet, hold down **[Shift]**, and click the column G heading. Double-click the border between the column headings for columns G and H.
 - e. Click the **Page Layout** tab.
 - f. In the **Scale to Fit** group, click the arrow for the Width button . Choose **1 page**.
 - g. In the **Scale to Fit** group, click the arrow for the Height button . Choose **1 page**.
12. Add a background by following these steps:
 - a. Right-click the **Sheet1** tab and choose **Move or Copy**. In the **Before sheet** list, choose **Formulas**. Click to select **Create a copy**. Click **OK**.
 - b. Rename the copied sheet **Background**.
 - c. Click the **Page Layout** tab. In the **Page Setup** group, click the Background button .
 - d. Navigate to the folder with the **KKBack** file. Click to select the file and click **Insert**.



- e. Press **Ctrl**+**Home**. Delete **Sheet2** and **Sheet3**.
 - f. Click the Save button  to resave your workbook.
13. Save the workbook as a Web page by following these steps:
- a. Press **F12**. Click the arrow for **Save as type** and choose **Web Page**.
 - b. Set the **Save in** folder to your Lesson 5 folder.
 - c. In the **Save** area, choose **Entire Workbook**.
 - d. Click **Change Title**. Key **Henderson Costs** and click **OK**.
 - e. Name the file **[your initials]5-24**. Click **Save**. Choose **Yes** in the message box about incompatible formats.
 - f. Close the workbook.
 - g. Start your Web browser and maximize the window.
 - h. Press **Ctrl**+**O**. Click **Browse** and navigate to your folder. Find and click **[your initials]5-24** and click **Open**. Click **OK**.
 - i. Look for the title and at each of the sheets in the browser.
 - j. Click the Close button  to close the browser.
14. Prepare and submit your work.

**TIP**

You can use the same filename for the workbook and the Web page because they use different extensions.



Lesson Applications

Exercise 5-25

Create a workbook from a template. Build addition and subtraction formulas.



TIP

Check the Recently Used Templates list in the New Workbook dialog box. Double-click the filename if it is listed.



REVIEW

Select cells in a row, key data, and press **Enter** to move left to right from cell to cell.



NOTE

Negative numbers are shown in parentheses in this workbook. A negative number means the sales rep spent more money than budgeted.



NOTE

Unless your instructor tells you otherwise, include your name, the sheet name, the filename, and the date in a header/footer.

- Use the **KlassyKow** template as the basis for a workbook. Save the new workbook as *[your initials]5-25*.
- Edit the label in cell B3 to show the current month.
- Edit cells A6, A11, A16, and A21 to show the date of each Friday in the current month. If the month has a fifth Friday, do not include it.
- In cells B9:D9, key the following expenses:

1300	1000	895
-------------	-------------	------------
- Key actual expenses for the weeks as follows:

Second week	1600	900	750
Third week	1000	1300	850
Fourth week	1200	2000	500
- In cell B10, subtract the actual expense from the budgeted amount. Copy the formula to cells C10:D10 and then to the appropriate cells in rows 15, 20, and 25.
- In cell B27, add the budget amounts for Kim Tomasaki. Copy the formula for the other salespeople.
- In row 28, copy or create formulas to add the actual expense amounts for the salespeople. In row 29, calculate the differences.
- Select cells E27:E29 and click the AutoSum button . Widen the column to show the data.
- Add a footer. Prepare and submit your work. Save and close the workbook.

Exercise 5-26

Use a mixed reference. Change page orientation and scaling.

- Open **DrinkSize** and save it as *[your initials]5-26* in your folder.
- Copy/paste cells A1:H11 to cells A23:H33. Compare and fix row heights. Delete the unit values for the states in rows 28:32.

3. In cell D28, multiply the item count for California by the price of a 16-ounce soda, using a mixed reference so that you can copy this formula for the other states and then for the other rows.
4. Format these results as Currency with two decimals and a dollar sign (from the Format Cells dialog box). Adjust column widths. Change the label to **Dollar Sales for June**.
5. In cells E15:E19, use a formula to calculate the total dollar sales for each beverage. Use the same currency format as other values on the sheet.
6. Use a two-color scale for cells E15:E19 that shows a darker shade for the largest values. Edit the rule to show a color that coordinates with the existing sheet.
7. Change the page orientation to landscape. Set the scaling to print the worksheet at **90%** of normal size.
8. Add a header.
9. Make a copy of the worksheet and name the tab **Formulas**. Choose a blue color for the tab to match the font.
10. Display the formulas and fit the columns. Scale the worksheet to **75%**.
11. Prepare and submit your work. Save and close the workbook.

Exercise 5-27

Use order of precedence. Change page layout options. Print formulas.

1. Open **ICOrder** and save it as *[your initials]5-27* in your folder.
2. Center the two main labels across columns A:C.
3. Insert a row at row 1 and make it **7.50 (10 pixels)** tall. Apply a dash-dot-dash-dot top border to this row up to column C.
4. Apply the same border to the bottom of row 3. Apply a solid vertical border to the right edge of cells A5:A12 and cells B5:B12.



TIP


You can use any combination of pointing, clicking, or keying to complete a formula.

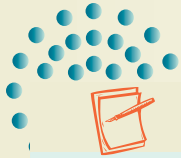


TIP

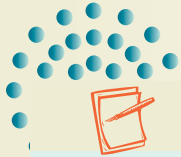
Key sample data to test your formulas.



5. Apply **White, Background 1, Darker 25%** fill to cell C16 with a single top and double bottom solid border.
6. In cell C14, create a formula to calculate a subtotal by multiplying the quantity by the price for each item. In cell C15, create a formula to calculate the sales tax. Finally, in cell C16, create the formula to calculate the total amount due.
7. Select cells A1:C16 and press **Ctrl+C** to copy. Click cell E1 and press **Ctrl+V** to paste. Right-click the Paste Options button  and choose **Keep Source Column Widths**.

**NOTE**

The Footer margin is on the Margins tab of the Page Setup dialog box.

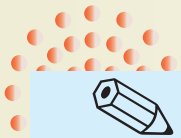
**NOTE**

Choose a print range in the Print dialog box.

8. Copy and paste cells A1:G16 to start in cell A18 so that there are four copies of the order form on your worksheet. Check for discrepancies in row height and make adjustments.
9. Change the page orientation to landscape. Scale the worksheet to 95% and set the top and bottom margins at .5 inches and the left margin at 1 inch. Change the footer margin to .35 inches.
10. Add a footer.
11. Make a copy of the worksheet and name it **Formulas**. Display the formulas. Size the columns to show the complete formulas. Set 75% scaling and print only the first page.
12. Prepare and submit your work. Save and close the workbook.

Exercise 5-28 ♦ Challenge Yourself

Use order of precedence. Print formulas.

**TIP**

A 4.5% tax rate makes the final cost 104.5% of the pre-tax total. Correct the first occurrence of the formula and copy it to the other locations.

1. Open **OrderForm**. Save it as *[your initials]5-28* in your folder.
2. The **Amount Due** formula calculates the total amount due by multiplying quantity by price, summing these results, and multiplying by 104.5%, the tax rate. Review and correct the formula.
3. Add a header.
4. Make a copy of the worksheet and name it **Formulas**. Hide all columns except those with formulas.
5. Prepare and submit your work. Save and close the workbook.

On Your Own

In these exercises you work on your own, as you would in a real-life work environment. Use the skills you've learned to accomplish the task—and be creative.

Exercise 5-29

Open **MultTable** and edit it to build a division table. Apply borders and/or fill to make the worksheet easy to read. Add a header or footer. Save the workbook as *[your initials]5-29* in your Lesson 5 folder. Set the page for

landscape orientation on one page. Make a copy of the sheet with formulas. Prepare and submit your work. Save and close the workbook.

Exercise 5-30

Create a new workbook and save it as *[your initials]5-30* in your folder. In cell A1, key **Tip Calculator**. In cell B2, key **10%**; in cell C2, **15%**; in cell D2, **18%**; and in cell E2, **20%**. Starting in cell A3, create a series with a \$5 interval that goes from \$10 to \$100. Using mixed references, create and copy formulas to determine the tip based on the sales amount and a tip percentage. Show two decimal places for the results. Apply formatting, borders, and fill for an attractive appearance. Prepare a formulas sheet. Prepare and submit your work. Save the workbook and close it.

Exercise 5-31

Develop a worksheet that tracks the number of e-mail and instant messages you receive per day. Build a date series in column A for a four-week period. In column B, key a value to show the number of messages with some variety of numbers. Make all data bold. Apply a three-color scale that uses a dark color for the smallest value. Add a header or footer. Save your workbook as *[your initials]5-31*. Prepare and submit your work. Save and close the workbook.