For an introduction to Office and instruction about how to perform basic tasks in Office programs, read the Office and Windows chapter at the beginning of this book, where you can learn how to run a program, use the ribbon, save a file, open a file, exit a program, use Help, and much more.

Entering the Titles and Numbers into the Worksheet

The first step in creating the worksheet is to enter the titles and numbers into the worksheet. The following sets of steps enter the worksheet title and subtitle and then the salary report data shown in Table 2–1 on page EX 71.

To Enter the Worksheet Title and Subtitle

With a good comprehension of the requirements document, an understanding of the necessary decisions, and a sketch of the worksheet, the next step is to use Excel to create the worksheet.

The following steps enter the worksheet title and subtitle into cells A1 and A2.

1. If necessary, select cell A1. Type **HyperMass Online Storage** in the selected cell and then press the DOWN ARROW key to enter the worksheet title.
2. Type **Salary Report** in cell A2 and then press the DOWN ARROW key to enter the worksheet subtitle.

To Enter the Column Titles

The employee names and the row titles Totals, Average, Highest, and Lowest in the leftmost column begin in cell A4 and continue down to cell A16. The employee data is entered into rows 4 through 12 of the worksheet. The remainder of this section explains the steps required to enter the column titles, payroll data, and row titles, as shown in Figure 2–4, and then save the workbook.

The column titles in row 3 begin in cell A3 and extend through cell J3. Some of the column titles in Figure 2–4 include multiple lines of text, such as Hours Worked in cell C3. To start a new line in a cell, press ALT+ENTER after each line, except for the last line, which is completed by tapping or clicking the Enter box, pressing the ENTER key, or pressing one of the arrow keys. When you see ALT+ENTER in a step, press the ENTER key while holding down the ALT key and then release both keys. The following steps enter the column titles.

1. With cell A3 selected, type **Employee** and then press the RIGHT ARROW key to enter the column heading.
2. Type **Dependents** and then press the RIGHT ARROW key to enter the column heading.
3. In cell C3, type **Hours** and then press ALT+ENTER to enter the first line of the column heading. Type **Worked** and then press the RIGHT ARROW key to enter the column heading.
4. Type **Hourly** in cell D3 and then press ALT+ENTER to begin a new line in the cell. Type **Pay Rate** and then press the RIGHT ARROW key to enter the column heading.
5. Type **Gross Pay** in cell E3 and then press the RIGHT ARROW key to enter the column heading.
6. Type **Federal Tax** in cell F3 and then press the RIGHT ARROW key to enter the column heading.

7. Type `State Tax` in cell G3 and then press the RIGHT ARROW key to enter the column heading.
8. Type `Tax %` in cell H3 and then press the RIGHT ARROW key to enter the column heading.
9. Type `Net Pay` in cell I3 and then press the RIGHT ARROW key to enter the column heading.
10. Type `Hire Date` in cell J3 and then press the RIGHT ARROW key to enter the column heading.

To Enter the Salary Data

The salary data in Table 2–1 includes a hire date for each employee. Excel considers a date to be a number and, therefore, it displays the date right-aligned in the cell. The following steps enter the data for each employee: name, dependents, hours worked, hourly pay rate, and hire date.

1. Select cell A4. Type `Carl, Michael` and then press the RIGHT ARROW key to enter the employee name.
2. Type `3` in cell B4 and then press the RIGHT ARROW key to enter a number in the selected cell.
3. Type `60.45` in cell C4 and then press the RIGHT ARROW key to enter a number in the selected cell.
4. Type `19.50` in cell D4 and then press the RIGHT ARROW key to enter a number in the selected cell.
5. Type `4/5/10` in cell J4 and then tap or click cell A5 to select the cell.
6. Enter the payroll data in Table 2–1 for the eight remaining employees in rows 5 through 12 (shown in Figure 2–4 on page 72).

Q&A In Step 5, why did the date that was entered change from 4/5/10 to 4/5/2010?
When Excel recognizes that you entered a date in mm/dd/yy format, it automatically formats the date as mm/dd/yyyy for you. Most professionals prefer to view dates in mm/dd/yyyy format as opposed to mm/dd/yy format because the latter can cause confusion regarding the intended year. For example, a date displayed as 3/3/50 could imply a date of 3/3/1950 or 3/3/2050. The use of a four-digit year eliminates this confusion.

Table 2–1 HyperMass Online Storage Salary Report Data

Employee	Dependents	Hours Worked	Hourly Pay Rate	Hire Date
Carl, Michael	3	60.45	19.50	4/5/10
Green, Sue	0	81.50	22.85	7/15/11
Fekir, Sith	1	69.50	17.36	1/13/09
Lane, Jon	2	65.25	19.45	3/1/12
Nichols, Peter	3	71.25	12.60	4/15/11
Pearson, Ada	3	44.65	22.45	10/31/08
Rodriquez, Juan	2	55.50	20.15	7/15/09
Williams, Sean	0	80.00	20.85	5/14/09
Yau, Xin	4	70.00	18.75	6/17/02

To Enter the Row Titles

The following steps add row titles for the rows that will contain the totals, highest, lowest, and average amounts.

1. Select cell A13. Type **Totals** and then press the DOWN ARROW key to enter a row header.
2. Type **Highest** in cell A14 and then press the DOWN ARROW key to enter a row header.
3. Type **Lowest** in cell A15 and then press the ENTER key to enter a row header.
4. Type **Average** in cell A16 and then press the DOWN ARROW key to enter a row header (Figure 2–4).

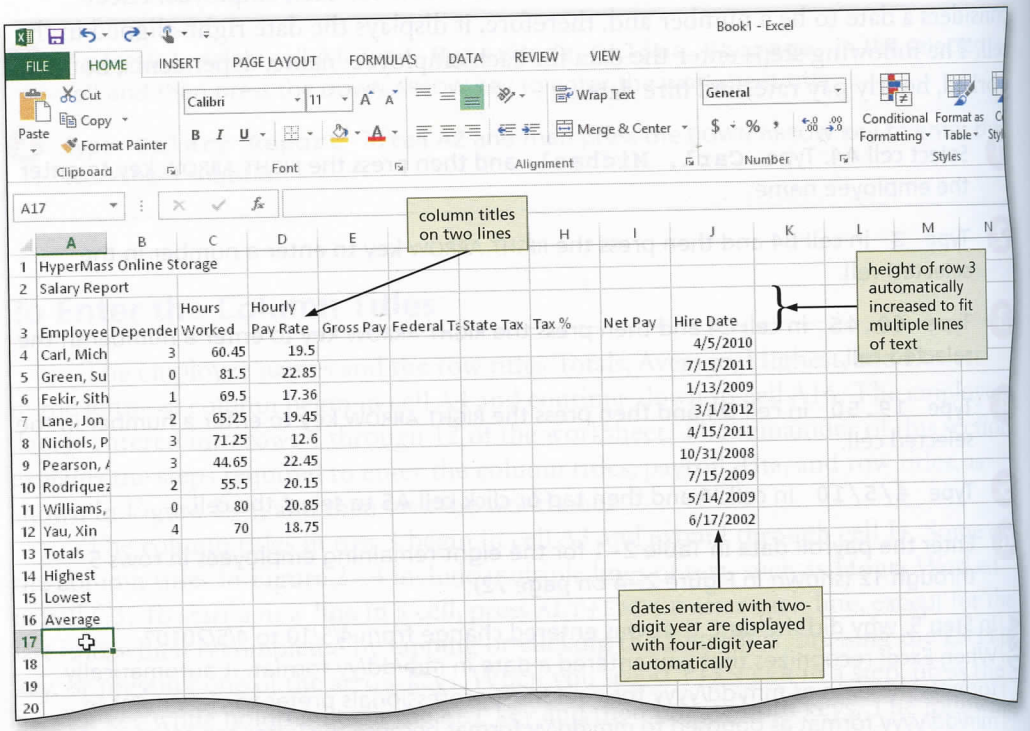

Figure 2–4

To Change the Worksheet Tab Name and Color and Save the Workbook

The following steps change the worksheet tab name to Salary Report, change the sheet tab color, and save the workbook in the Excel folder (for your assignments) using the file name, HyperMass Online Storage Salary Report.

1. Double-tap or double-click the Sheet1 tab and then enter **Salary Report** as the sheet tab name and then press the ENTER key.
2. Press and hold or right-click the sheet tab to display the shortcut menu.
3. Tap or point to Tab Color on the shortcut menu to display the Tab Color gallery. Tap or click Green, Accent 6, Darker 25% (column 10, row 5) in the Theme Colors area to apply a new color to the sheet tab.

4. Tap or click the Save button on the Quick Access Toolbar, which depending on settings, will display either the Save As gallery in the Backstage view or the Save As dialog box.
5. To save on a hard disk or other storage media on your computer, proceed to Step 5a. To save on SkyDrive, proceed to Step 5b.

5a. If your screen opens the Backstage view and you want to save on storage media on your computer, tap or click Computer, if necessary, to display options in the right pane related to saving on your computer. If your screen already displays the Save As dialog box, proceed to Step 6.

5b. If your screen opens the Backstage view and you want to save on SkyDrive, tap or click SkyDrive to display SkyDrive saving options or a Sign In button. If your screen displays a Sign In button, tap or click it and then sign in to SkyDrive.

6. Tap or click the Browse button in the right pane to display the Save As dialog box associated with the selected Save As Place (i.e., Computer or SkyDrive).
7. Type `HyperMass Online Storage Salary Report` in the File name box to change the file name. Do not press the ENTER key after typing the file name because you do not want to close the dialog box at this time.
8. Navigate to the desired save location (in this case, the Excel folder in the CIS 101 folder [or your class folder] on your computer or SkyDrive).
9. Tap or click the Save button (Save As dialog box) to save the document in the selected folder on the selected location with the entered file name.

Entering Formulas

One of the reasons Excel is such a valuable tool is that you can assign a **formula** to a cell, and Excel will calculate the result. Consider, for example, what would happen if you had to multiply 60.45 by 19.5 and then manually enter the product for Gross Pay, 1,178.78, in cell E4. Every time the values in cells C4 or D4 changed, you would have to recalculate the product and enter the new value in cell E4. By contrast, if you enter a formula in cell E4 to multiply the values in cells C4 and D4, Excel recalculates the product whenever new values are entered into those cells and displays the result in cell E4.

A formula in a cell that contains a reference back to itself is called a **circular reference**. Excel often warns you when you create a circular reference. In almost all cases, circular references are the result of an incorrect formula. A circular reference can be direct or indirect. For example, placing the formula =A1 in cell A1 results in a direct circular reference. An **indirect circular reference** occurs when a formula in a cell refers to another cell or cells that include a formula that refers back to the original cell.

To Enter a Formula Using the Keyboard

1 ENTER FORMULAS | 2 ENTER FUNCTIONS | 3 VERIFY FORMULAS
4 FORMAT WORKSHEET | 5 CHECK SPELLING | 6 PRINT WORKSHEET

The formulas needed in the worksheet are noted in the requirements document as follows:

1. Gross Pay (column E) = Hours Worked × Hourly Pay Rate
2. Federal Tax (column F) = 0.22 × (Gross Pay – Dependents × 24.32)
3. State Tax (column G) = 0.04 × Gross Pay
4. Tax % (column H) = (Federal Tax + State Tax) / Gross Pay
5. Net Pay (column I) = Gross Pay – (Federal Tax + State Tax)

The gross pay for each employee, which appears in column E, is equal to hours worked in column C times hourly pay rate in column D. Thus, the gross pay for Michael Carl in cell E4 is obtained by multiplying 60.45 (cell C4) by 19.50 (cell D4) or =C4 × D4. The following steps enter the initial gross pay formula in cell E4 using the keyboard. ***Why?*** *In order for Excel to perform the calculations, you must create formulas.*

1

- With cell E4 selected, type `=c4*d4` in the cell to display the formula in the formula bar and in the current cell and to display colored borders around the cells referenced in the formula (Figure 2–5).

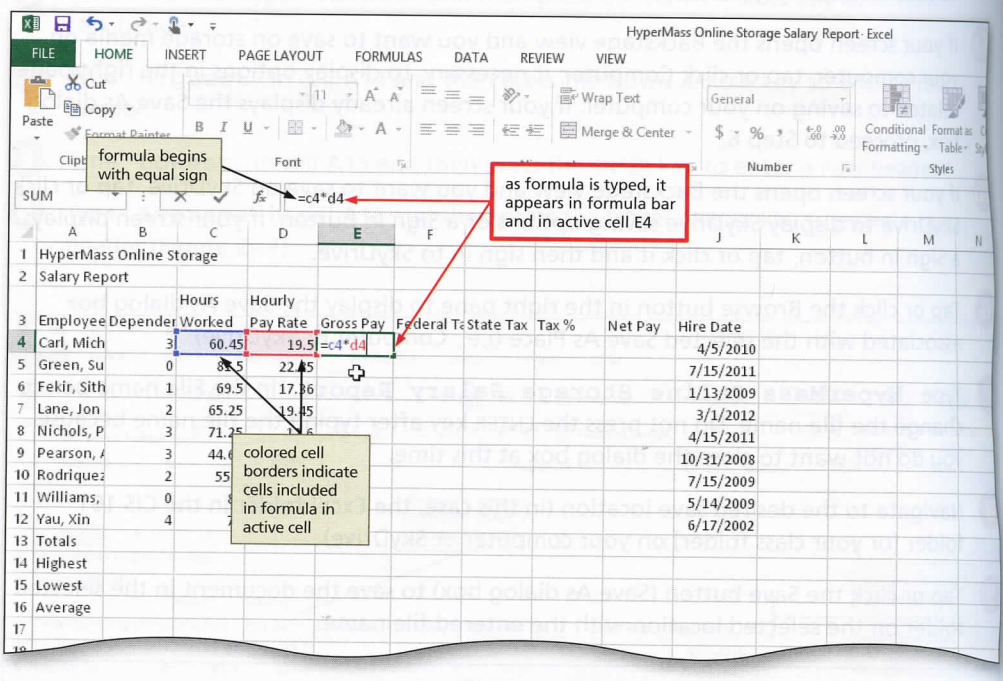

Figure 2–5

Q&A What occurs on the worksheet as I enter the formula?

The **equal sign** (=) preceding c4*d4 alerts Excel that you are entering a formula or function and not text. Because the most common error when entering a formula is to reference the wrong cell in a formula mistakenly, Excel colors the borders of the cells referenced in the formula. The coloring helps in the reviewing process to ensure the cell references are correct. The **asterisk** (*) following c4 is the arithmetic operator that directs Excel to perform the multiplication operation.

2

- Press the RIGHT ARROW key to complete the arithmetic operation indicated by the formula, to display the result in the worksheet, and to select the cell to the right (Figure 2–6). The number of decimal places shown in cell E4 may be different, but these values will be adjusted later in this chapter.

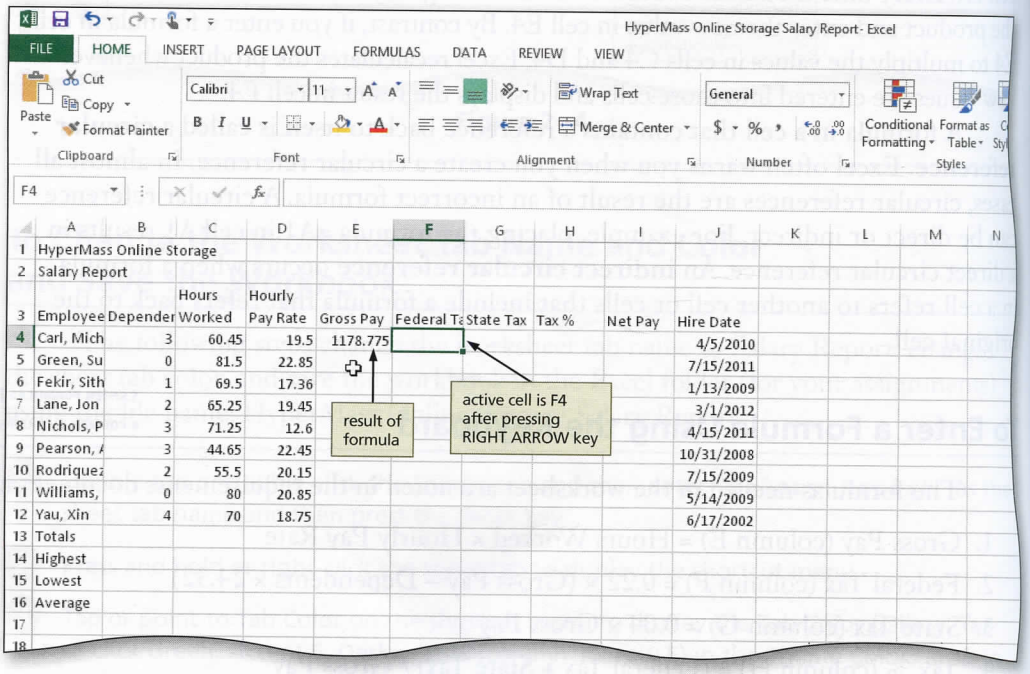

Figure 2–6

To Enter Formulas Using Point Mode

The sketch of the worksheet in Figure 2–3 on page EX 68 calls for the federal tax, state tax, tax percent, and net pay for each employee to appear in columns F, G, H, and I, respectively. All four of these values are calculated using formulas in row 4:

Federal Tax (cell F4) = 0.22 × (Gross Pay – Dependents × 24.32) or =0.22 * (E4 – B4 * 24.32)
State Tax (cell G4) = 0.04 × Gross Pay or =0.04 * E4
Tax % (cell H4) = (Federal Tax + State Tax) / Gross Pay or =(F4 + G4)/E4
Net Pay (cell I4) = Gross Pay – (Federal Tax + State Tax) or =E4 – (F4 + G4)

An alternative to entering the formulas in cells F4, G4, H4, and I4 using the keyboard is to enter the formulas using the pointer and Point mode. **Point mode** allows you to select cells for use in a formula by using your finger or the pointer. The following steps enter formulas using Point mode. ***Why?*** *Using Point mode makes it easier to create formulas without worrying about typographical errors when entering cell references.*

1

- With cell F4 selected, type `=0.22*(` to begin the formula and then tap or click cell E4 to add a cell reference in the formula (Figure 2–7).

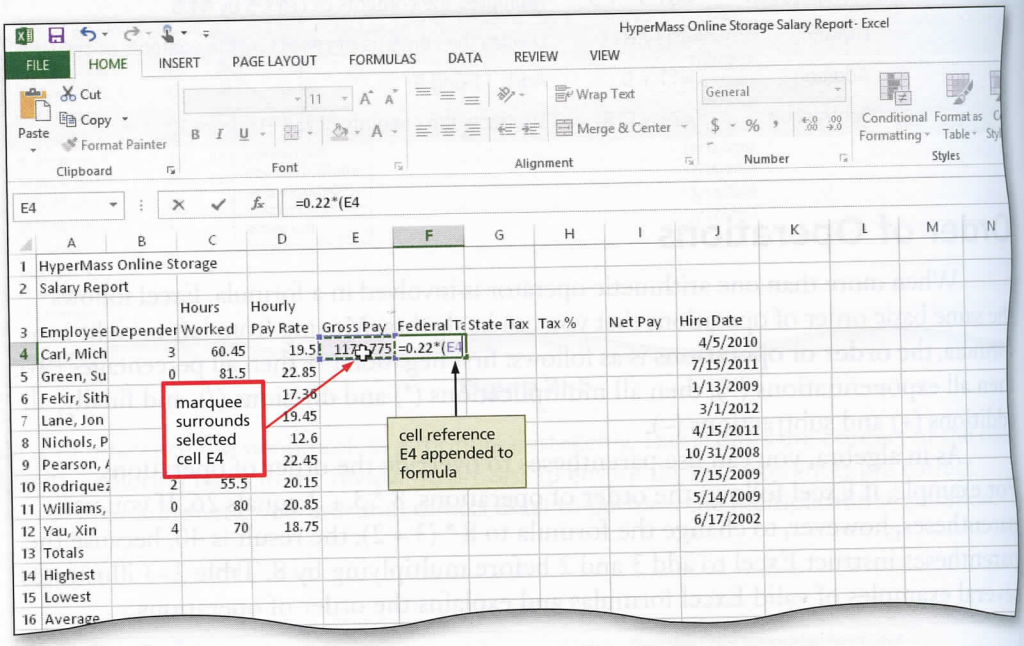

Figure 2–7

2

- Type `-` (minus sign) and then tap or click cell B4 to add a subtraction operator and a reference to another cell to the formula.
- Type `*24.32)` to complete the formula (Figure 2–8).

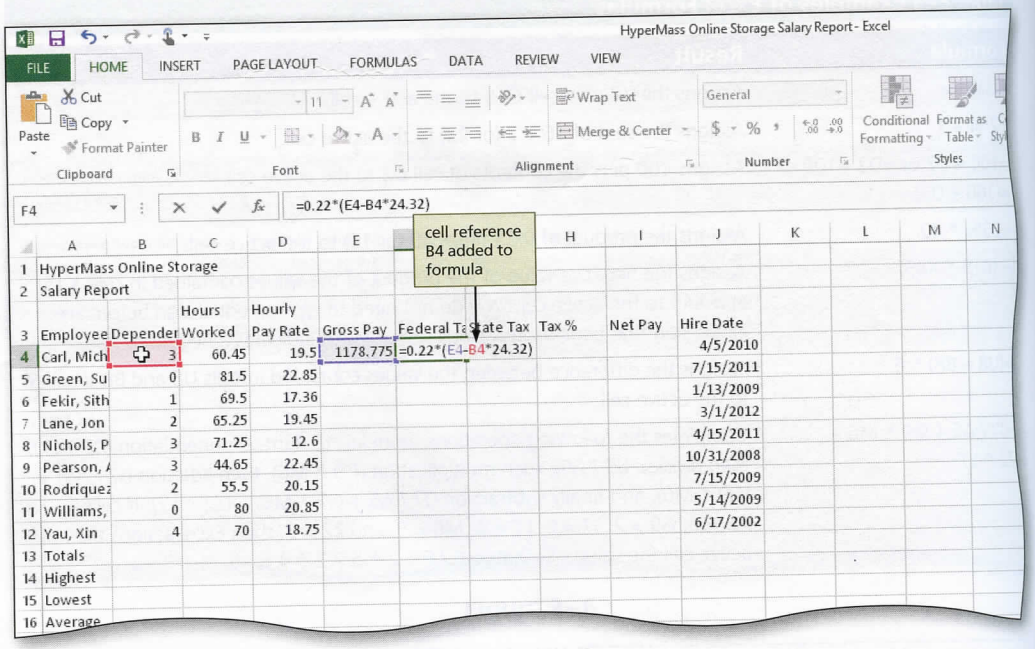

Figure 2–8

3

- Tap or click th
Enter box in t
formula bar a
then select ce
G4 to prepar
enter the ne
formula.
- Type `=0.0`
and then tap
click cell E4
a cell refere
to the form
(Figure 2–9

Q&A

Why should
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- Tap or cli
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3

- Tap or click the Enter box in the formula bar and then select cell G4 to prepare to enter the next formula.
- Type `=0.04*` and then tap or click cell E4 to add a cell reference to the formula (Figure 2–9).

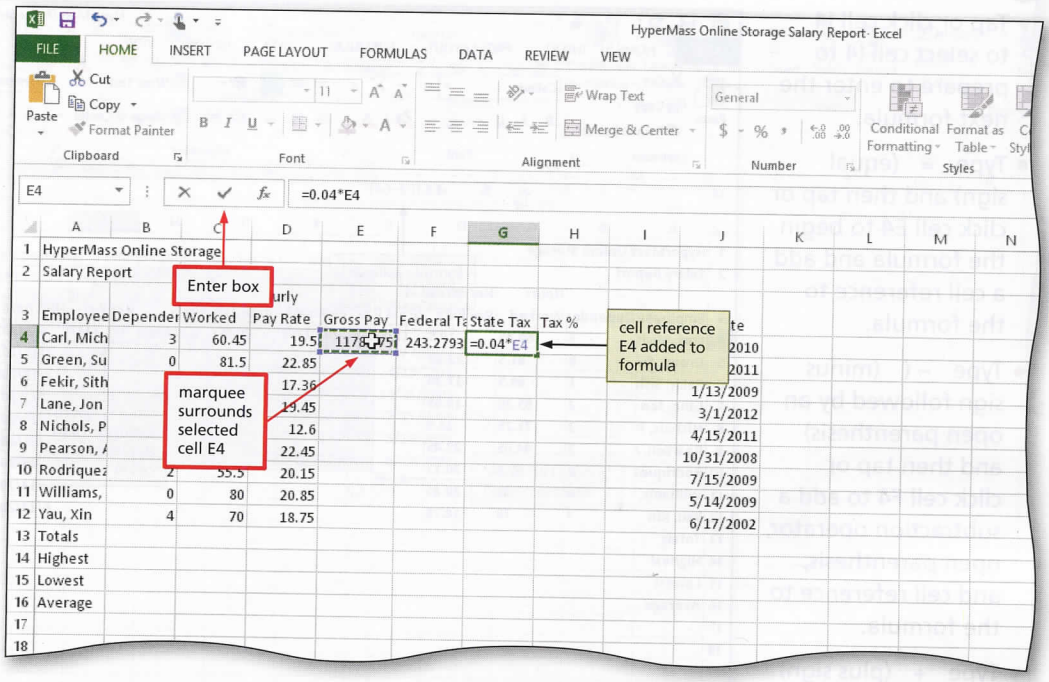


Figure 2–9

Q&A Why should I use Point mode to enter formulas?

Using Point mode to enter formulas often is faster and more accurate than using the keyboard to type the entire formula when the cell you want to select does not require you to scroll. In many instances, as in these steps, you may want to use both the keyboard and touch gestures or the pointer when entering a formula in a cell. You can use the keyboard to begin the formula, for example, and then use touch gestures or the pointer to select a range of cells.

4

- Tap or click the Enter box in the formula bar to enter the formula in cell G4.
- Select cell H4. Type `=(` (equal sign followed by an open parenthesis) and then tap or click cell F4 to add a reference to the formula.
- Type `+` (plus sign) and then tap or click cell G4 to add a cell reference to the formula.
- Type `)/` (close parenthesis followed by a forward slash), and then tap or click cell E4 to add a cell reference to the formula.
- Tap or click the Enter box in the formula bar to enter the formula in cell H4 (Figure 2–10).

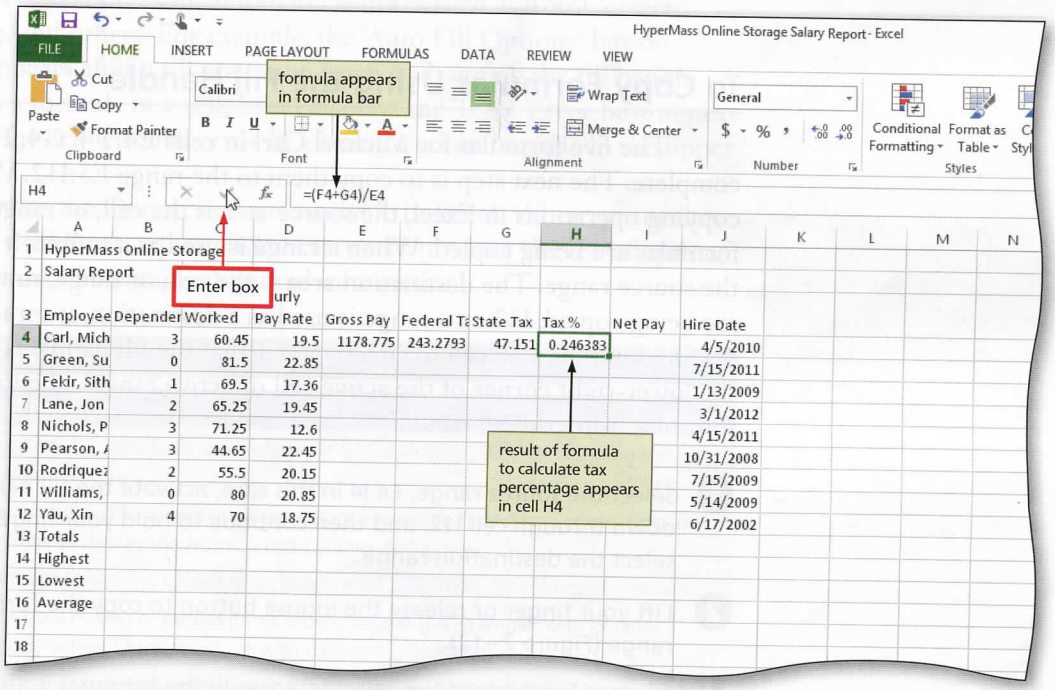


Figure 2–10

5

- Tap or click cell I4 to select cell I4 to prepare to enter the next formula.
- Type = (equal sign) and then tap or click cell E4 to begin the formula and add a cell reference to the formula.
- Type –((minus sign followed by an open parenthesis) and then tap or click cell F4 to add a subtraction operator, open parenthesis, and cell reference to the formula.
- Type + (plus sign) and then tap or click cell G4 to add an addition operator and cell reference to the formula.
- Type) (close parenthesis) to complete the formula (Figure 2–11).
- Tap or click the Enter box in the formula bar to enter the formula.

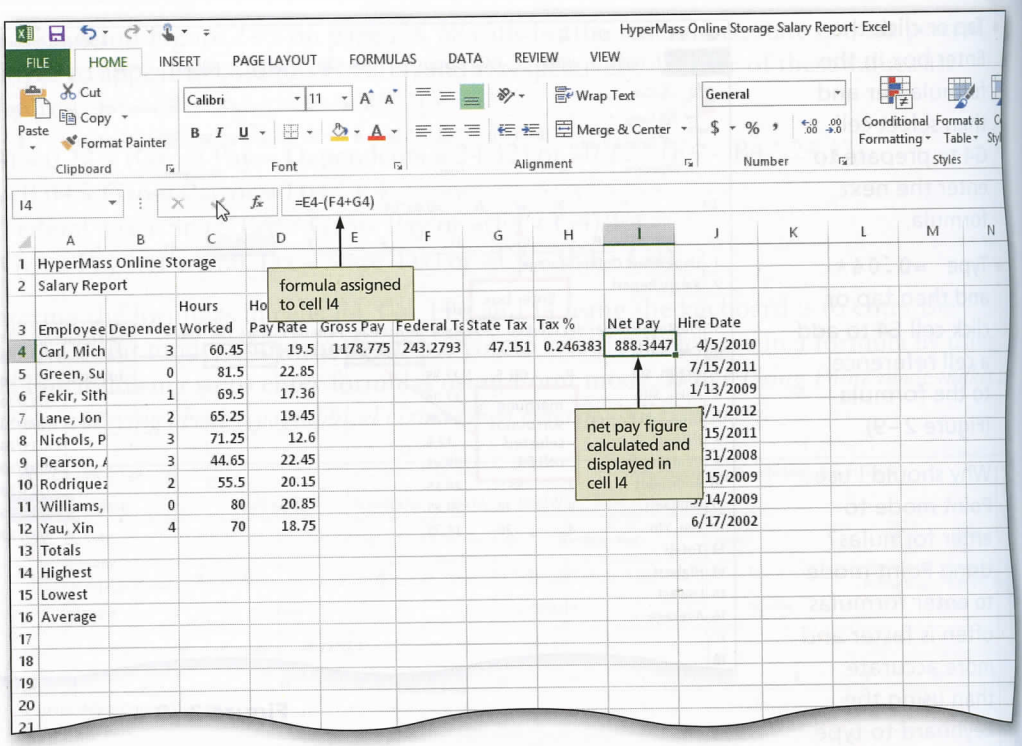


Figure 2–11

To Copy Formulas Using the Fill Handle

The five formulas for Michael Carl in cells E4, F4, G4, H4, and I4 now are complete. The next step is to copy them to the range E5:I12. When performing copying operations in Excel, the source area is the cell, or range, from which data or formulas are being copied. When a range is used as a source, it sometimes is called the source range. The destination area is the cell, or range, to which data or formulas are being copied. When a range is used as a destination, it sometimes is called the destination range. Recall from Chapter 1 that the fill handle is a small black square in the lower-right corner of the active cell or active range. The following steps copy the formulas using the fill handle.

1 Select the source range, E4:I4 in this case, activate the fill handle, drag the fill handle down through cell I12, and then continue to hold your finger or the mouse button to select the destination range.

2 Lift your finger or release the mouse button to copy the formulas to the destination range (Figure 2–12).

Q&A How does Excel adjust the cell references in the formulas in the destination area?
Recall that when you copy a formula, Excel adjusts the cell references so that the new formulas contain references corresponding to the new location and perform calculations using the appropriate values. Thus, if you copy downward, Excel adjusts the row portion of cell references. If you copy across, then Excel adjusts the column portion of cell references. These cell references are called **relative cell references**.

CONSIDER THIS

The Paste Options button provides powerful functionality. When performing copy and paste operations, the button allows you great freedom in specifying what it is you want to paste. You can choose from the following options:

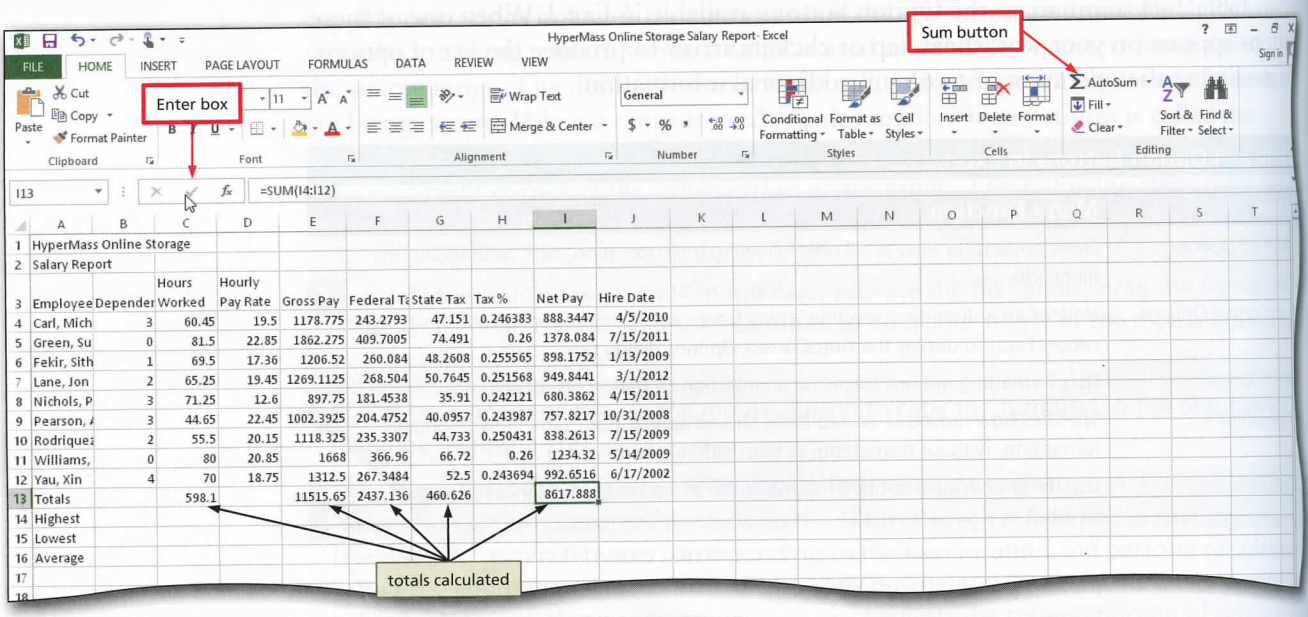
- Paste an exact copy of what you copied, including the cell contents and formatting.
- Copy only formulas.
- Copy only formatting.
- Copy only values.
- Copy a combination of these options.
- Copy a picture of what you copied.

To Determine Totals Using the Sum Button

The next step is to determine the totals in row 13 for the hours worked in column C, gross pay in column E, federal tax in column F, state tax in column G, and net pay in column I. To determine the total hours worked in column C, the values in the range C4 through C12 must be summed. To do so, enter the function =sum(c4:c12) in cell C13 or select cell C13, tap or click the Sum button (HOME tab | Editing group), and then press the ENTER key. Recall that a function is a prewritten formula that is built into Excel. Similar SUM functions can be used in cells E13, F13, G13, and I13 to total gross pay, federal tax, state tax, and net pay, respectively. The following steps determine totals in cell C13, the range E13:G13, and cell I13.

1. Select the cell to contain the sum, cell C13 in this case. Tap or click the Sum button (HOME tab | Editing group) to sum the contents of the range C4:C12 in cell C13 and then tap or click the Enter box to display a total in the selected cell.
2. Select the range to contain the sums, range E13:G13 in this case. Tap or click the Sum button (HOME tab | Editing group) to display totals in the selected range.
3. Select the cell to contain the sum, cell I13 in this case. Tap or click the Sum button (HOME tab | Editing group) to sum the contents of the range I4:I12 in cell I13 and then tap or click the Enter box to display a total in the selected cell (Figure 2–13).

Q&A Why did I have to tap or click the Enter box?
When creating a sum for a single column, you tap or click the Enter box. If you are calculating the sum for multiple ranges, you tap or click the Sum button.



	A	B	C	D	E	F	G	H	I	J
1	HyperMass Online Storage									
2	Salary Report									
3	Employee	Dependents	Hours Worked	Hourly Pay Rate	Gross Pay	Federal Tax	State Tax	Tax %	Net Pay	Hire Date
4	Carl, Mich	3	60.45	19.5	1178.775	243.2793	47.151	0.246383	888.3447	4/5/2010
5	Green, Su	0	81.5	22.85	1862.275	409.7005	74.491	0.26	1378.084	7/15/2011
6	Fekir, Sith	1	69.5	17.36	1206.52	260.084	48.2608	0.255565	898.1752	1/13/2009
7	Lane, Jon	2	65.25	19.45	1269.1125	268.504	50.7645	0.251568	949.8441	3/1/2012
8	Nichols, P	3	71.25	12.6	897.75	181.4538	35.91	0.242121	680.3862	4/15/2011
9	Pearson, A	3	44.65	22.45	1002.3925	204.4752	40.0957	0.243987	757.8217	10/31/2008
10	Rodriquez	2	55.5	20.15	1118.325	235.3307	44.733	0.250431	838.2613	7/15/2009
11	Williams,	0	80	20.85	1668	366.96	66.72	0.26	1234.32	5/14/2009
12	Yau, Xin	4	70	18.75	1312.5	267.3484	52.5	0.243694	992.6516	6/17/2002
13	Totals		598.1		11515.65	2437.136	460.626		8617.888	
14	Highest									
15	Lowest									
16	Average									
17										
18										

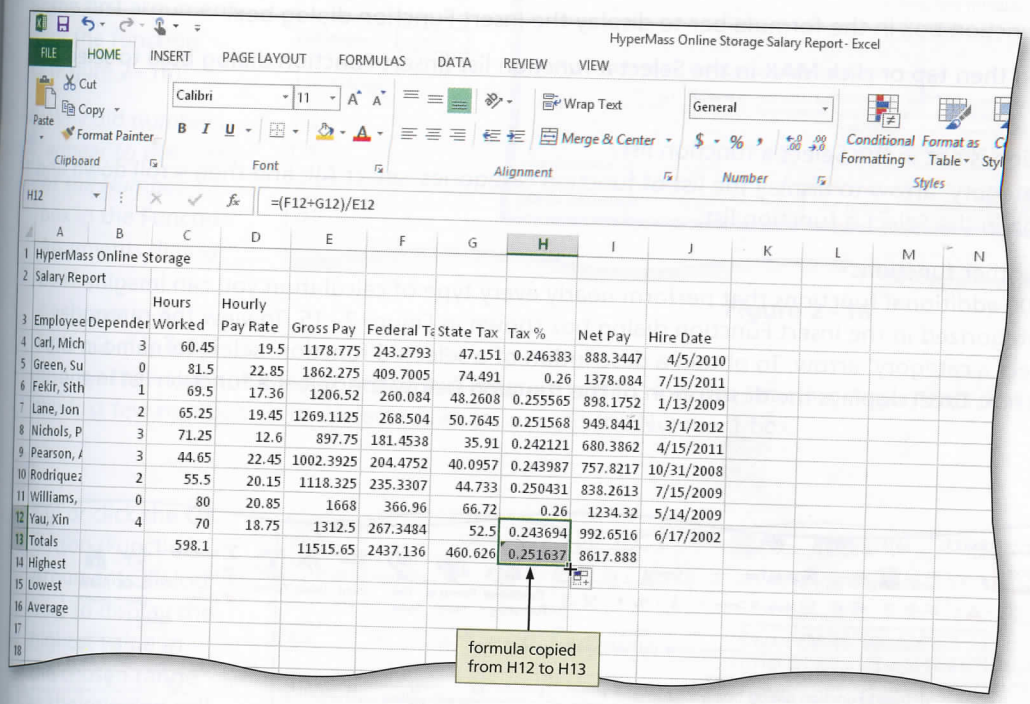
Figure 2–13

To Determine the Total Tax Percentage

With the totals in row 13 determined, the next step is to copy the tax percentage formula in cell H12 to cell H13. The following step copies the tax percentage formula.

1. Select the cell to be copied, H12 in this case, and then drag the fill handle down through cell H13 to copy the formula (Figure 2–14).

Q&A Why was the SUM function not used for tax percentage in H13?
The tax percentage is based off of the totals, not the sum, of the tax percentage column; therefore, there was no need to use the SUM function.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	HyperMass Online Storage													
2	Salary Report													
3	Employee	Depender	Hours Worked	Hourly Pay Rate	Gross Pay	Federal Ta	State Tax	Tax %	Net Pay	Hire Date				
4	Carl, Mich	3	60.45	19.5	1178.775	243.2793	47.151	0.246383	888.3447	4/5/2010				
5	Green, Su	0	81.5	22.85	1862.275	409.7005	74.491	0.26	1378.084	7/15/2011				
6	Fekir, Sith	1	69.5	17.36	1206.52	260.084	48.2608	0.255565	898.1752	1/13/2009				
7	Lane, Jon	2	65.25	19.45	1269.1125	268.504	50.7645	0.251568	949.8441	3/1/2012				
8	Nichols, P	3	71.25	12.6	897.75	181.4538	35.91	0.242121	680.3862	4/15/2011				
9	Pearson, A	3	44.65	22.45	1002.3925	204.4752	40.0957	0.243987	757.8217	10/31/2008				
10	Rodriquez	2	55.5	20.15	1118.325	235.3307	44.733	0.250431	838.2613	7/15/2009				
11	Williams,	0	80	20.85	1668	366.96	66.72	0.26	1234.32	5/14/2009				
12	Yau, Xin	4	70	18.75	1312.5	267.3484	52.5	0.243694	992.6516	6/17/2002				
13	Totals		598.1		11515.65	2437.136	460.626	0.251637	8617.888					
14	Highest													
15	Lowest													
16	Average													
17														
18														

Figure 2–14

Using the AVERAGE, MAX, and MIN Functions

The next step in creating the HyperMass Online Storage Salary Report worksheet is to compute the highest value, lowest value, and average value for the number of dependents listed in the range B4:B12 using the MAX, MIN, and AVERAGE functions in the range B14:B16. Once the values are determined for column B, the entries can be copied across to the other columns.

With Excel, you can enter functions using one of five methods: (1) keyboard, touch gesture, or pointer; (2) the Insert Function box in the formula bar; (3) the Sum menu; (4) the Sum button (FORMULAS tab | Function Library group); and (5) the Name box area in the formula bar. The method you choose will depend on your typing skills and whether you can recall the function name and required arguments.

In the following sections, three of these methods will be used. The Insert Function box in the formula bar method will be used to determine the highest number of dependents (cell B14). The Sum menu will be used to determine the lowest number of dependents (cell B15). The keyboard and pointer will be used to determine the average number of dependents (cell B16).

To Determine the Highest Number in a Range of Numbers Using the Insert Function Box

The next step is to select cell B14 and determine the highest (maximum) number in the range B4:B12. Excel includes a function called the **MAX function** that displays the highest value in a range. The following steps use the Insert Function box in the formula bar to enter the MAX function. ***Why?*** *Although you could enter the MAX function using the keyboard and Point mode as described previously, an alternative method to entering the function is to use the Insert Function box in the formula bar.*

1

- Select the cell to contain the maximum number, cell B14 in this case.
- Tap or click the Insert Function box in the formula bar to display the Insert Function dialog box.
- If necessary, scroll to and then tap or click MAX in the Select a function list (Insert Function dialog box) to select it (Figure 2–15).

Q&A

What if the MAX function is not in the Select a function list?
Click the 'Or select a category' arrow to display the list of function categories, select All, and then scroll down and select the MAX function in the Select a function list.

How can I learn about other functions?
Excel has more than 400 additional functions that perform nearly every type of calculation you can imagine. These functions are categorized in the Insert Function dialog box shown in Figure 2–15. To view the categories, tap or click the 'Or select a category' arrow. To obtain a description of a selected function, select its name in the Insert Function dialog box. Excel displays the description of the function below the Select a function list in the dialog box.

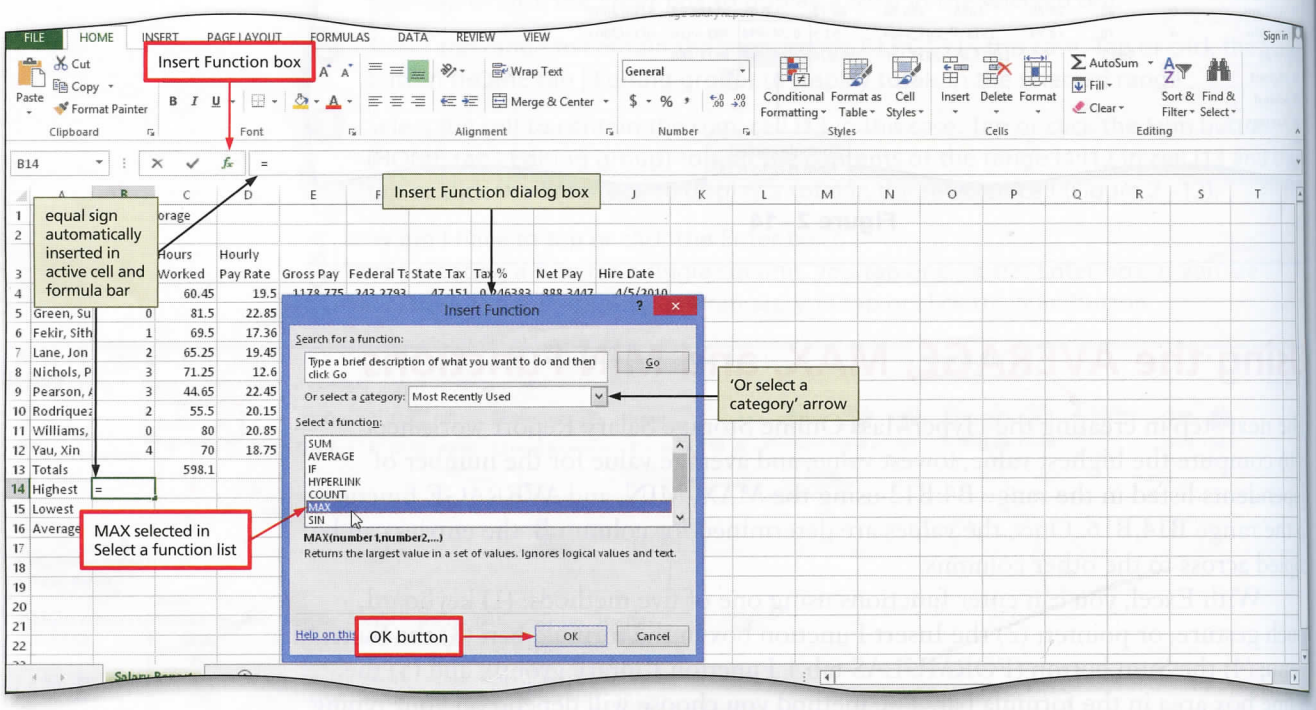


Figure 2–15

2

- Tap or click the OK button (Insert Function dialog box) to display the Function Arguments dialog box.
- Type `b4:b12` in the Number1 box (Function Arguments dialog box) to enter the first argument of the function (Figure 2–16).

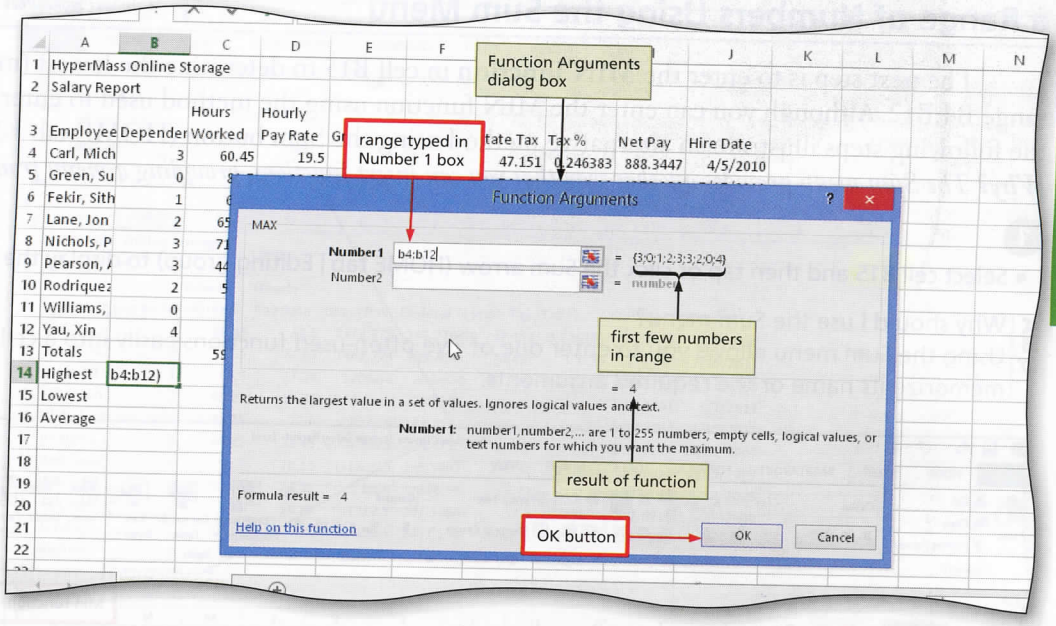


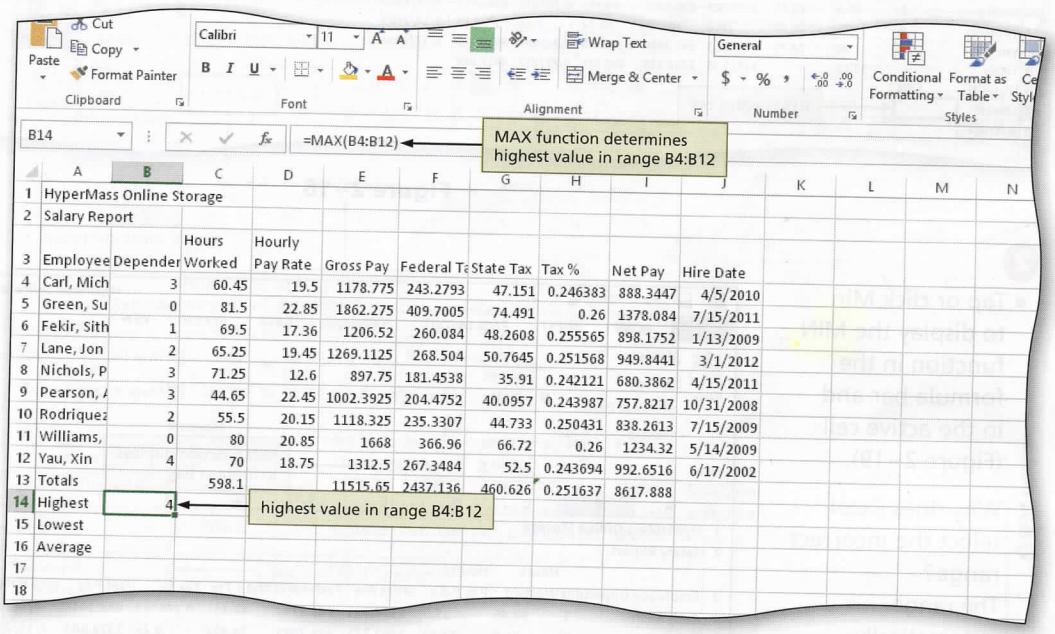
Figure 2–16

Q&A Why did numbers appear to the right of the Number 1 box in the Function Arguments dialog box?

As shown in Figure 2–16, Excel displays the value the MAX function will return to cell B14 in the Function Arguments dialog box. It also lists the first few numbers in the selected range, next to the Number1 box.

3

- Tap or click the OK button (Function Arguments dialog box) to display the highest value in the chosen range in the selected cell (Figure 2–17).



	A	B	C	D	E	F	G	H	I	J
1	HyperMass Online Storage									
2	Salary Report									
3	Employee	Dependents	Hours Worked	Hourly Pay Rate	Gross Pay	Federal Ta	State Tax	Tax %	Net Pay	Hire Date
4	Carl, Mich	3	60.45	19.5	1178.775	243.2793	47.151	0.246383	888.3447	4/5/2010
5	Green, Su	0	81.5	22.85	1862.275	409.7005	74.491	0.26	1378.084	7/15/2011
6	Fekir, Sith	1	69.5	17.36	1206.52	260.084	48.2608	0.255565	898.1752	1/13/2009
7	Lane, Jon	2	65.25	19.45	1269.1125	268.504	50.7645	0.251568	949.8441	3/1/2012
8	Nichols, P	3	71.25	12.6	897.75	181.4538	35.91	0.242121	680.3862	4/15/2011
9	Pearson, A	3	44.65	22.45	1002.3925	204.4752	40.0957	0.243987	757.8217	10/31/2008
10	Rodriquez	2	55.5	20.15	1118.325	235.3307	44.733	0.250431	838.2613	7/15/2009
11	Williams,	0	80	20.85	1668	366.96	66.72	0.26	1234.32	5/14/2009
12	Yau, Xin	4	70	18.75	1312.5	267.3484	52.5	0.243694	992.6516	6/17/2002
13	Totals		598.1		11515.65	2437.136	460.626	0.251637	8617.888	
14	Highest	4								
15	Lowest									
16	Average									

Figure 2–17

Q&A Why should I not just enter the highest value that I see in the range B4:B12 in cell B14?

In this example, rather than entering the MAX function, you visually could scan the range B4:B12, determine that the highest number of dependents is 4, and manually enter the number 4 as a constant in cell B14. Excel would display the number the same as in Figure 2–17. Because it contains a constant, however, Excel will continue to display 4 in cell B14, even if the values in the range change. If you use the MAX function, Excel will recalculate the highest value in the range each time a new value is entered into the worksheet.

Other Ways

1. Tap or click Sum arrow (HOME tab | Editing group), tap or click Max
2. Tap or click Sum arrow (FORMULAS tab | Function Library group), tap or click Max
3. Type `=MAX` in cell, fill in arguments

To Determine the Lowest Number in a Range of Numbers Using the Sum Menu

The next step is to enter the **MIN function** in cell B15 to determine the lowest (minimum) number in the range B4:B12. Although you can enter the MIN function using the method used to enter the MAX function, the following steps illustrate an alternative method using the Sum button (HOME tab | Editing group).

Why? *The Sum menu provides another way that you can insert functions, providing a menu from which you can choose.*

1

- Select cell B15 and then tap or click the Sum arrow (HOME tab | Editing group) to display the Sum menu (Figure 2–18).

Q&A Why should I use the Sum menu?
Using the Sum menu allows you to enter one of five often-used functions easily into a cell, without having to memorize its name or the required arguments.

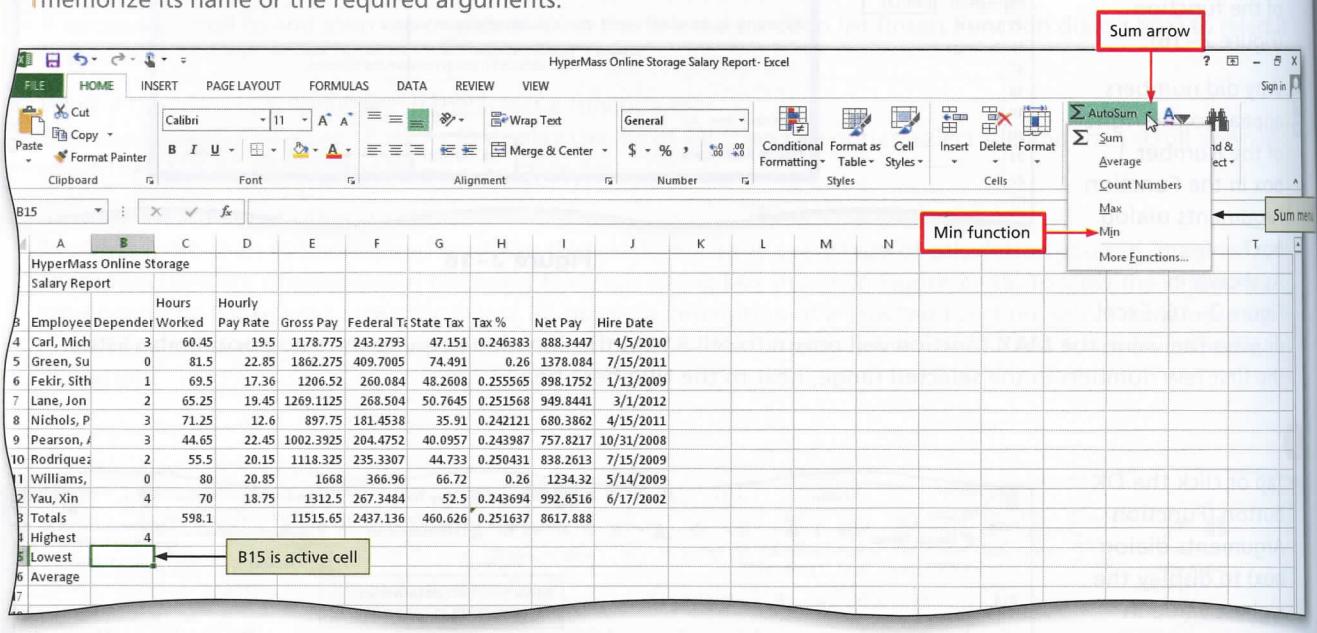


Figure 2–18

2

- Tap or click Min to display the MIN function in the formula bar and in the active cell (Figure 2–19).

Q&A Why does Excel select the incorrect range?
The range automatically selected by Excel is not always correct. Excel attempts to guess which cells you want to include in the function by looking for ranges that are adjacent to the selected cell and that contain numeric data.

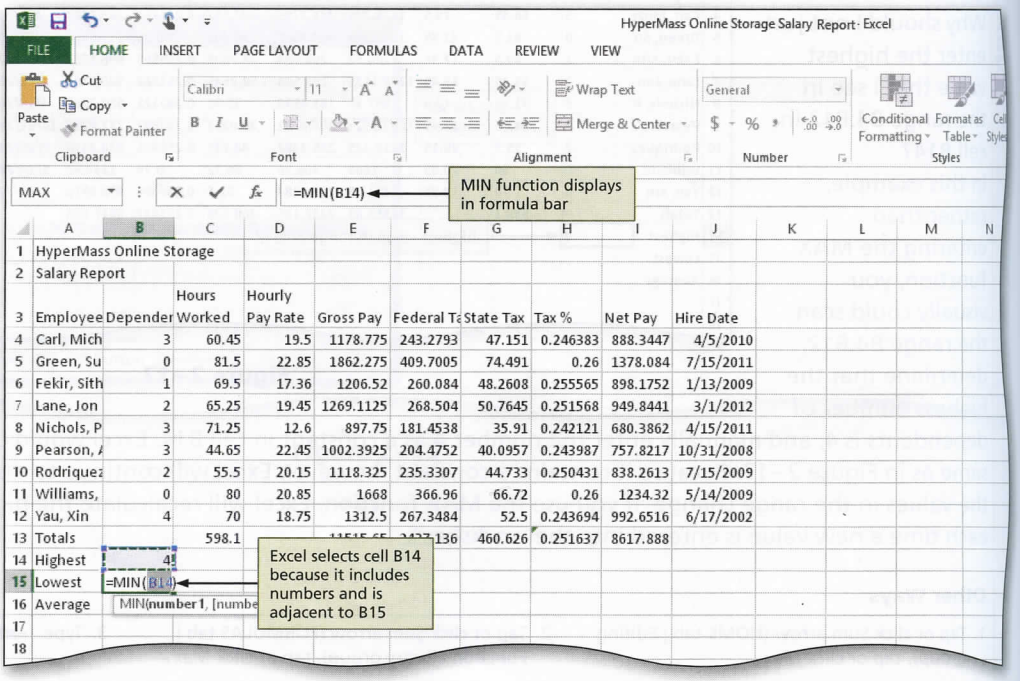


Figure 2–19

3

- Tap or click cell B4 and then drag through cell B12 to display the function with the new range in the formula bar and in the selected cell (Figure 2–20).

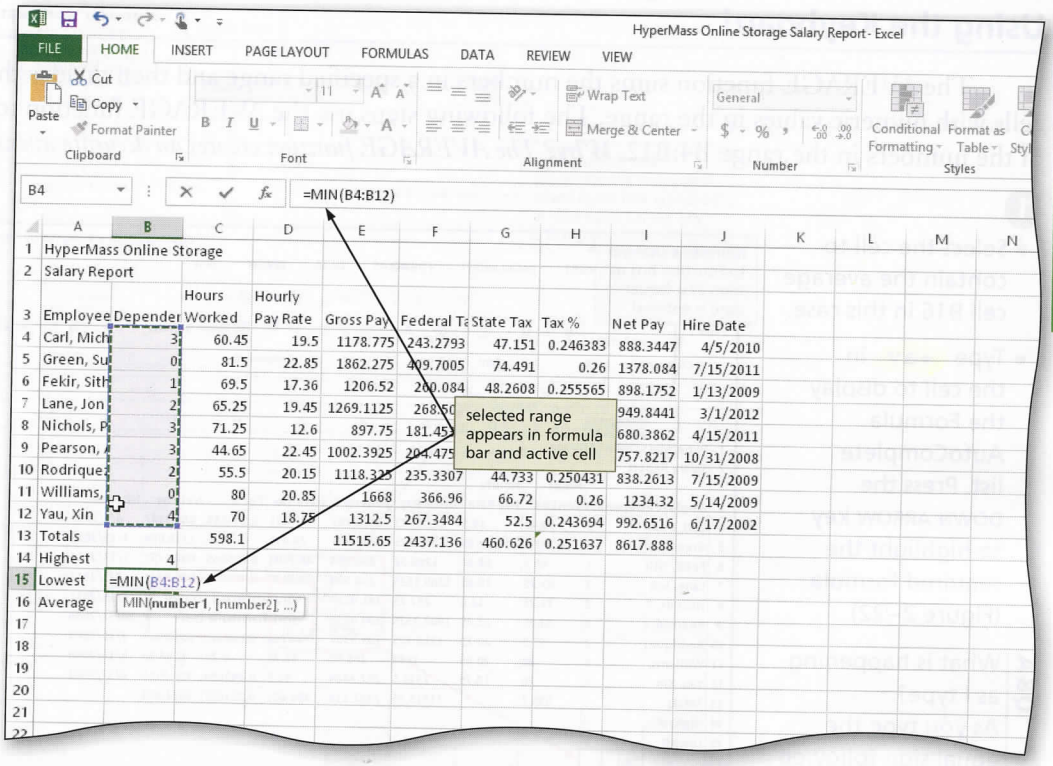


Figure 2–20

4

- Tap or click the Enter box to determine the lowest value in the range B4:B12 and display the result in the selected cell (Figure 2–21).

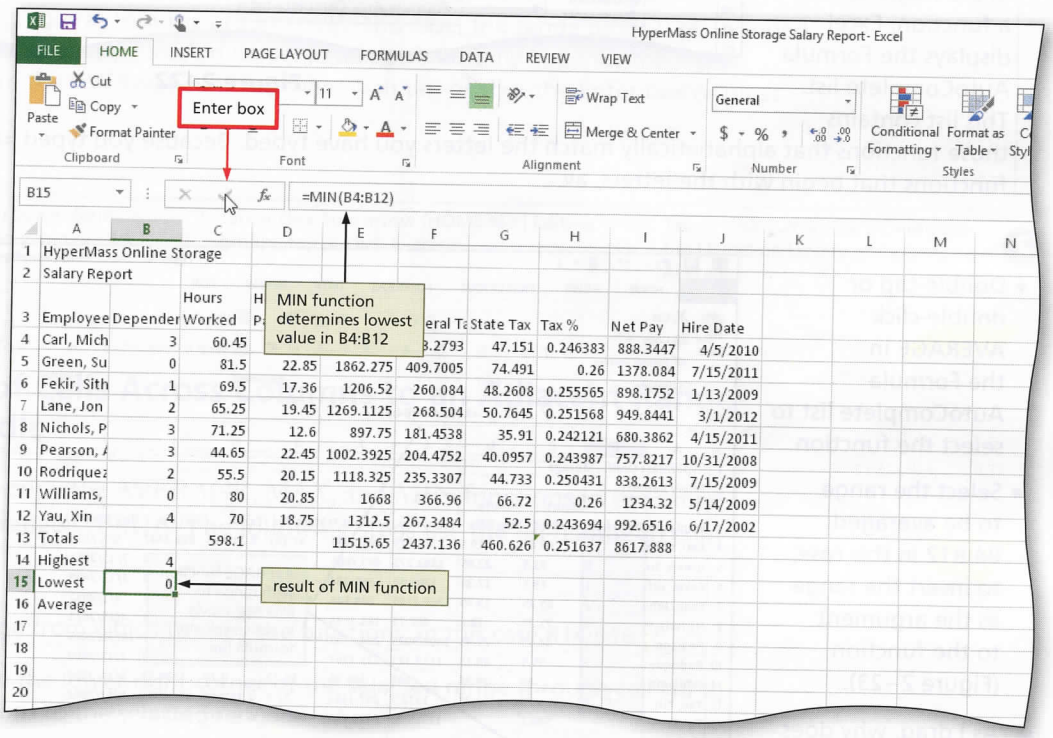


Figure 2–21

Other Ways

1. Tap or click Insert Function box in formula bar, if necessary, select Statistical category, tap or click MIN, specify arguments
2. Tap or click Sum arrow (FORMULAS tab | Function Library group), tap or click Min
3. Type `=MIN` in cell, fill in arguments

To Determine the Average of a Range of Numbers Using the Keyboard

The AVERAGE function sums the numbers in a specified range and then divides the sum by the number of cells with numeric values in the range. The following steps use the AVERAGE function to determine the average of the numbers in the range B4:B12. ***Why?*** *The AVERAGE function creates an accurate average automatically.*

1

- Select the cell to contain the average, cell B16 in this case.
- Type **=av** in the cell to display the Formula AutoComplete list. Press the DOWN ARROW key to highlight the required formula (Figure 2–22).

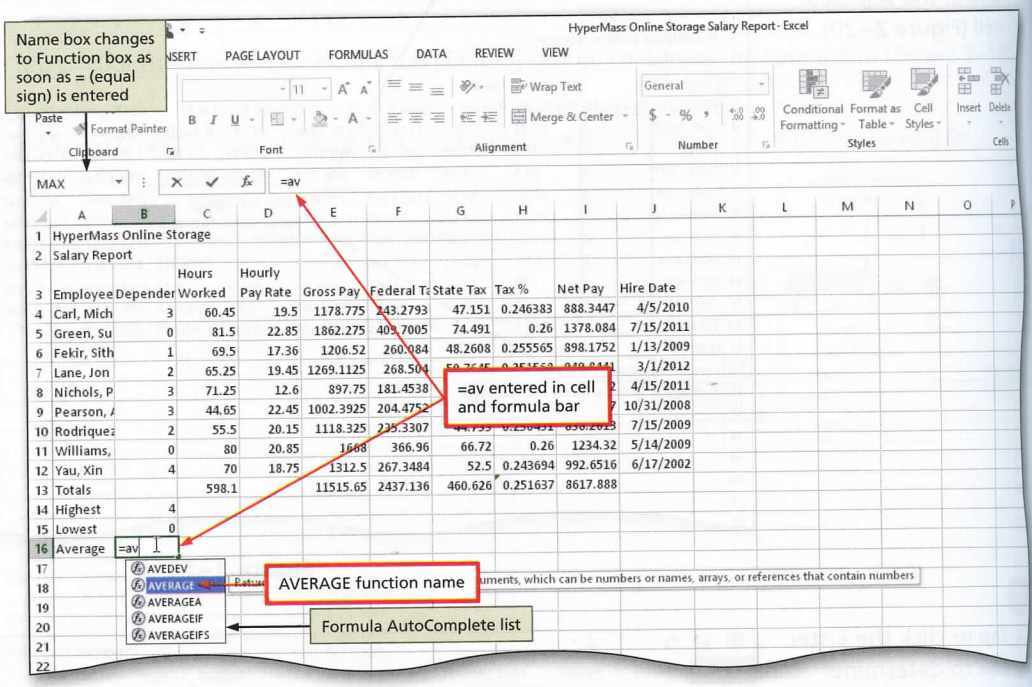


Figure 2–22

Q&A What is happening as I type?
As you type the equal sign followed by the characters in the name of a function, Excel displays the Formula AutoComplete list. This list contains those functions that alphabetically match the letters you have typed. Because you typed =av, Excel displays all the functions that begin with the letters, av.

2

- Double-tap or double-click AVERAGE in the Formula AutoComplete list to select the function.
- Select the range to be averaged, B4:B12 in this case, to insert the range as the argument to the function (Figure 2–23).

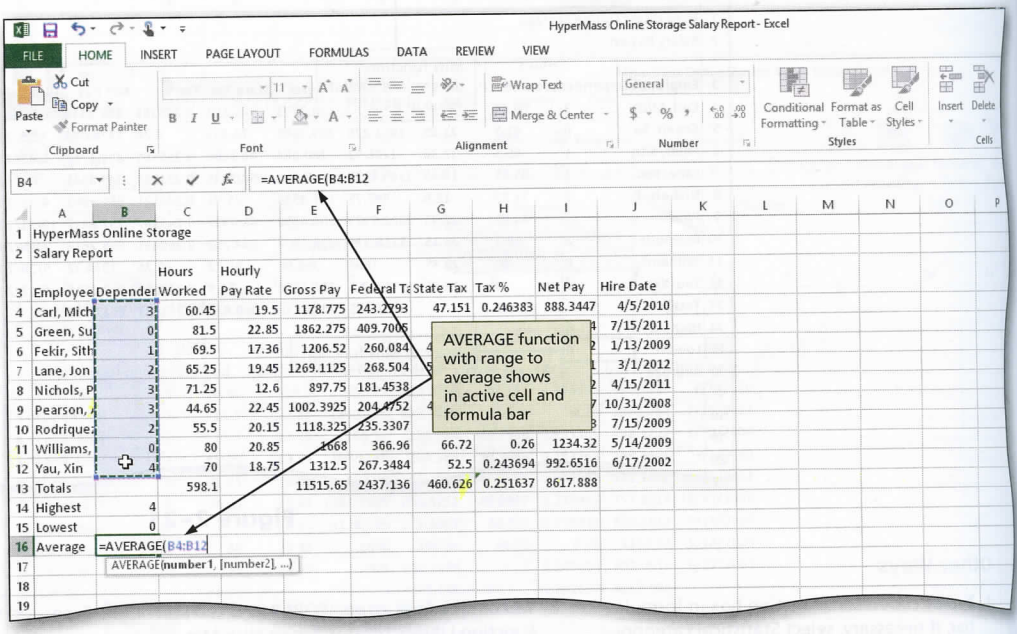


Figure 2–23

Q&A As I drag, why does the function in cell B16 change?
When you tap or click cell B4, Excel appends cell B4 to the left parenthesis in the formula bar and surrounds cell B4 with a marquee. When you begin dragging, Excel appends to the argument a colon (:) and the cell reference of the cell where the pointer is located.

3

- Tap or click th box to compu the average c numbers in th selected rang display the re in the selecte (Figure 2–24

Q&A Can I use the keys to comp entry instead No. When yo Point mode cannot use t keys to com the entry. W Point mode, arrow keys the selected reference in range you a selecting.

What is the of the pare the functio The AVERA within pare parenthesis the ENTER k

Other Ways

1. Tap or click bar, select AVERAGE

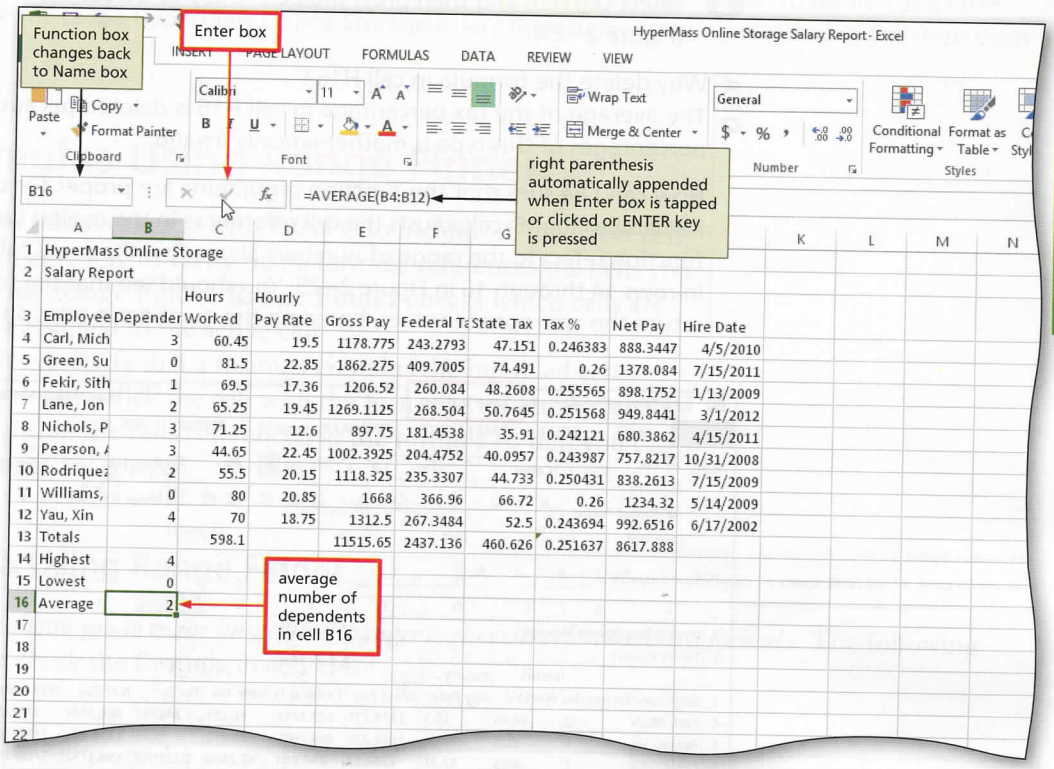
To Copy a Using the

The n B14:B16 to the function

1 Select t

2 Drag th copy th

3. Tap or click the Enter box to compute the average of the numbers in the selected range and display the result in the selected cell (Figure 2–24).



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7	Lane, Jon	2	65.25	19.45	1269.1125	268.504	50.7645	0.251568	949.8441	3/1/2012
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9	Pearson, A	3	44.65	22.45	1002.3925	204.4752	40.0957	0.243987	757.8217	10/31/2008
10	Rodriquez	2	55.5	20.15	1118.325	235.3307	44.733	0.250431	838.2613	7/15/2009
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12	Yau, Xin	4	70	18.75	1312.5	267.3484	52.5	0.243694	992.6516	6/17/2002
13	Totals		598.1		11515.65	2437.136	460.626	0.251637	8617.888	
14	Highest	4								
15	Lowest	0								
16	Average	2								

Figure 2–24

Q&A

Can I use the arrow keys to complete the entry instead?

No. When you use Point mode you cannot use the arrow keys to complete the entry. While in Point mode, the arrow keys change the selected cell reference in the range you are selecting.

What is the purpose of the parentheses in the function?

The AVERAGE function requires that the argument (in this case, the range B4:B12) be included within parentheses following the function name. Excel automatically appends the right parenthesis to complete the AVERAGE function when you tap or click the Enter box or press the ENTER key.

Other Ways

1. Tap or click Insert Function box in formula bar, select Statistical category, tap or click AVERAGE
2. Tap or click Sum arrow (HOME tab | Editing group), tap or click Average
3. Tap or click Sum arrow (FORMULAS tab | Function Library group), tap or click Average

To Copy a Range of Cells Across Columns to an Adjacent Range Using the Fill Handle

The next step is to copy the AVERAGE, MAX, and MIN functions in the range B14:B16 to the adjacent range C14:I16. The following steps use the fill handle to copy the functions.

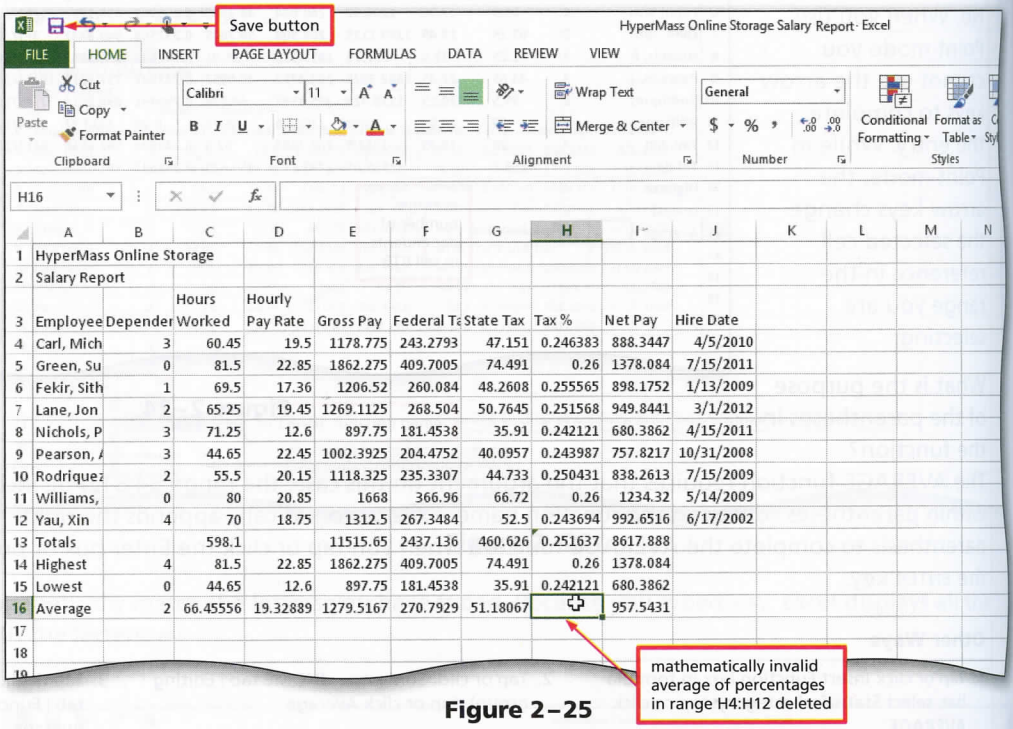
1. Select the source range from which to copy the functions, in this case B14:B16.
2. Drag the fill handle in the lower-right corner of the selected range through cell I16 to copy the three functions to the selected range.

3. Select cell H16 and then press the DELETE key to delete the average of the tax % (Figure 2–25).

Q&A

Why delete the formula in cell H16?
The average of the tax percentage in cell H16 is deleted because an average of percentages of this type is mathematically invalid.

How can I be sure that the function arguments are proper for the cells in range C14:I16?
Remember that Excel adjusts the cell references in the copied functions so that each function refers to the range of numbers above it in the same column. Review the numbers in rows 14 through 16 in Figure 2–25. You should see that the functions in each column return the appropriate values, based on the numbers in rows 4 through 12 of that column.



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3	Employee	Dependents	Hours Worked	Hourly Pay Rate	Gross Pay	Federal Tax	State Tax	Tax %	Net Pay	Hire Date
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5	Green, Su	0	81.5	22.85	1862.275	409.7005	74.491	0.26	1378.084	7/15/2011
6	Fekir, Sith	1	69.5	17.36	1206.52	260.084	48.2608	0.255565	898.1752	1/13/2009
7	Lane, Jon	2	65.25	19.45	1269.1125	268.504	50.7645	0.251568	949.8441	3/1/2012
8	Nichols, P	3	71.25	12.6	897.75	181.4538	35.91	0.242121	680.3862	4/15/2011
9	Pearson, A	3	44.65	22.45	1002.3925	204.4752	40.0957	0.243987	757.8217	10/31/2008
10	Rodriquez	2	55.5	20.15	1118.325	235.3307	44.733	0.250431	838.2613	7/15/2009
11	Williams,	0	80	20.85	1668	366.96	66.72	0.26	1234.32	5/14/2009
12	Yau, Xin	4	70	18.75	1312.5	267.3484	52.5	0.243694	992.6516	6/17/2002
13	Totals		598.1		11515.65	2437.136	460.626	0.251637	8617.888	
14	Highest	4	81.5	22.85	1862.275	409.7005	74.491	0.26	1378.084	
15	Lowest	0	44.65	12.6	897.75	181.4538	35.91	0.242121	680.3862	
16	Average	2	66.45556	19.32889	1279.5167	270.7929	51.18067		957.5431	
17										
18										

Figure 2–25

Other Ways

1. Select source area, tap or click Copy button (HOME tab | Clipboard group), select destination area, tap or click Paste button (HOME tab | Clipboard group)
2. Press and hold or right-click source area, tap or click Copy on shortcut menu; press and hold or right-click destination area, tap or click Paste icon on shortcut menu
3. Select source area and then point to border of range; while holding down CTRL, drag source area to destination area
4. Select source area, press CTRL+C, select destination area, press CTRL+V

To Save a Workbook Using the Same File Name

Earlier in this project, an intermediate version of the workbook was saved using the file name, HyperMass Online Storage Salary Report. The following step saves the workbook a second time, using the same file name.

1. Tap or click the Save button on the Quick Access Toolbar to overwrite the previously saved file.

Break Point: If you wish to take a break, this is a good place to do so. You can exit Excel now. To resume at a later time, run Excel, open the file called HyperMass Online Storage Salary Report, and continue following the steps from this location forward.

Verifying Formulas Using Range Finder

One of the more common mistakes made with Excel is to include an incorrect cell reference in a formula. An easy way to verify that a formula references the cells you want it to reference is to use Range Finder. **Range Finder** checks which cells are referenced in the formula assigned to the active cell.

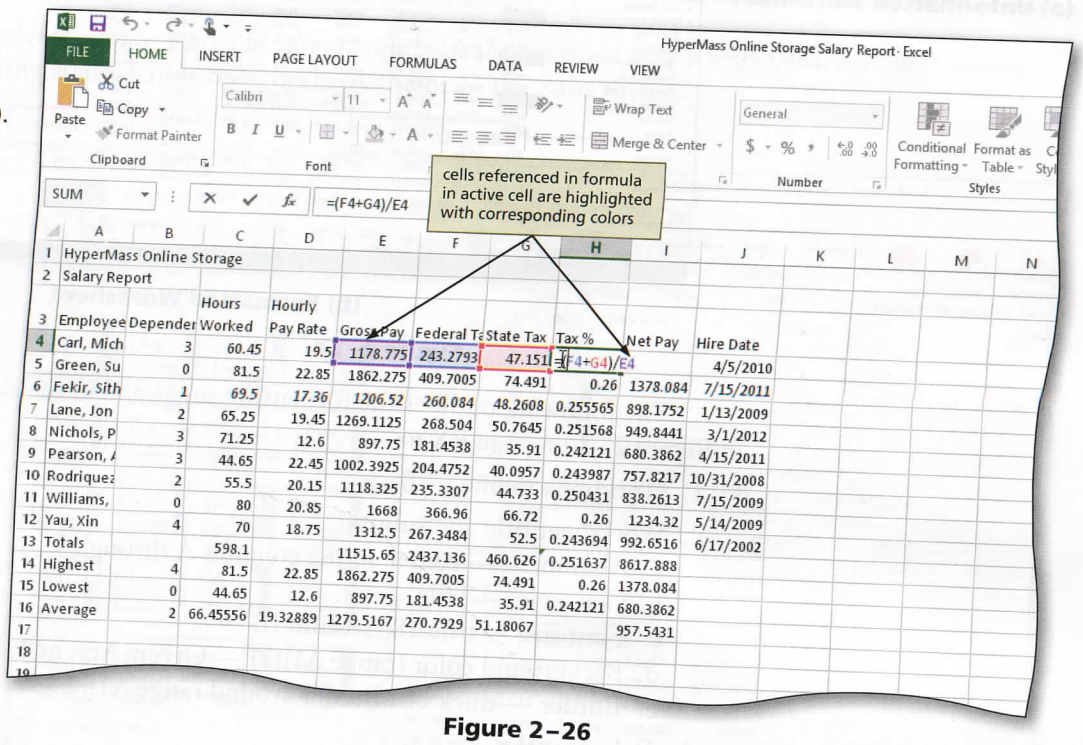
To use Range Finder to verify that a formula contains the intended cell references, double-tap or double-click the cell with the formula you want to check. Excel responds by highlighting the cells referenced in the formula so that you can verify that the cell references are correct.

To Verify a Formula Using Range Finder

1 ENTER FORMULAS | 2 ENTER FUNCTIONS | 3 VERIFY FORMULAS | 4 FORMAT WORKSHEET | 5 CHECK SPELLING | 6 PRINT WORKSHEET

Why? Range Finder allows you to make immediate changes to the cells referenced in a formula. The following steps use Range Finder to check the formula in cell H4.

1. Double-tap or double-click cell H4 to activate Range Finder (Figure 2–26).
2. Press the ESC key to quit Range Finder and then tap or click anywhere in the worksheet, such as cell A18, to deselect the current cell.



	A	B	C	D	E	F	G	H	I	J
1	HyperMass Online Storage									
2	Salary Report									
3	Employee	Dependents	Hours Worked	Hourly Pay Rate	Gross Pay	Federal Tax	State Tax	Tax %	Net Pay	Hire Date
4	Carl, Mich	3	60.45	19.5	1178.775	243.2793	47.151	=(F4+G4)/E4		4/5/2010
5	Green, Su	0	81.5	22.85	1862.275	409.7005	74.491	0.26	1378.084	7/15/2011
6	Fekir, Sith	1	69.5	17.36	1206.52	260.084	48.2608	0.255565	898.1752	1/13/2009
7	Lane, Jon	2	65.25	19.45	1269.1125	268.504	50.7645	0.251568	949.8441	3/1/2012
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10	Rodriquez	2	55.5	20.15	1118.325	235.3307	44.733	0.250431	838.2613	7/15/2009
11	Williams,	0	80	20.85	1668	366.96	66.72	0.26	1234.32	5/14/2009
12	Yau, Xin	4	70	18.75	1312.5	267.3484	52.5	0.243694	992.6516	6/17/2002
13	Totals		598.1		11515.65	2437.136	460.626	0.251637	8617.888	
14	Highest	4	81.5	22.85	1862.275	409.7005	74.491	0.26	1378.084	
15	Lowest	0	44.65	12.6	897.75	181.4538	35.91	0.242121	680.3862	
16	Average	2	66.45556	19.32889	1279.5167	270.7929	51.18067		957.5431	

Figure 2–26

Formatting the Worksheet

Although the worksheet contains the appropriate data, formulas, and functions, the text and numbers need to be formatted to improve their appearance and readability.

5. Total line
   a. Cell style — Total
   b. Numbers — accounting number format
6. Highest, lowest, and average rows
   a. Font style of row titles in range A14:A16 — bold
   b. Numbers — currency style with floating dollar sign, comma style for Hours Worked
7. Percentages in column H
   a. Numbers — percentage style with two decimal places
8. Column widths
   a. Columns A and B — best fit
   b. Columns E, F, and I — 10.50 characters
   c. Column G — 10.25 characters
   d. Column C, D, and H — 7.50 characters
9. Row heights
   a. Row 3 — 48.00 points
   b. Row 14 — 27.00 points
   c. Remaining rows — default

To Change the Workbook Theme

1 ENTER FORMULAS | 2 ENTER FUNCTIONS | 3 VERIFY FORMULAS | 4 FORMAT WORKSHEET | 5 CHECK SPELLING | 6 PRINT WORKSHEET

Why? *The Basis theme includes fonts and colors that provide the worksheet with a professional and subtly colored appearance.* The following steps change the workbook theme to the Basis theme.

1. Display the PAGE LAYOUT tab.
2. Tap or click the Themes button (PAGE LAYOUT tab | Themes group) to display the Themes gallery (Figure 2–28).

Experiment

- Point to several themes in the Themes gallery to see a live preview of the themes.

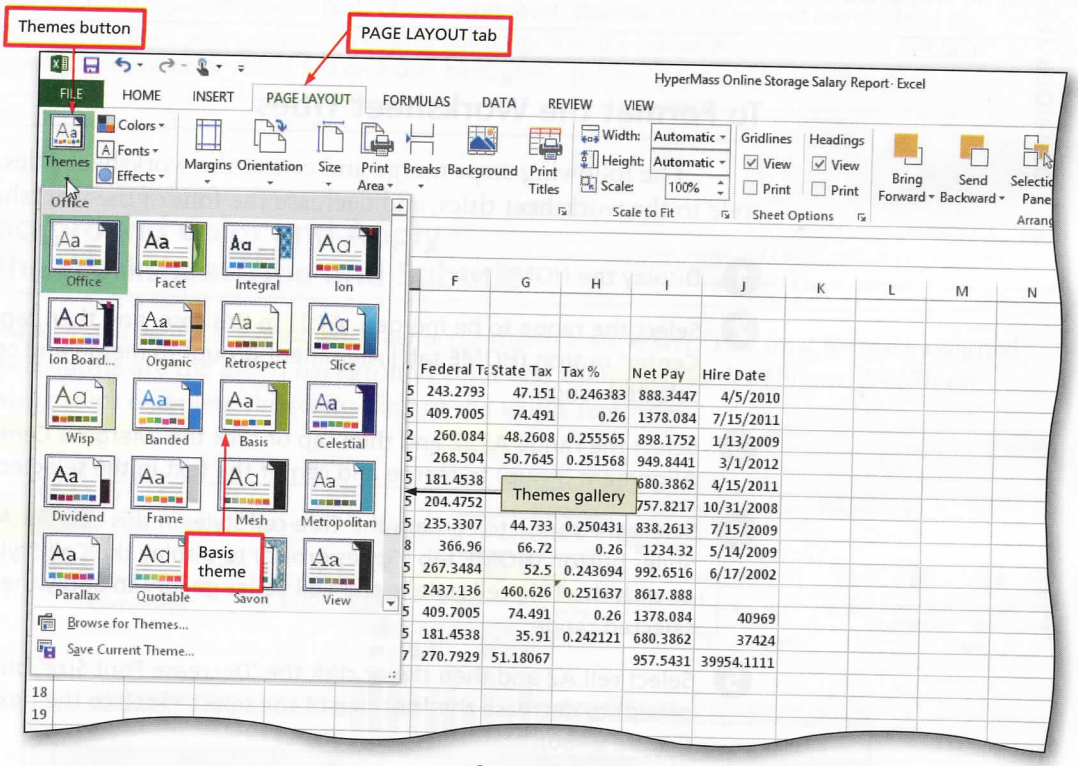


Figure 2–28

Q&A Why should I change the theme of a workbook?

A company or department may standardize with a specific theme so that all of their documents have a similar appearance. Similarly, an individual may want to have a theme that sets his or her work apart from the work of others. Other Office programs, such as Word and PowerPoint, include the same themes included with Excel, meaning that all of your Microsoft Office documents can share a common theme.

2. Tap or click Basis in the Themes gallery to change the workbook theme (Figure 2–29).

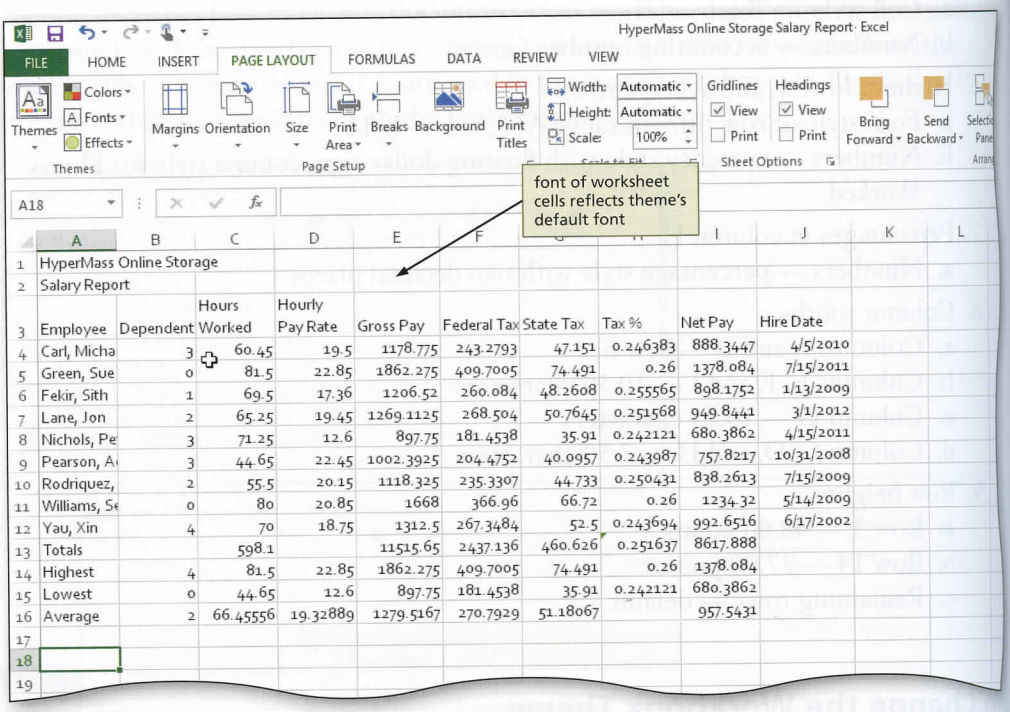


Figure 2–29

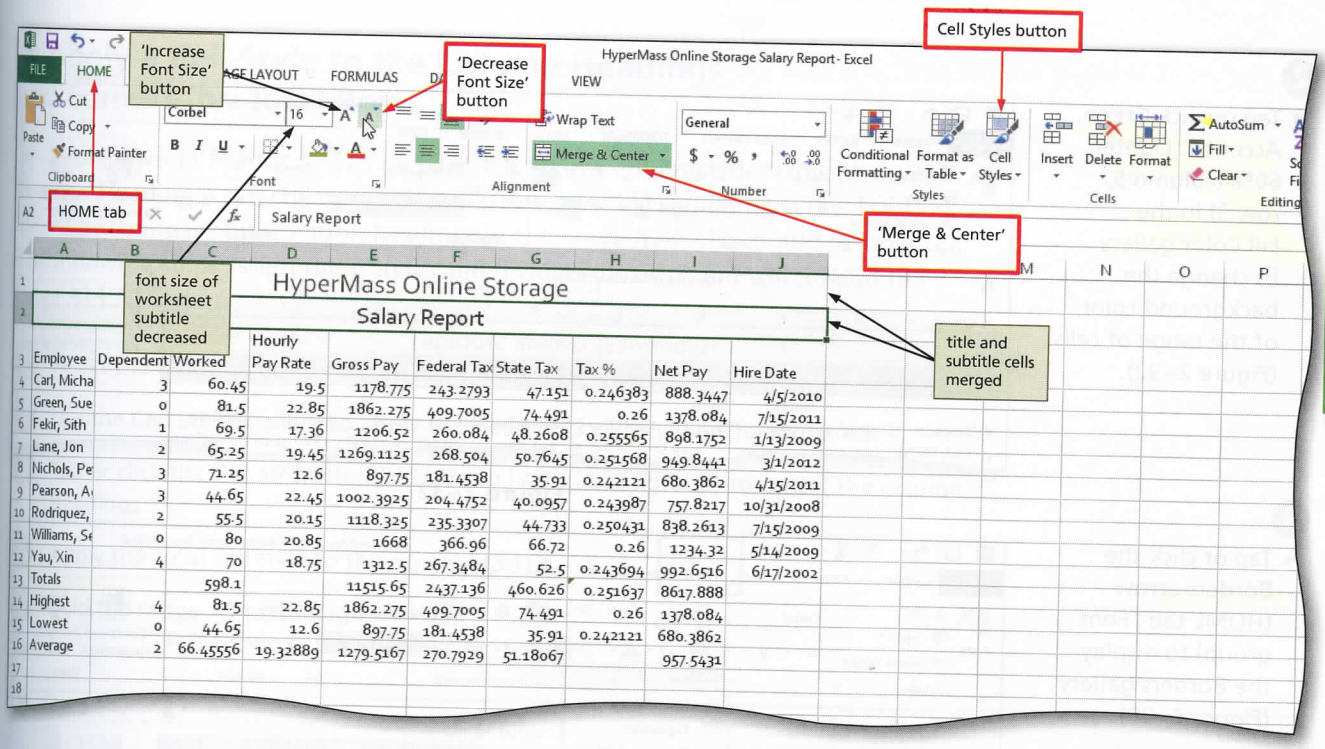
Q&A Why did the cells in the worksheet change?
The cells in the worksheet originally were formatted with the default font for the default Office theme. The default font for the Basis theme is different from that of the default font for the Office theme and, therefore, changed on the worksheet when you changed the theme. If you had modified the font for any of the cells, those cells would not be formatted with the default font for the Basis theme.

To Format the Worksheet Titles

The following steps merge and center the worksheet titles, apply the Title cells style to the worksheet titles, and decrease the font of the worksheet subtitle.

1. Display the HOME tab.
2. Select the range to be merged, A1:J1 in this case, and then tap or click the 'Merge & Center' button (HOME tab | Alignment group) to merge and center the text in the selected range.
3. Select the range A2:J2 and then tap or click the 'Merge & Center' button (HOME tab | Alignment group) to merge and center the text in the selected range.
4. Select the range to contain the Title cell style, in this case A1:A2, tap or click the Cell Styles button (HOME tab | Styles group) to display the Cell Styles gallery, and then tap or click the Title cell style in the Cell Styles gallery to apply the Title cell style to the selected range.
5. Select cell A2 and then tap or click the 'Decrease Font Size' button (HOME tab | Font group) to decrease the font size of the selected cell to the next lowest font size (Figure 2–30).

Q&A What is the effect of tapping or clicking the 'Decrease Font Size' button?
When you tap or click the 'Decrease Font Size' button, Excel assigns the next lowest font size in the Font Size gallery to the selected range. The 'Increase Font Size' button works in a similar manner, but causes Excel to assign the next highest font size in the Font Size gallery to the selected range.



Employee	Dependent	Hours Worked	Hourly Pay Rate	Gross Pay	Federal Tax	State Tax	Tax %	Net Pay	Hire Date
Carl, Micha	3	60.45	19.5	1178.775	243.2793	47.151	0.246383	888.3447	4/5/2010
Green, Sue	0	81.5	22.85	1862.275	409.7005	74.491	0.26	1378.084	7/15/2011
Fekir, Sith	1	69.5	17.36	1206.52	260.084	48.2608	0.255565	898.1752	1/13/2009
Lane, Jon	2	65.25	19.45	1269.1125	268.504	50.7645	0.251568	949.8441	3/1/2012
Nichols, Pe	3	71.25	12.6	897.75	181.4538	35.91	0.242121	680.3862	4/15/2011
Pearson, A	3	44.65	22.45	1002.3925	204.4752	40.0957	0.243987	757.8217	10/31/2008
Rodriquez,	2	55.5	20.15	1118.325	235.3307	44.733	0.250431	838.2613	7/15/2009
Williams, Se	0	80	20.85	1668	366.96	66.72	0.26	1234.32	5/14/2009
Yau, Xin	4	70	18.75	1312.5	267.3484	52.5	0.243694	992.6516	6/17/2002
Totals		598.1		11515.65	2437.136	460.626	0.251637	8617.888	
Highest	4	81.5	22.85	1862.275	409.7005	74.491	0.26	1378.084	
Lowest	0	44.65	12.6	897.75	181.4538	35.91	0.242121	680.3862	
Average	2	66.45556	19.32889	1279.5167	270.7929	51.18067		957.5431	

Figure 2–30

Which colors should you select when formatting your worksheet?
Knowing how people perceive colors helps you emphasize parts of your worksheet. Warmer colors (red and orange) tend to reach toward the reader. Cooler colors (blue, green, and violet) tend to pull away from the reader. Bright colors jump out of a dark background and are easiest to see. White or yellow text on a dark blue, green, purple, or black background is ideal.

CONSIDER THIS

To Change the Background Color and Apply a Box Border to the Worksheet Title and Subtitle

1 ENTER FORMULAS | 2 ENTER FUNCTIONS | 3 VERIFY FORMULAS
4 FORMAT WORKSHEET | 5 CHECK SPELLING | 6 PRINT WORKSHEET

Why? A background color and border can draw attention to the title of a worksheet. The final formats assigned to the worksheet title and subtitle are the green background color and thick box border (Figure 2–27b on page EX 90). The following steps complete the formatting of the worksheet titles.

1

- Select the range A1:A2 and then tap or click the Fill Color arrow (HOME tab | Font group) to display the Fill Color gallery (Figure 2–31).

Experiment

- Point to a number of colors in the Fill Color gallery to display a live preview of the color in the range A1:A2.

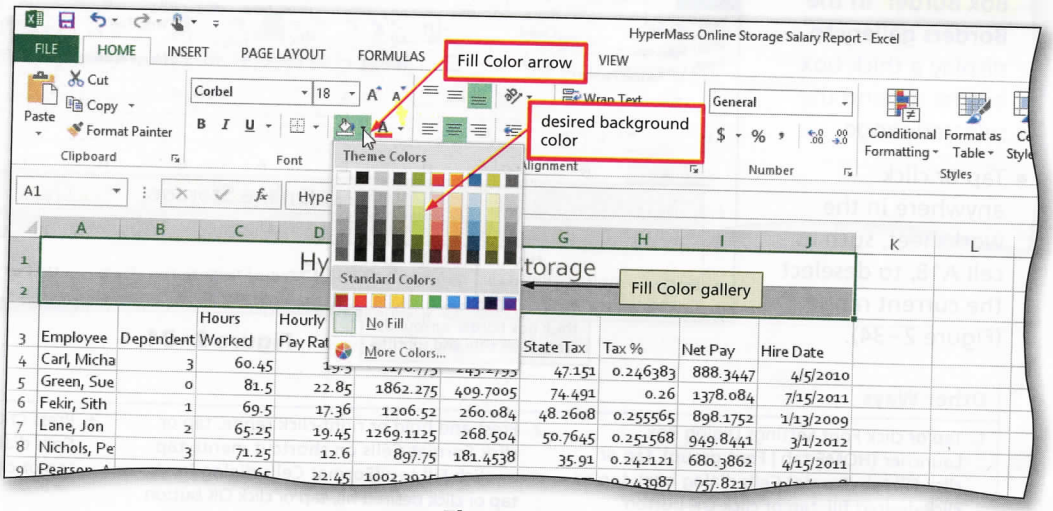


Figure 2–31

2

- Tap or click Green, Accent 1, Lighter 60% (column 5, row 3) in the Fill Color gallery to change the background color of the range of cells (Figure 2–32).

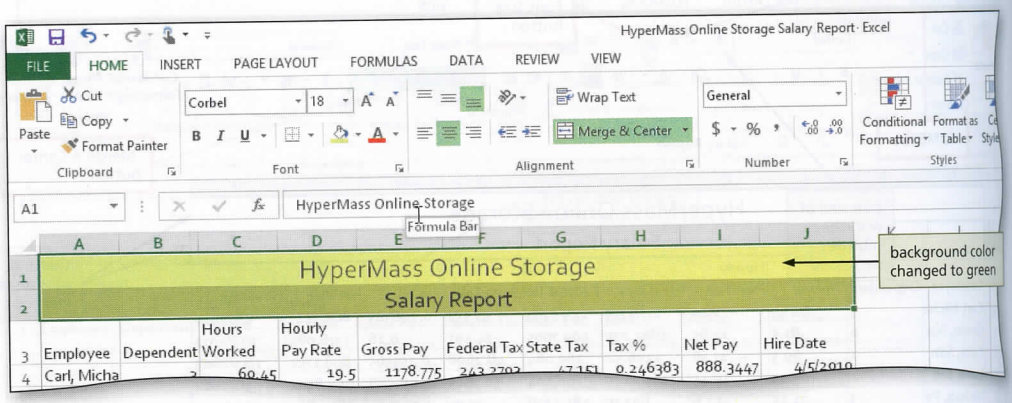


Figure 2–32

3

- Tap or click the Borders arrow (HOME tab | Font group) to display the Borders gallery (Figure 2–33).

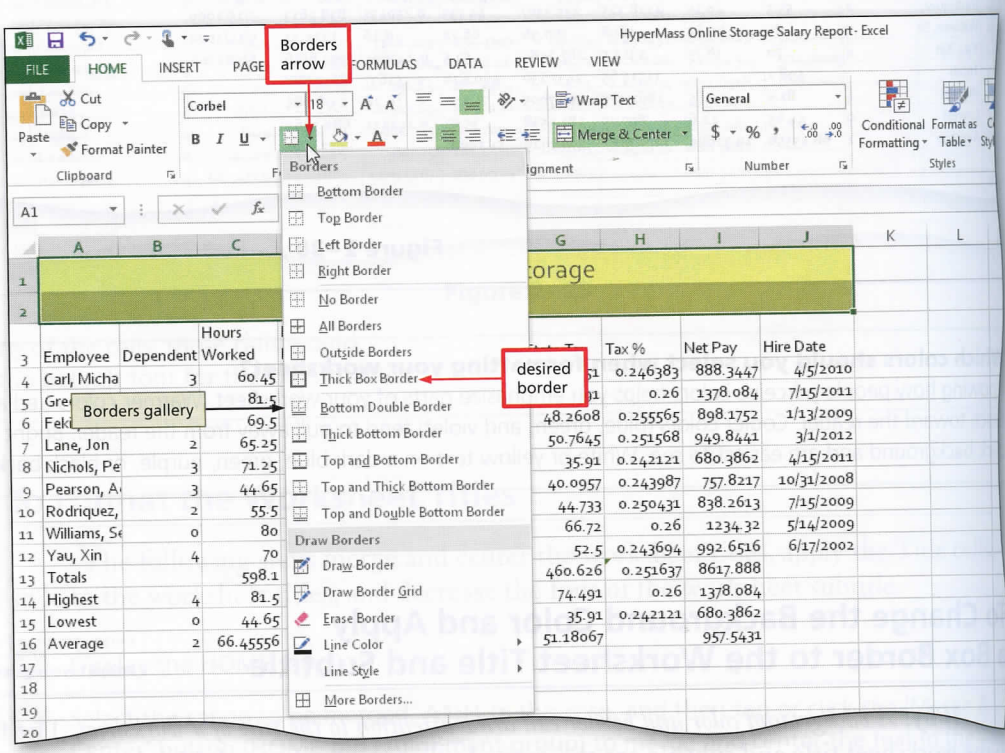


Figure 2–33

4

- Tap or click 'Thick Box Border' in the Borders gallery to display a thick box border around the selected range.
- Tap or click anywhere in the worksheet, such as cell A18, to deselect the current range (Figure 2–34).

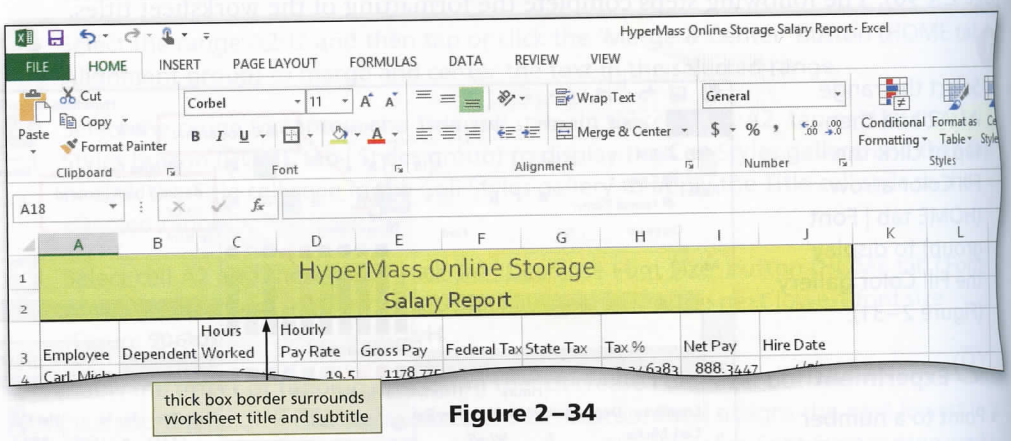


Figure 2–34

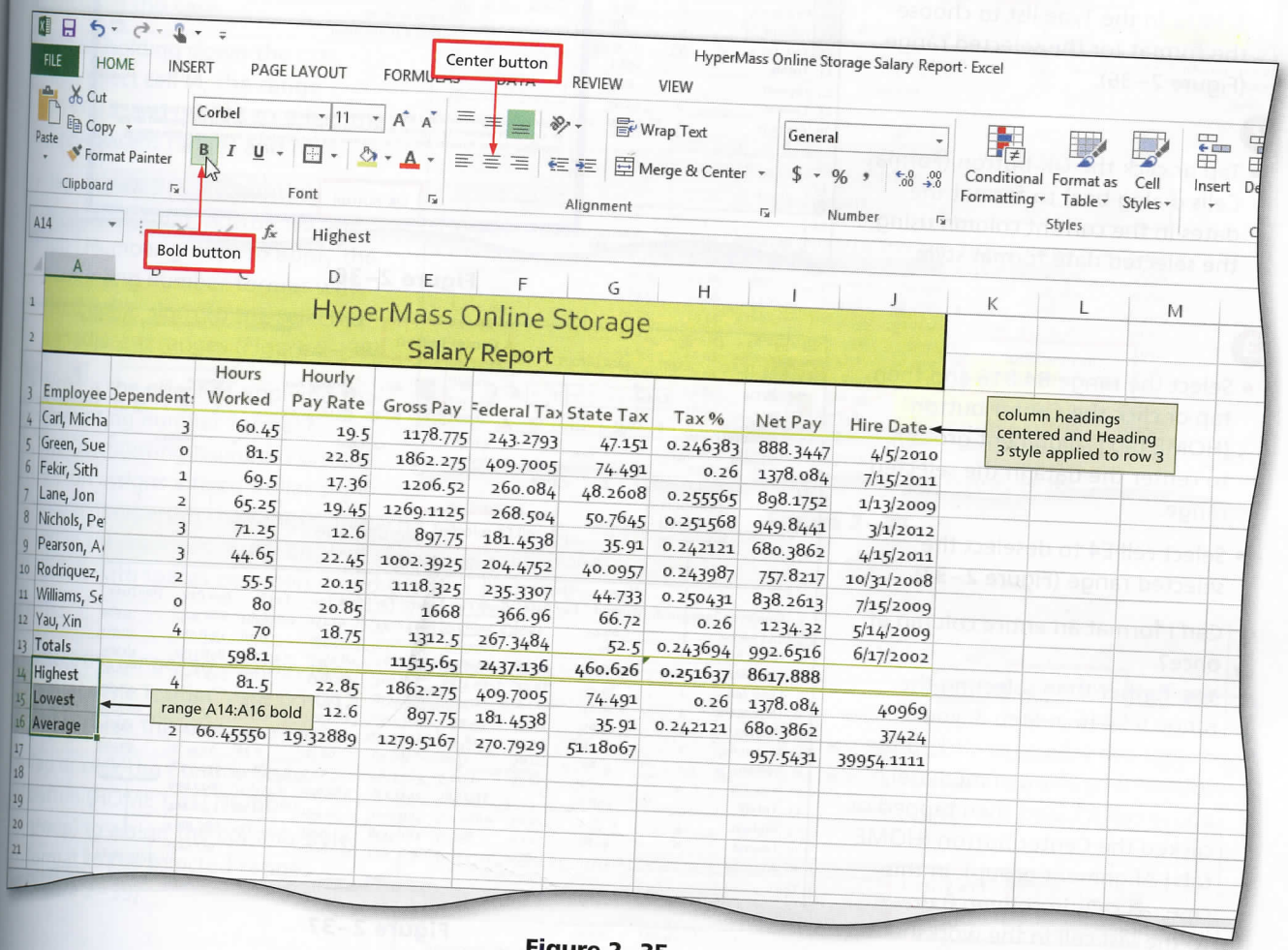
Other Ways

1. Tap or click Font Settings Dialog Box Launcher (HOME tab | Font group), tap or click Fill tab (Format Cells dialog box), tap or click desired fill, tap or click OK button
2. Press and hold or right-click range, tap or click Format Cells on shortcut menu, tap or click Fill tab (Format Cells dialog box), tap or click desired fill, tap or click OK button
3. Press CTRL+1, tap or click Fill tab (Format Cells dialog box), tap or click desired fill, tap or click OK button

To Apply a Cell Style to the Column Headings and Format the Total Rows

As shown in Figure 2–27b on page EX 90, the column titles (row 3) should have the Heading 3 cell style and the totals row (row 13) should have the Total cell style. The summary information headings in the range A14:A16 should be bold. The following steps assign these styles and formats to row 3 and row 13 and the range A14:A16.

1. Select the range to be formatted, cells A3:J3 in this case.
2. Use the Cell Styles gallery to apply the Heading 3 cell style to the range A3:J3.
3. Tap or click the Center button (HOME tab | Alignment group) to center the column headings.
4. Apply the Total cell style to the range A13:J13.
5. Bold the range A14:A16 (Figure 2–35).



Employee	Dependents	Hours Worked	Hourly Pay Rate	Gross Pay	Federal Tax	State Tax	Tax %	Net Pay	Hire Date
Carl, Micha	3	60.45	19.5	1178.775	243.2793	47.151	0.246383	888.3447	4/5/2010
Green, Sue	0	81.5	22.85	1862.275	409.7005	74.491	0.26	1378.084	7/15/2011
Fekir, Sith	1	69.5	17.36	1206.52	260.084	48.2608	0.255565	898.1752	1/13/2009
Lane, Jon	2	65.25	19.45	1269.1125	268.504	50.7645	0.251568	949.8441	3/1/2012
Nichols, Pe	3	71.25	12.6	897.75	181.4538	35.91	0.242121	680.3862	4/15/2011
Pearson, A	3	44.65	22.45	1002.3925	204.4752	40.0957	0.243987	757.8217	10/31/2008
Rodriquez,	2	55.5	20.15	1118.325	235.3307	44.733	0.250431	838.2613	7/15/2009
Williams, Se	0	80	20.85	1668	366.96	66.72	0.26	1234.32	5/14/2009
Yau, Xin	4	70	18.75	1312.5	267.3484	52.5	0.243694	992.6516	6/17/2002
Totals		598.1		11515.65	2437.136	460.626	0.251637	8617.888	
Highest	4	81.5	22.85	1862.275	409.7005	74.491	0.26	1378.084	40969
Lowest	0	12.6		897.75	181.4538	35.91	0.242121	680.3862	37424
Average	2	66.45556	19.32889	1279.5167	270.7929	51.18067		957.5431	39954.1111

Figure 2–35

To Format Dates and Center Data in Cells

Why? With the column titles and total rows formatted, the next step is to format the dates in column J and center the dependents in column B. The following steps format the dates in the range J4:J12 and center the data in the range B4:B16.

1

- Select the range to contain the new date format, cells J4:J12 in this case.
- Tap or click the Format Cells: Number Format Dialog Box Launcher (HOME tab | Number group) to display the Format Cells dialog box.
- If necessary, tap or click the Number tab (Format Cells dialog box), tap or click Date in the Category list, and then tap or click 3/14/12 in the Type list to choose the format for the selected range (Figure 2–36).

2

- Tap or click the OK button (Format Cells dialog box) to format the dates in the current column using the selected date format style.

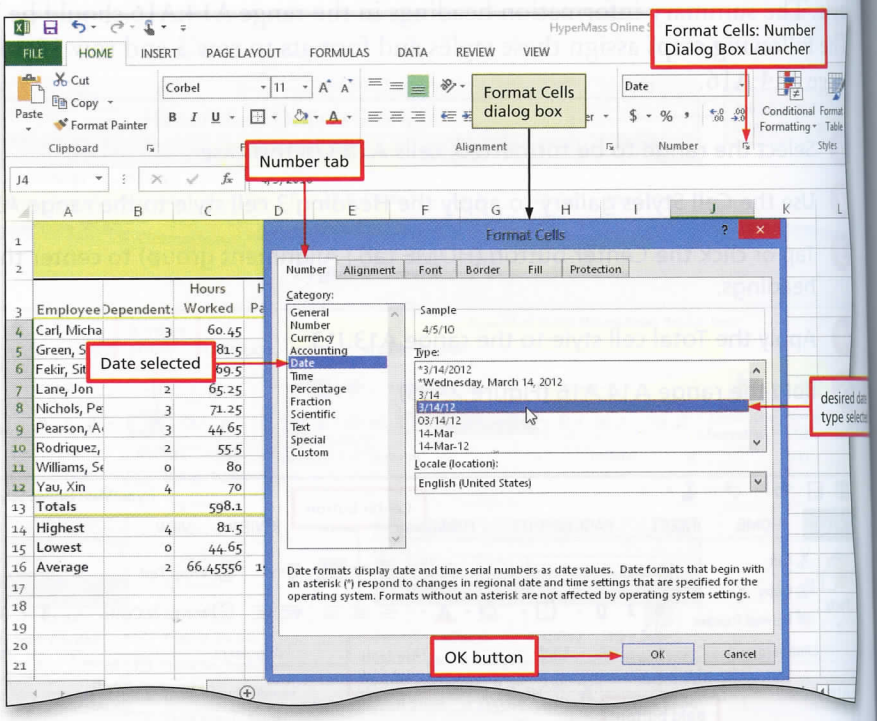


Figure 2–36

3

- Select the range B4:B16 and then tap or click the Center button (HOME tab | Alignment group) to center the data in the selected range.
- Select cell E4 to deselect the selected range (Figure 2–37).

Q&A Can I format an entire column at once?

Yes. Rather than selecting the range B4:B16 in Step 3, you could have tapped or clicked the column B heading immediately above cell B1, and then tapped or clicked the Center button (HOME tab | Alignment group). In this case, all cells in column B down to the last cell in the worksheet would have been formatted to use center alignment. This same procedure could have been used to format the dates in column J.

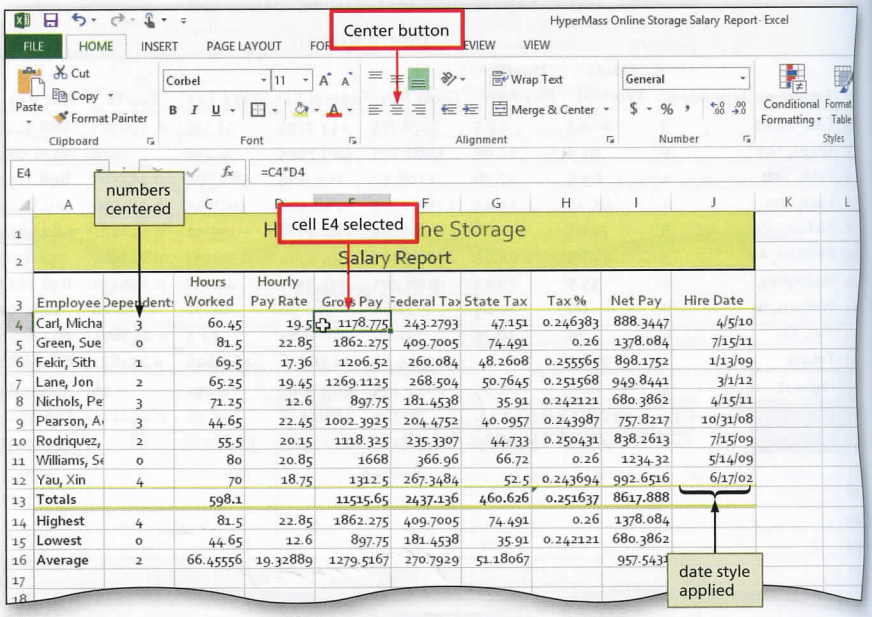


Figure 2–37

Other Ways

1. Press and hold or right-click range, tap or click Format Cells on shortcut menu, tap or click Number tab (Format Cells dialog box), tap or click desired number format, tap or click OK button
2. Press CTRL+1, tap or click Number tab (Format Cells dialog box), tap or click desired number format, tap or click OK button

Formatting Numbers Using the Ribbon

As shown in Figure 2–27b on page EX 90, the worksheet is formatted to resemble an accounting report. For example, in columns D through G and I, the numbers in the first row (row 4), the totals row (row 13), and the rows below the totals (rows 14 through 16) have dollar signs, while the remaining numbers (rows 5 through 12) in columns D through G and column I do not.

To Apply an Accounting Number Format and Comma Style Format Using the Ribbon

The following steps assign formats using the 'Accounting Number Format' button and the Comma Style button. The accounting number format is applied to the currency amounts in rows 4 and 13. The comma style format is applied to the range E5:G12 and to range I5:I12, and to column C (Hours Worked). ***Why?*** *This gives the worksheet a more professional look.*

1

- Select the range to contain the accounting number format, cells D4:G4 in this case.
- While holding down the CTRL key, select cell I4, the range E13:G13, and cell I13 to select the nonadjacent ranges and cells.
- Tap or click the 'Accounting Number Format' button (HOME tab | Number group) to apply the accounting number format with fixed dollar signs to the selected nonadjacent ranges (Figure 2–38).

Q&A What is the effect of applying the accounting number format?
The 'Accounting Number Format' button assigns a fixed dollar sign to the numbers in the ranges. In each cell in these ranges, Excel displays the dollar sign to the far left with spaces between it and the first digit in the cell.

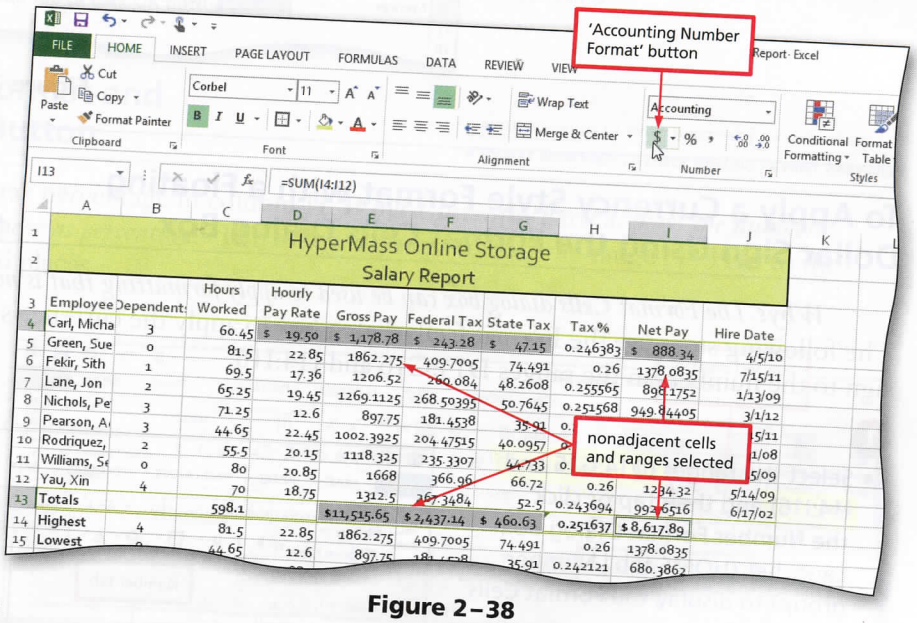


Figure 2–38

2

- Select the ranges to contain the comma style format, cells D5:G12 and I5:I12 in this case.
- Tap or click the Comma Style button (HOME tab | Number group) to assign the comma style format to the selected ranges (Figure 2–39).

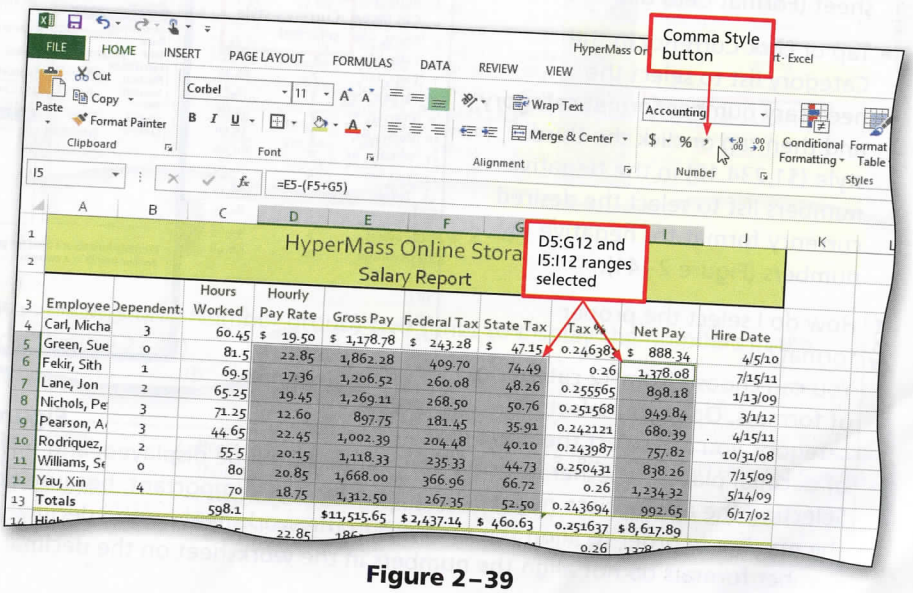


Figure 2–39

3

- Select the range to contain the comma style format, cells C4:C16 in this case.
- Tap or click the Comma Style button (HOME tab | Number group) to assign the comma style format to the selected range (Figure 2–40).

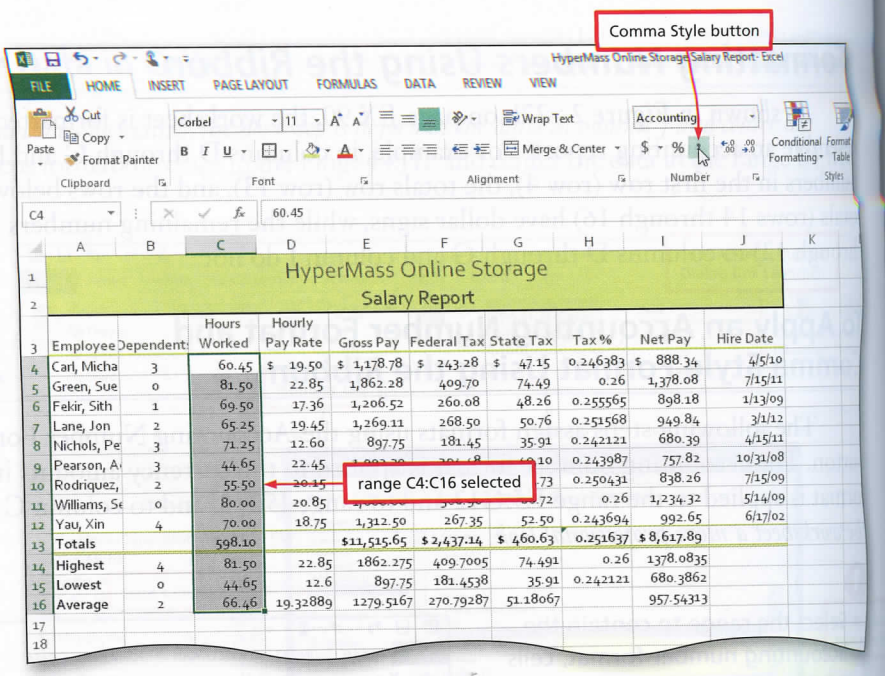


Figure 2–40

To Apply a Currency Style Format with a Floating Dollar Sign Using the Format Cells Dialog Box

1 ENTER FORMULAS | 2 ENTER FUNCTIONS | 3 VERIFY FORMULAS | 4 FORMAT WORKSHEET | 5 CHECK SPELLING | 6 PRINT WORKSHEET

Why? The Format Cells dialog box can be used to apply formatting that is not available directly on the ribbon. The following steps use the Format Cells dialog box to apply the currency style format with a floating dollar sign to the numbers in the ranges D14:G16 and I14:I16.

1

- Select the ranges (D14:G16 and I14:I16) and then tap or click the Number Format Dialog Box Launcher (HOME tab | Number group) to display the Format Cells dialog box.
- If necessary, tap or click the Number tab to display the Number sheet (Format Cells dialog box).
- Tap or click Currency in the Category list to select the necessary number format category and then tap or click the third style ($1,234.10) in the Negative numbers list to select the desired currency format for negative numbers (Figure 2–41).

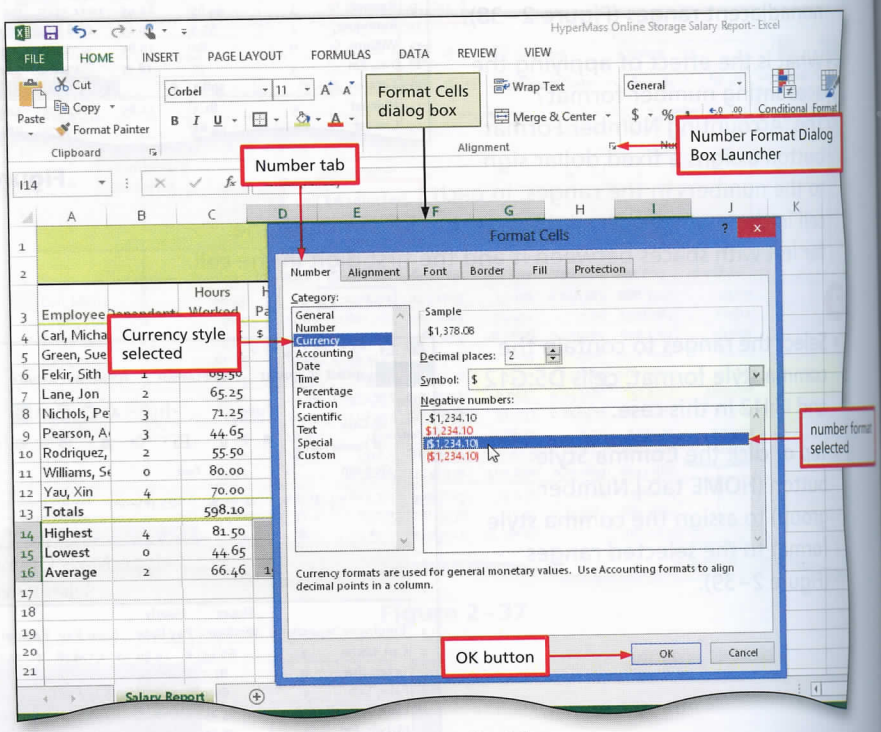


Figure 2–41

Q&A How do I select the proper format?

You can choose from 12 categories of formats. Once you select a category, you can select the number of decimal places, whether or not a dollar sign should be displayed, and how negative numbers should appear. Selecting the appropriate negative numbers format is important, because doing so adds a space to the right of the number in order to align the numbers in the worksheet on the decimal points. Some of the available negative number formats do not align the numbers in the worksheet on the decimal points.

2

- Tap or click the OK button (Format Cells dialog box) to assign the currency style format with a floating dollar sign to the selected ranges (Figure 2–42).

Q&A What is the difference between using the accounting number style and currency style?
When using the 'Accounting Number Format' button, recall that a floating dollar sign always appears immediately to the left of the first digit, and the fixed dollar sign always appears on the left side of the cell.

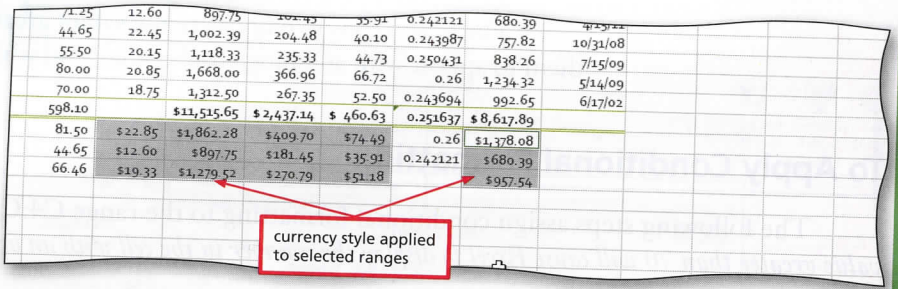


Figure 2–42

Other Ways

1. Press CTRL+1, tap or click Number tab (Format Cells dialog box), tap or click Currency in Category list, select format, tap or click OK button
2. Press CTRL+SHIFT+DOLLAR SIGN ($)

To Apply a Percent Style Format and Use the Increase Decimal Button

1 ENTER FORMULAS | 2 ENTER FUNCTIONS | 3 VERIFY FORMULAS | 4 FORMAT WORKSHEET | 5 CHECK SPELLING | 6 PRINT WORKSHEET

The next step is to format the tax percentage in column H. ***Why?*** *Currently, Excel displays the numbers as decimal fractions when they should appear as percentages.* The following steps format the range H4:H16 to the percent style format with two decimal places.

1

- Select the range to format, cells H4:H16 in this case.
- Tap or click the Percent Style button (HOME tab | Number group) to display the numbers in the selected range as a rounded whole percent.

Q&A What is the result of tapping or clicking the Percent Style button?
The Percent Style button instructs Excel to display a value as a percentage, determined by multiplying the cell entry by 100, rounding the result to the nearest percent, and adding a percent sign. For example, when cell H4 is formatted using the Percent Style buttons, Excel displays the actual value 0.246383 as 25%.

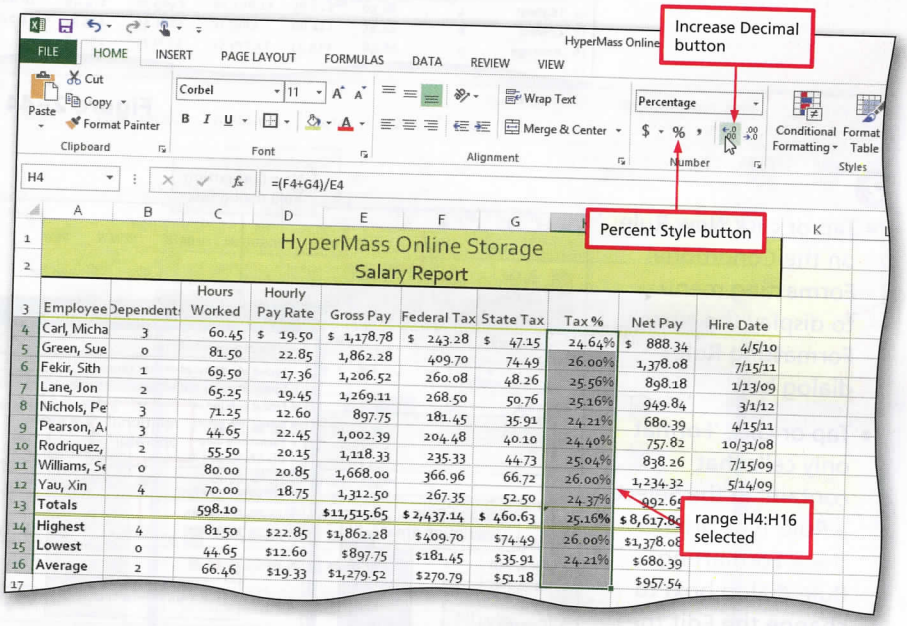


Figure 2–43

2

- Tap or click the Increase Decimal button (HOME tab | Number group) two times to display the numbers in the selected range with two decimal places (Figure 2–43).

Other Ways

1. Press and hold or right-click selected range, tap or click Format Cells on shortcut menu, tap or click Number tab (Format Cells dialog box), tap or click Percentage in Category list, select format, tap or click OK button
2. Press CTRL+1, tap or click Number tab (Format Cells dialog box), tap or click Percentage in Category list, select format, tap or click OK button
3. Press CTRL+SHIFT+PERCENT SIGN (%)

Conditional Formatting

The next step is to emphasize the values greater than 70 in column C by formatting them to appear with an orange background and white font color (Figure 2–44).

To Apply Conditional Formatting

The following steps assign conditional formatting to the range C4:C12. ***Why?*** *After formatting, any cell value greater than 70 will cause Excel to display the number in the cell with an orange background and a white font color.*

1

- Select the range C4:C12.
- Tap or click the Conditional Formatting button (HOME tab | Styles group) to display the Conditional Formatting menu (Figure 2–44).

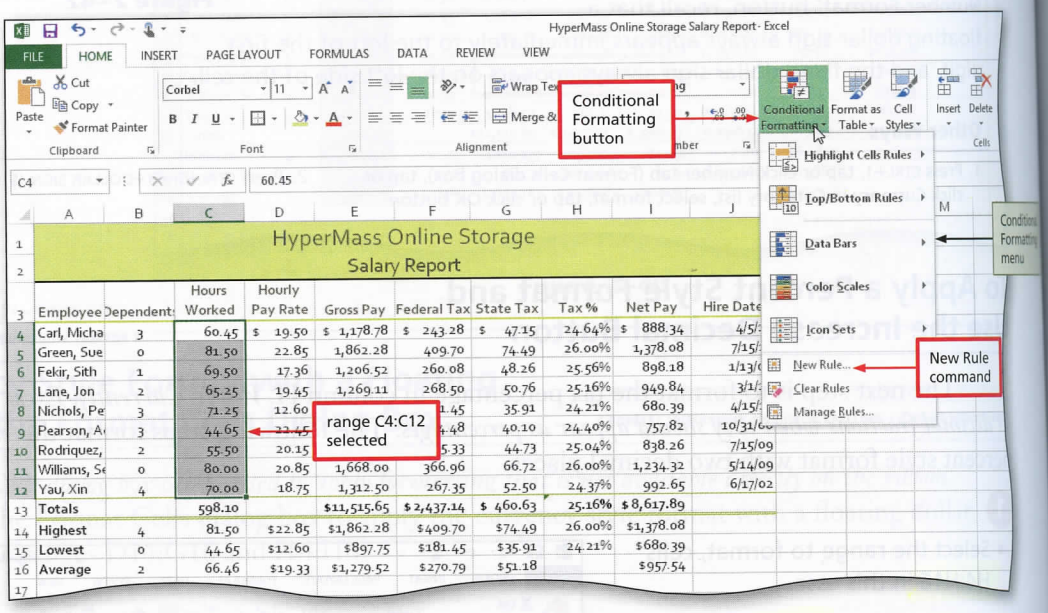


Figure 2–44

2

- Tap or click New Rule on the Conditional Formatting menu to display the New Formatting Rule dialog box.
- Tap or click 'Format only cells that contain' in the Select a Rule Type area (New Formatting Rule dialog box) to change the Edit the Rule Description area.

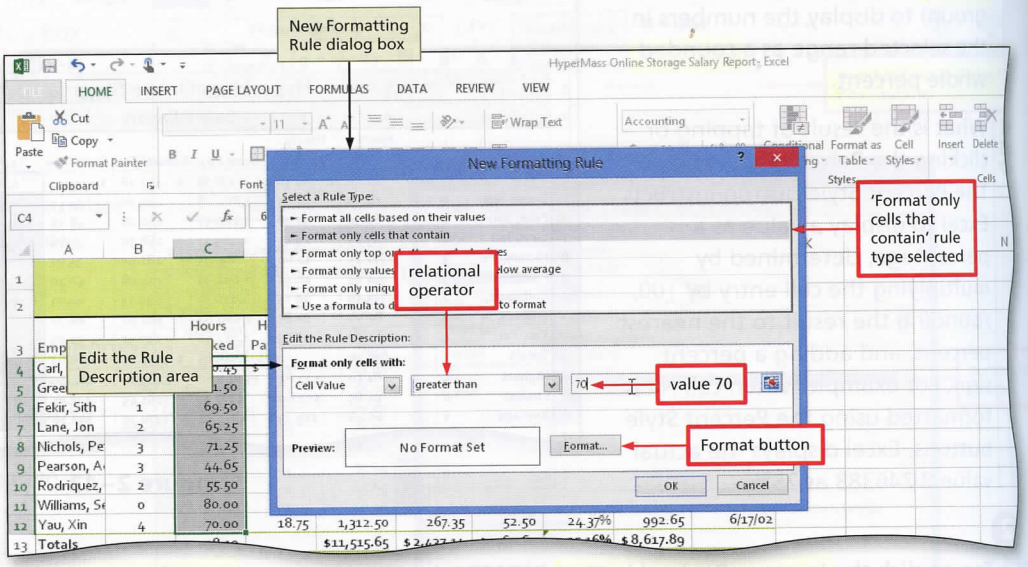


Figure 2–45

- In the Edit the Rule Description area, tap or click the arrow in the relational operator box (second box) to display a list of relational operators, and then select greater than to select the desired operator.
- Select the rightmost box, and then type 70 to enter the second value of the rule description (Figure 2–45).

Q&A What do the changes in the Edit the Rule Description area indicate?
The Edit the Rule Description area allows you to view and edit the rules for the conditional format. In this case, reading the area indicates that Excel should conditionally format only those cells with cell values greater than 70.

3

- Tap or click the Format button (New Formatting Rule dialog box) to display the Format Cells dialog box.
- If necessary, tap or click the Font tab (Format Cells dialog box) to display the Font sheet. Tap or click the Color arrow to display the Color gallery and then tap or click White, Background 1 (column 1, row 1) in the Color gallery to select the font color (Figure 2–46).

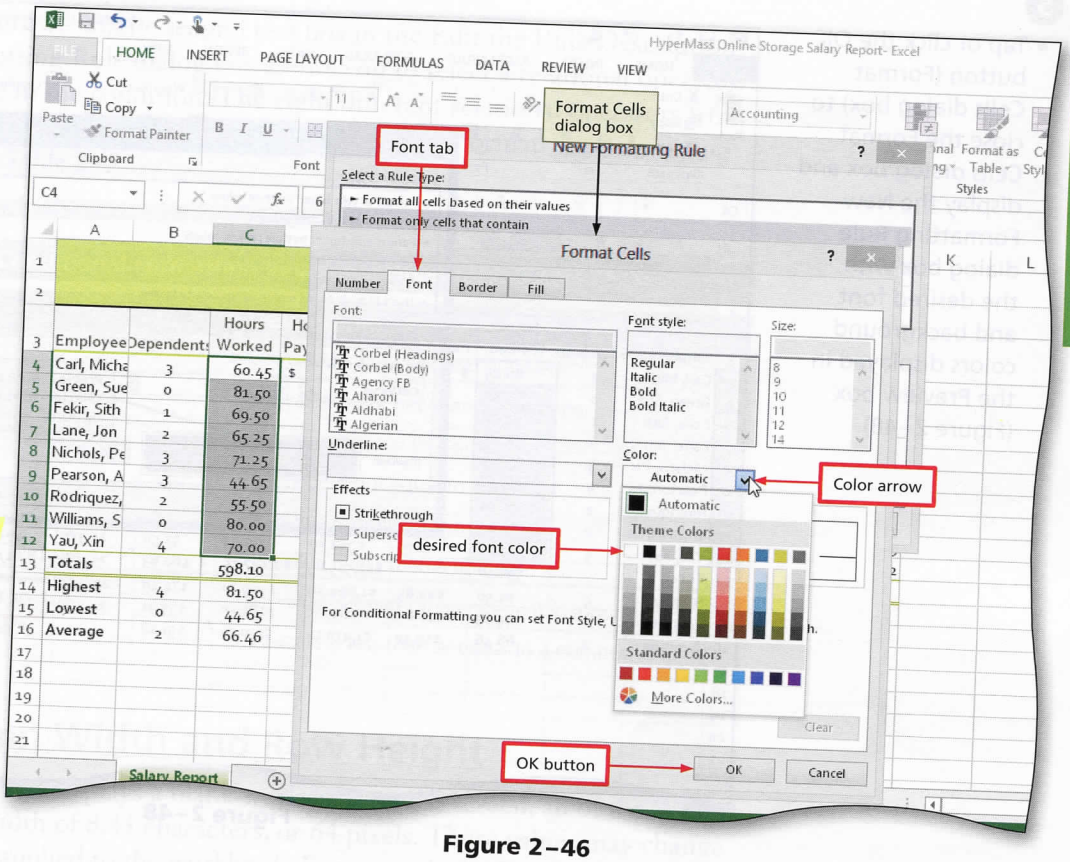


Figure 2–46

4

- Tap or click the Fill tab (Format Cells dialog box) to display the Fill sheet and then tap or click the orange color in column 6, row 5 to select the background color (Figure 2–47).

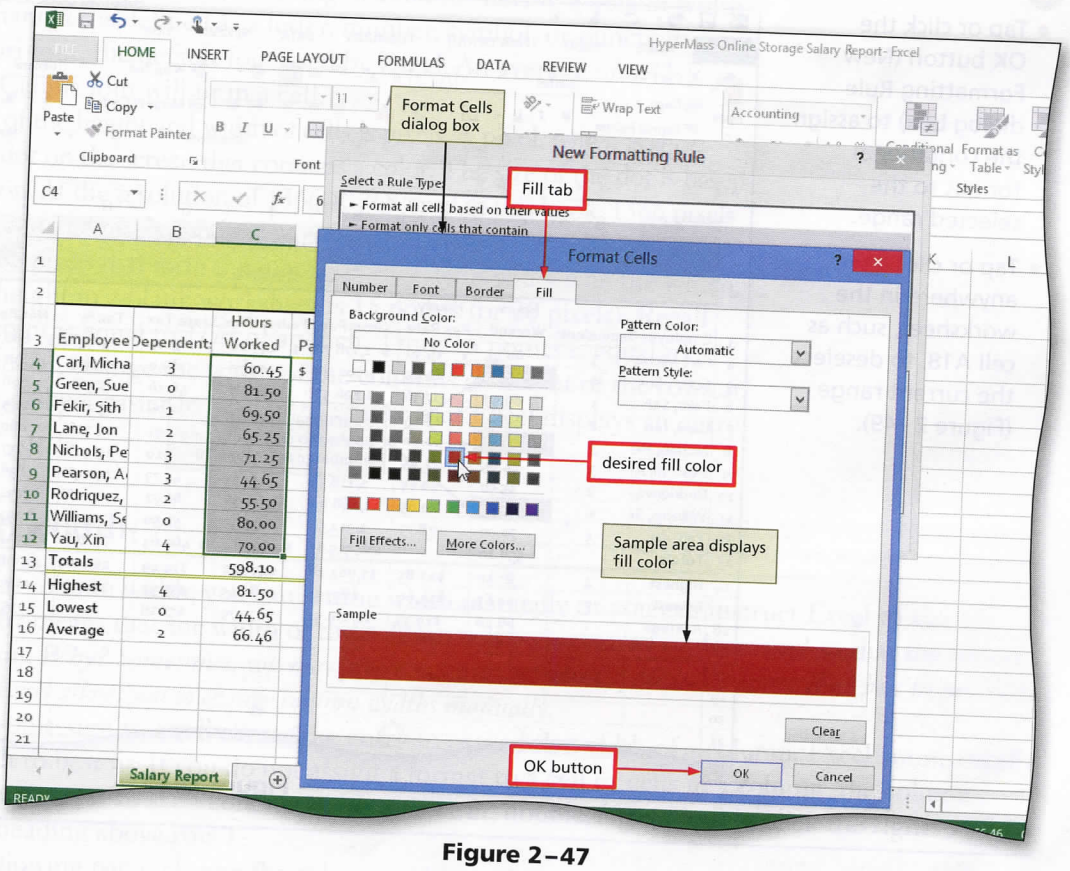


Figure 2–47

5

- Tap or click the OK button (Format Cells dialog box) to close the Format Cells dialog box and display the New Formatting Rule dialog box with the desired font and background colors displayed in the Preview box (Figure 2–48).

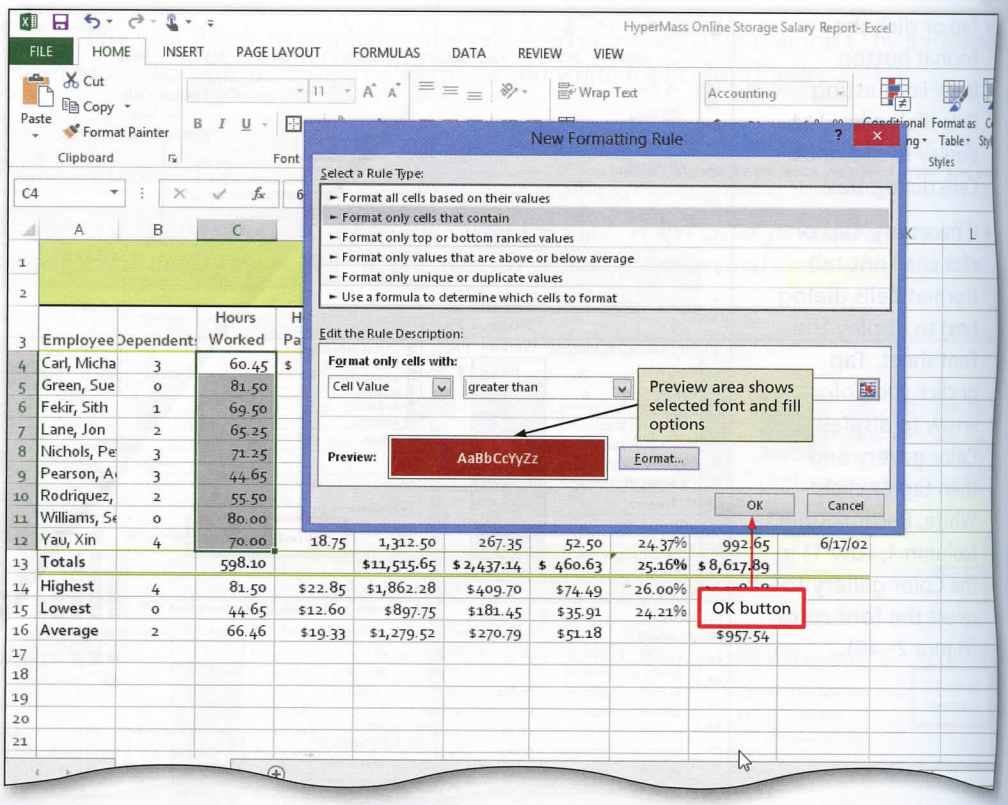


Figure 2–48

6

- Tap or click the OK button (New Formatting Rule dialog box) to assign the conditional format to the selected range.
- Tap or click anywhere in the worksheet, such as cell A18, to deselect the current range (Figure 2–49).

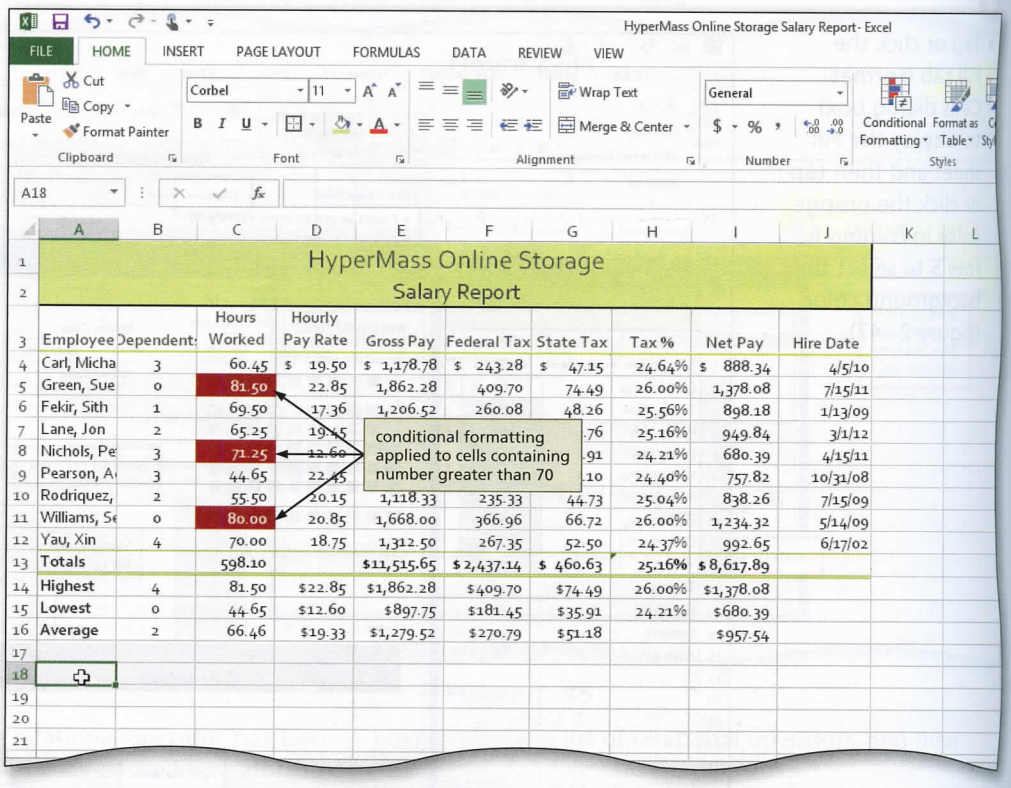


Figure 2–49

Conditional Formatting Operators

As shown in Figure 2–48, the second text box in the Edit the Rule Description area in the New Formatting Rule dialog box allows you to select a relational operator, such as less than, to use in the condition. The eight different relational operators from which you can choose for conditional formatting in the New Formatting Rule dialog box are summarized in Table 2–5.

Table 2–5 Summary of Conditional Formatting Relational Operators

Relational Operator	Description
between	Cell value is between two numbers
not between	Cell value is not between two numbers
equal to	Cell value is equal to a number
not equal to	Cell value is not equal to a number
greater than	Cell value is greater than a number
less than	Cell value is less than a number
greater than or equal to	Cell value is greater than or equal to a number
less than or equal to	Cell value is less than or equal to a number

Changing Column Width and Row Height

When Excel starts and displays a blank worksheet on the screen, all of the columns have a default width of 8.43 characters, or 64 pixels. These values may change depending on the theme applied to the workbook. For example, in this chapter, the Basis theme was applied to the workbook, resulting in columns having a default width of 8.38 characters. A character is defined as a letter, number, symbol, or punctuation mark in 11-point Calibri font, the default font used by Excel. An average of 8.43 characters in 11-point Calibri font will fit in a cell.

Another measure of the height and width of cells is pixels. A **pixel**, which is short for picture element, is a dot on the screen that contains a color. The size of the dot is based on your screen's resolution. At the resolution of 1366 × 768 used in this book, 1366 pixels appear across the screen and 768 pixels appear down the screen for a total of 1,049,088 pixels. It is these 1,049,088 pixels that form the font and other items you see on the screen.

The default row height in a blank worksheet is 15 points (or 20 pixels). Recall from Chapter 1 that a point is equal to 1/72 of an inch. Thus, 15 points is equal to about 1/5 of an inch. You can change the width of the columns or height of the rows at any time to make the worksheet easier to read or to ensure that Excel displays an entry properly in a cell.

To Change Column Width

1 ENTER FORMULAS | 2 ENTER FUNCTIONS | 3 VERIFY FORMULAS
4 FORMAT WORKSHEET | 5 CHECK SPELLING | 6 PRINT WORKSHEET

When changing the column width, you can set the width manually or you can instruct Excel to size the column to best fit. **Best fit** means that the width of the column will be increased or decreased so that the widest entry will fit in the column. ***Why?*** *Sometimes, you may prefer more or less white space in a column than best fit provides. To change the white space, Excel allows you to change column widths manually.*

When the format you assign to a cell causes the entry to exceed the width of a column, Excel automatically changes the column width to best fit. If you do not assign a format to a cell or cells in a column, the column width will remain 8.43 characters. To set a column width to best fit, double-tap or double-click the right boundary of the column heading above row 1.

The steps on the following pages change the column widths as follows: column A and B to best fit; column G to 10.25 characters; columns C, D, and H to 7.50 characters; and columns E, F, and I to 10.50 characters.

1

- Drag through column headings A and B above row 1 to select the columns.
- Tap or point to the boundary on the right side of column heading B to cause the pointer to become a split double arrow (Figure 2–50).

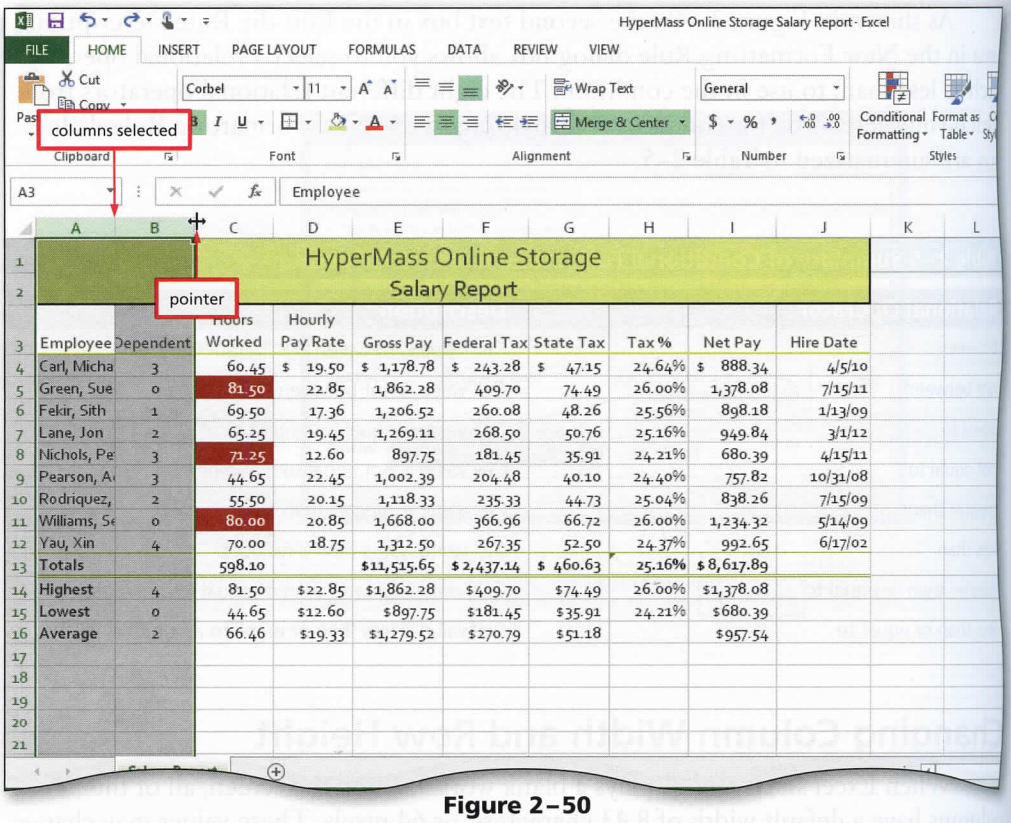


Figure 2–50

Q&A What if I want to make a large change to the column width?

If you want to increase or decrease column width significantly, you can press and hold or right-click a column heading and then use the Column Width command on the shortcut menu to change the column's width. To use this command, however, you must select one or more entire columns.

2

- Double-tap or double-click the right boundary of column heading B to change the width of the selected columns to best fit.
- Tap or point to the right boundary of the column G heading above row 1.
- When the pointer changes to a split double arrow, drag until the ScreenTip indicates Width: 10.25 (87 pixels). Do not lift your finger or release the mouse button (Figure 2–51).

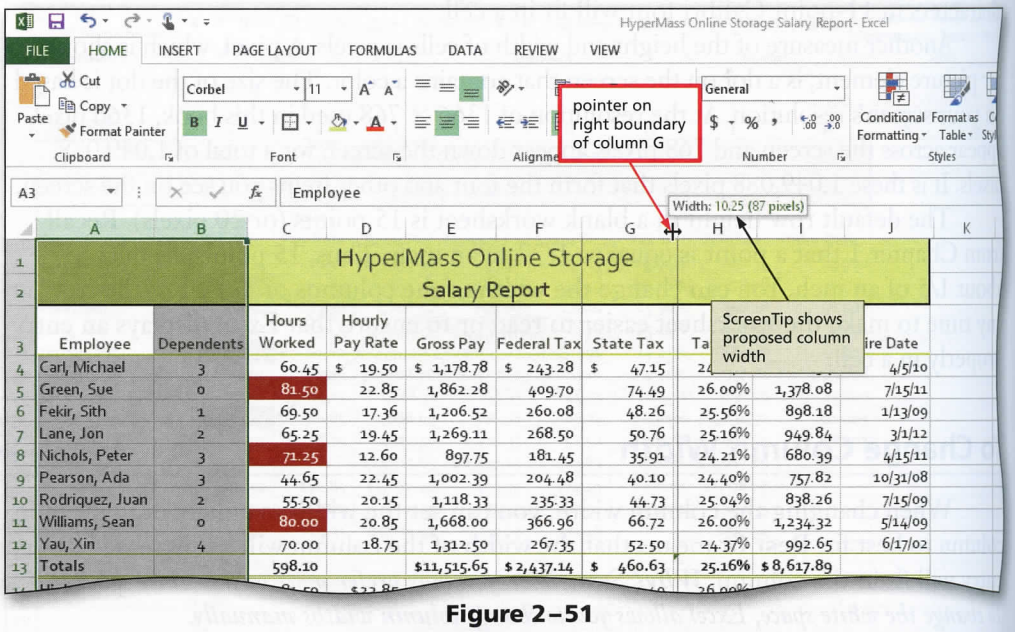


Figure 2–51

Q&A What happens if I change the column width to zero (0)?

If you decrease the column width to 0, the column is hidden. **Hiding cells** is a technique you can use to hide data that might not be relevant to a particular report or sensitive data that you do not want others to see. To instruct Excel to display a hidden column, position the mouse pointer to the right of the column heading boundary where the hidden column is located and then drag to the right.

3

- Lift your finge
release the mo
button to cha
the column wi
- Tap or click th
column C hea
above row 1 t
the column.
- While holdin
the CTRL key,
or click the c
D heading a
then the colu
heading abo
so that nona
columns are
- Tap or point
boundary o
side of the c
heading ab
- Drag until
ScreenTip i
Width: 7.5
or release

4

- Lift your fi
release th
button to
the colum
- Tap or clic
column E
and drag
the colun
heading.
- While ho
the CTRL
click the
heading
so that
columns
- Drag th
bounda
F until
indicate
10.50 (8
your fi
the mo
- Tap or

Other

1. Press
colun

3

- Lift your finger or release the mouse button to change the column width.
- Tap or click the column C heading above row 1 to select the column.
- While holding down the CTRL key, tap or click the column D heading and then the column H heading above row 1 so that nonadjacent columns are selected.
- Tap or point to the boundary on the right side of the column H heading above row 1.
- Drag until the ScreenTip indicates Width: 7.50 (65 pixels). Do not lift your finger or release the mouse button (Figure 2–52).

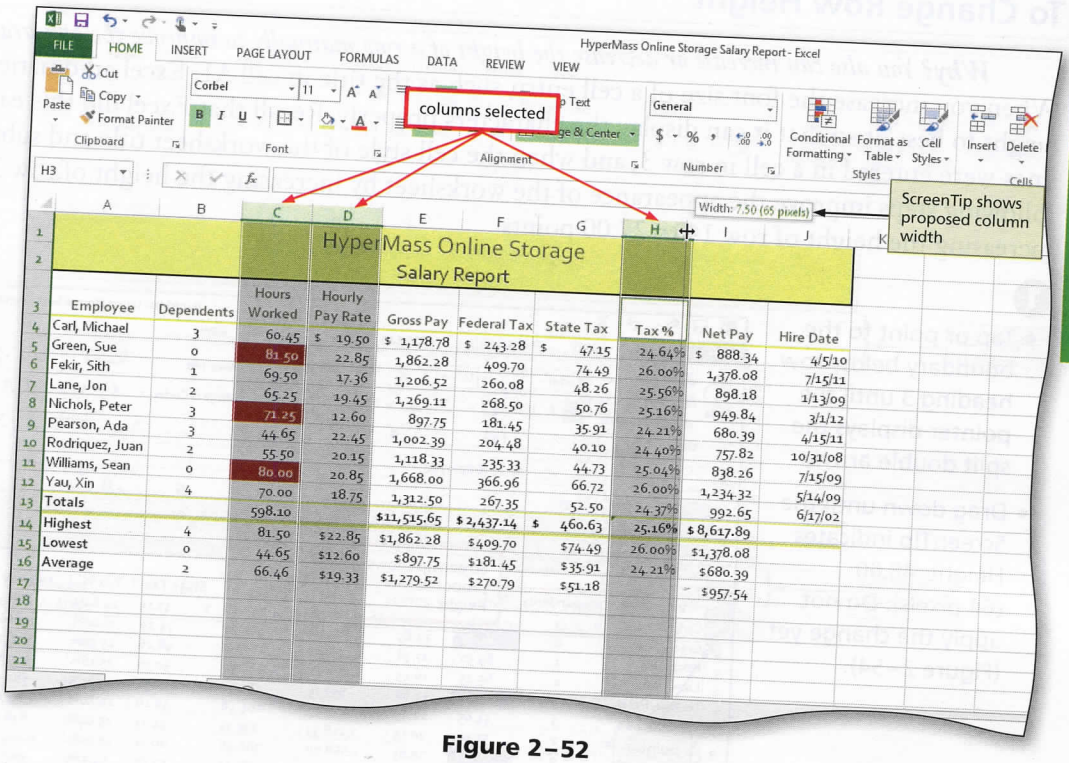


Figure 2–52

4

- Lift your finger or release the mouse button to change the column widths.
- Tap or click the column E heading and drag to select the column F heading.
- While holding down the CTRL key, tap or click the column I heading above row 1 so that nonadjacent columns are selected.
- Drag the right boundary of column F until the ScreenTip indicates Width: 10.50 (89 pixels). Lift your finger or release the mouse button to change the column widths.

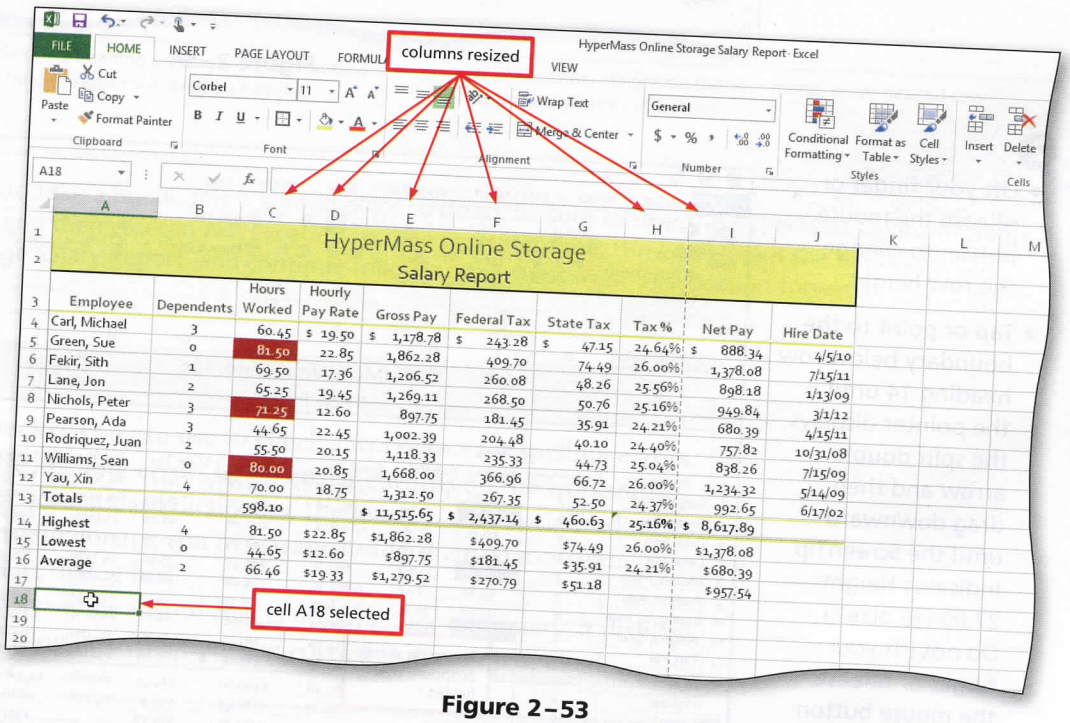


Figure 2–53

- Tap or click anywhere in the worksheet, such as cell A18, to deselect the columns (Figure 2–53).

Other Ways

1. Press and hold or right-click column heading or drag through multiple column headings, press and hold or right-click selected heading, tap or click Column Width on shortcut menu, enter desired column width, tap or click OK button

To Change Row Height

Why? *You also can increase or decrease the height of a row manually to improve the appearance of the worksheet.* When you increase the font size of a cell entry, such as the title in cell A1, Excel automatically increases the row height to best fit so that it can display the characters properly. Recall that Excel did this earlier when multiple lines were entered in a cell in row 3, and when the cell style of the worksheet title and subtitle was changed. The following steps improve the appearance of the worksheet by increasing the height of row 3 to 48.00 points and increasing the height of row 14 to 27.00 points.

1

- Tap or point to the boundary below row heading 3 until the pointer displays the split double arrow.
- Drag down until the ScreenTip indicates Height: 48.00 (64 pixels). Do not apply the change yet (Figure 2–54).

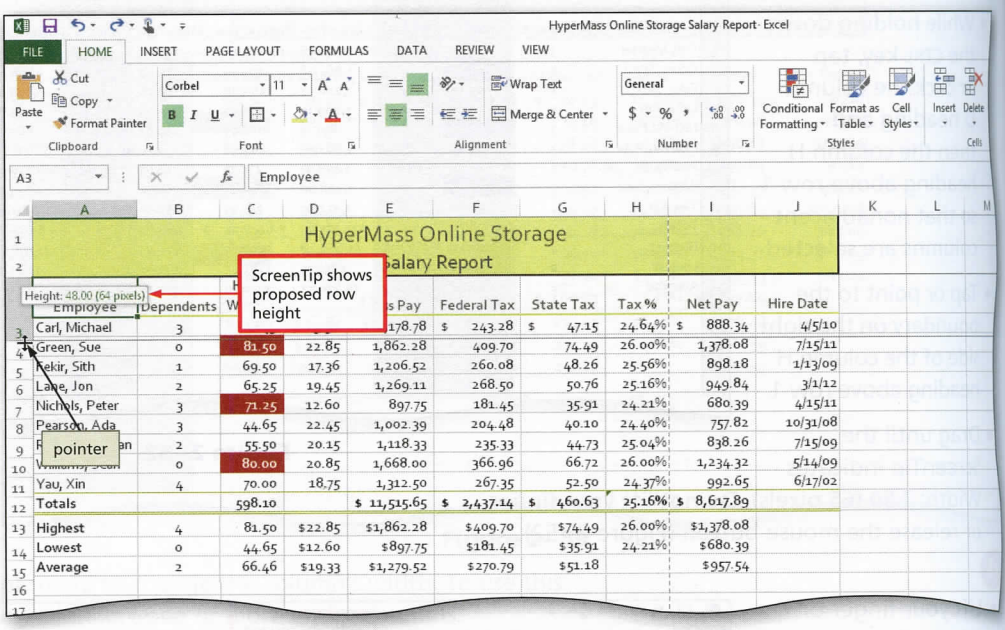


Figure 2–54

2

- Lift your finger or release the mouse button to change the row height.
- Tap or point to the boundary below row heading 14 until the pointer displays the split double arrow and then drag downward until the ScreenTip indicates Height: 27.00 (36 pixels). Do not lift your finger or release the mouse button (Figure 2–55).

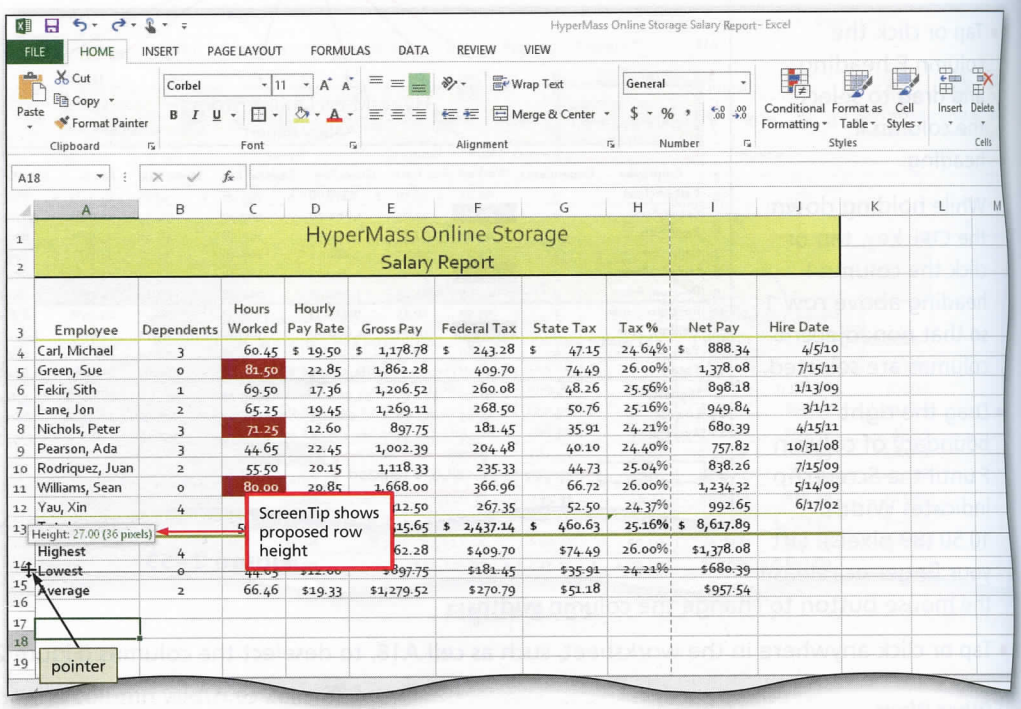
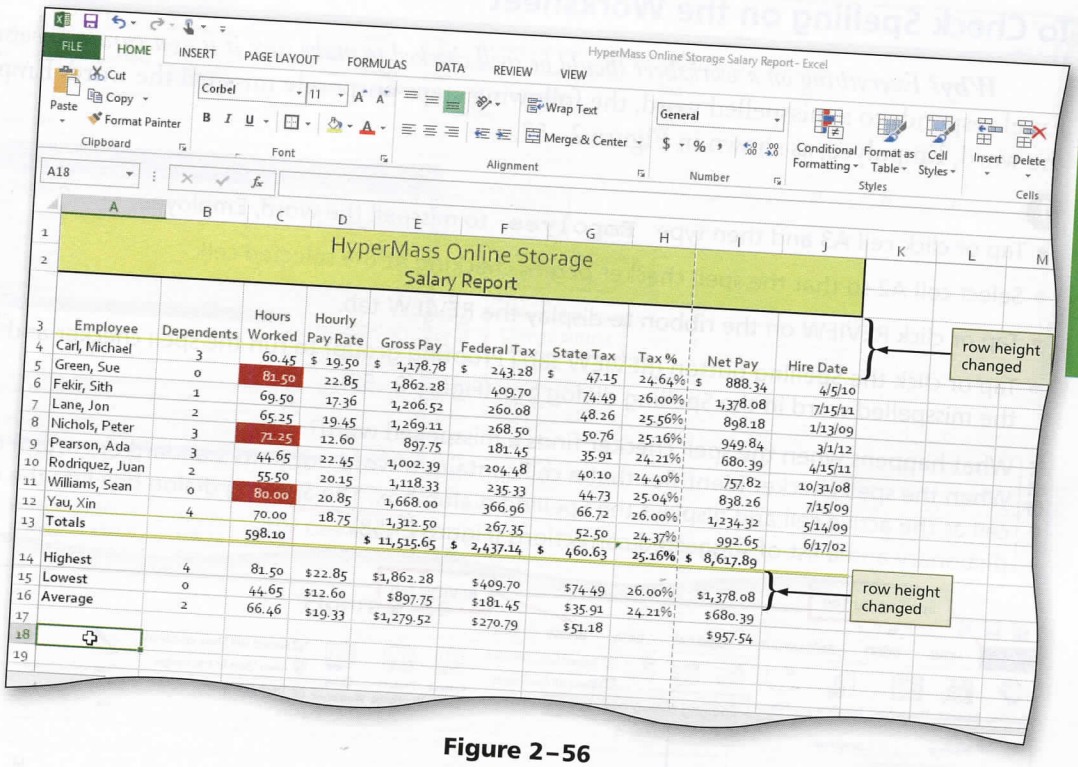


Figure 2–55

3

- Lift your finger or release the mouse button to change the row height.
- Tap or click anywhere in the worksheet, such as cell A18, to deselect the current cell (Figure 2–56).

Q&A Can I hide a row?
Yes. As with column widths, when you decrease the row height to 0, the row is hidden. To instruct Excel to display a hidden row, position the pointer just below the row heading boundary where the row is hidden and then drag downward. To set a row height to best fit, double-tap or double-click the bottom boundary of the row heading.



Employee	Dependents	Hours Worked	Hourly Pay Rate	Gross Pay	Federal Tax	State Tax	Tax %	Net Pay	Hire Date
Carl, Michael	3	60.45	$ 19.50	$ 1,178.78	$ 243.28	$ 47.15	24.64%	$ 888.34	4/5/10
Green, Sue	0	81.50	22.85	1,862.28	409.70	74.49	26.00%	1,378.08	7/15/11
Fekir, Sith	1	69.50	17.36	1,206.52	260.08	48.26	25.56%	898.18	1/13/09
Lane, Jon	2	65.25	19.45	1,269.11	268.50	50.76	25.16%	949.84	3/1/12
Nichols, Peter	3	71.25	12.60	897.75	181.45	35.91	24.21%	680.39	4/15/11
Pearson, Ada	3	44.65	22.45	1,002.39	204.48	40.10	24.40%	757.82	10/31/08
Rodriquez, Juan	2	55.50	20.15	1,118.33	235.33	44.73	25.04%	838.26	7/15/09
Williams, Sean	0	80.00	20.85	1,668.00	366.96	66.72	26.00%	1,234.32	5/14/09
Yau, Xin	4	70.00	18.75	1,312.50	267.35	52.50	24.37%	992.65	6/17/02
Totals		598.10		$ 11,515.65	$ 2,437.14	$ 460.63	25.16%	$ 8,617.89	
Highest	4	81.50	$22.85	$1,862.28	$409.70	$74.49	26.00%	$1,378.08	
Lowest	0	44.65	$12.60	$897.75	$181.45	$35.91	24.21%	$680.39	
Average	2	66.46	$19.33	$1,279.52	$270.79	$51.18		$957.54	

Figure 2–56

Other Ways

1. Press and hold or right-click row heading or drag through multiple row headings, press and hold or right-click selected heading, tap or click Row Height on shortcut menu, enter desired row height, tap or click OK button

Break Point: If you wish to take a break, this is a good place to do so. Be sure to save the HyperMass Online Storage Salary Report file again and then you can exit Excel. To resume at a later time, run Excel, open the file called HyperMass Online Storage Salary Report, and continue following the steps from this location forward.

Checking Spelling

Excel includes a **spell checker** you can use to check a worksheet for spelling errors. The spell checker looks for spelling errors by comparing words on the worksheet against words contained in its standard dictionary. If you often use specialized terms that are not in the standard dictionary, you may want to add them to a custom dictionary using the Spelling dialog box.

When the spell checker finds a word that is not in either dictionary, it displays the word in the Spelling dialog box. You then can correct it if it is misspelled.

Does the spell checker catch all spelling mistakes?

While Excel's spell checker is a valuable tool, it is not infallible. You should proofread your workbook carefully by pointing to each word and saying it aloud as you point to it. Be mindful of misused words such as its and it's, through and though, and to and too. Nothing undermines a good impression more than a professional looking report with misspelled words.

CONSIDER THIS

To Check Spelling on the Worksheet

Why? *Everything on a worksheet should be spell checked to make sure it is as accurate as possible.* To illustrate how Excel responds to a misspelled word, the following steps purposely misspell the word, Employee, in cell A3 as the word, Empolyee, as shown in Figure 2–57.

1

- Tap or click cell A3 and then type **Empolyee** to misspell the word, Employee.
- Select cell A2 so that the spell checker begins checking at the selected cell.
- Tap or click REVIEW on the ribbon to display the REVIEW tab.
- Tap or click the Spelling button (REVIEW tab | Proofing group) to run the spell checker and display the misspelled word in the Spelling dialog box (Figure 2–57).

Q&A What happens when the spell checker finds a misspelled word?
When the spell checker identifies that a cell contains a word not in its standard or custom dictionary, it selects that cell as the active cell and displays the Spelling dialog box. The Spelling dialog box lists the word not found in the dictionary and a list of suggested corrections (Figure 2–58).

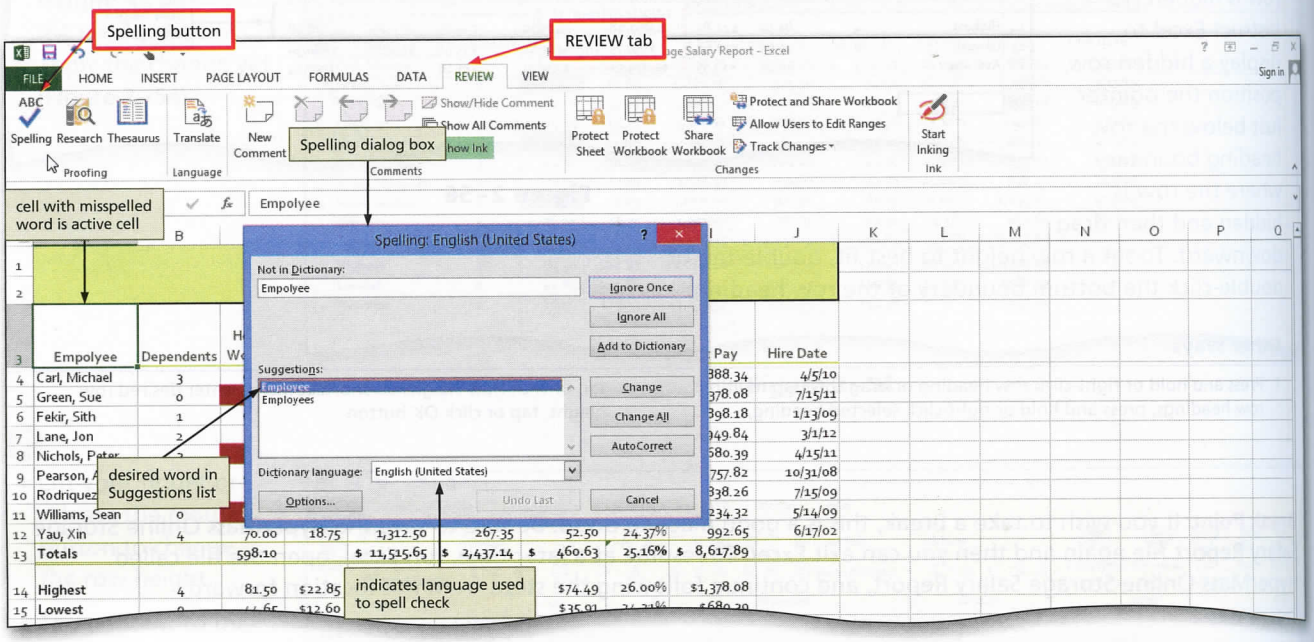


Figure 2–57

2

- Tap or click the Change button (Spelling dialog box) to change the misspelled word to the correct word (Figure 2–58).
- Tap or click the Close button to close the Spelling dialog box.
- If a Microsoft Excel dialog box is displayed, tap or click the OK button.

3

- Tap or click anywhere in the worksheet, such as cell A18, to deselect the current cell.
- Display the HOME tab.
- Tap or click the Save button on the Quick Access Toolbar to save the workbook.

Q&A What other actions can I take in the Spelling dialog box?
If one of the words in the Suggestions list is correct, tap or click it and then tap or click the Change button. If none of the suggestions is correct, type the correct word in the Not in Dictionary text box and then tap or click the Change button. To change the word throughout the worksheet, tap or click the Change All button instead of the Change button. To skip correcting the word, tap or click the Ignore Once button. To have Excel ignore the word for the remainder of the worksheet, tap or click the Ignore All button.

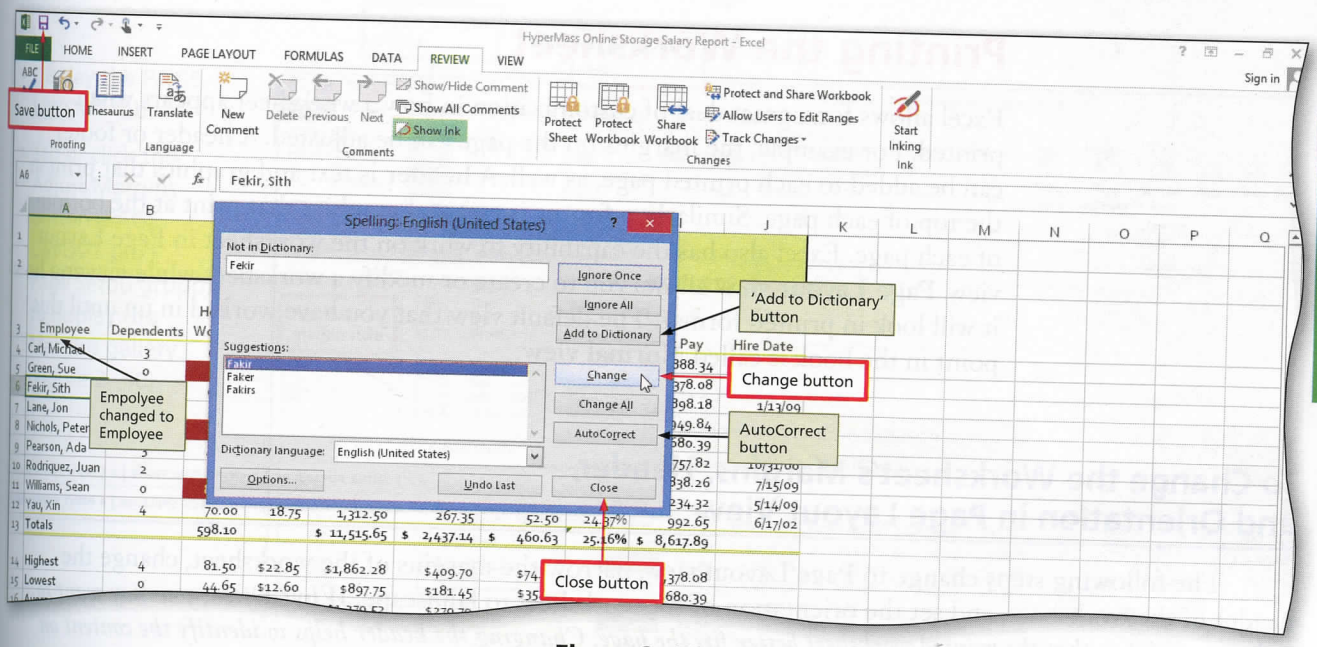


Figure 2–58

Other Ways

1. Press F7

Additional Spell Checker Considerations

Consider these additional guidelines when using the spell checker:

- To check the spelling of the text in a single cell, double-tap or double-click the cell to make the formula bar active and then tap or click the Spelling button (REVIEW tab | Proofing group).
- If you select a single cell so that the formula bar is not active and then start the spell checker, Excel checks the remainder of the worksheet, including notes and embedded charts.
- If you select a cell other than cell A1 before you start the spell checker, Excel will display a dialog box when the spell checker reaches the end of the worksheet, asking if you want to continue checking at the beginning.
- If you select a range of cells before starting the spell checker, Excel checks the spelling of the words only in the selected range.
- To check the spelling of all the sheets in a workbook, press and hold or right-click any sheet tab, tap or click 'Select All Sheets' on the sheet tab shortcut menu, and then start the spell checker.
- To add words to the dictionary, such as your last name, tap or click the 'Add to Dictionary' button in the Spelling dialog box (shown in Figure 2–58) when Excel flags the word as not being in the dictionary.
- Tap or click the AutoCorrect button (shown in Figure 2–58) to add the misspelled word and the correct version of the word to the AutoCorrect list. For example, suppose that you misspell the word, do, as the word, dox. When the spell checker displays the Spelling dialog box with the correct word, do, in the Suggestions list, tap or click the AutoCorrect button. Then, anytime in the future that you type the word, dox, Excel automatically will change it to the word, do.

Printing the Worksheet

Excel allows for a great deal of customization in how a worksheet appears when printed. For example, the margins on the page can be adjusted. A header or footer can be added to each printed page, as well. A **header** is text and graphics that print at the top of each page. Similarly, a **footer** is text and graphics that print at the bottom of each page. Excel also has the capability to work on the worksheet in Page Layout view. **Page Layout view** allows you to create or modify a worksheet while viewing how it will look in printed format. The default view that you have worked in up until this point in the book is called **Normal view**.

To Change the Worksheet's Margins, Header, and Orientation in Page Layout View

1 ENTER FORMULAS | 2 ENTER FUNCTIONS | 3 VERIFY FORMULAS | 4 FORMAT WORKSHEET | 5 CHECK SPELLING | 6 PRINT WORKSHEET

The following steps change to Page Layout view, narrow the margins of the worksheet, change the header of the worksheet, and set the orientation of the worksheet to landscape. ***Why?*** *Often, you may want to reduce margins so that the printed worksheet better fits the page. Changing the header helps to identify the content on each page, and changing the orientation can help you fit wider printouts across a sheet of paper.* **Margins** are those portions of a printed page outside the main body of the printed document and always are blank when printed. The current worksheet is too wide for a single page and requires landscape orientation to fit on one page in a readable manner.

1

- Tap or click the Page Layout button on the status bar to view the worksheet in Page Layout view (Figure 2–59).

Q&A What are some key features of Page Layout view?
Page Layout view shows the worksheet divided into pages. A gray background separates each page. The white areas surrounding each page indicate the print margins. The top of each page includes a Header area, and the bottom of each page includes a Footer area. Page Layout view also includes a ruler at the top of the page that assists you in placing objects on the page, such as charts and pictures.

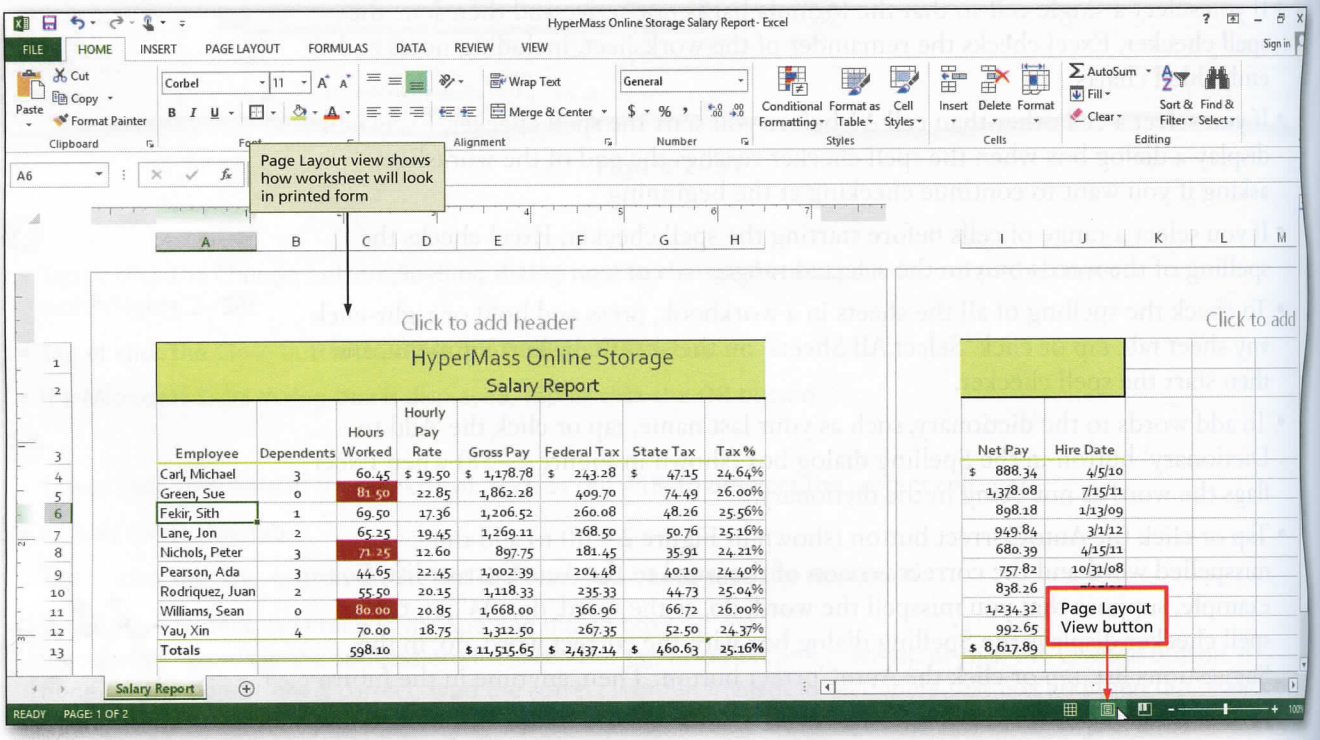


Figure 2–59

2

- Display the PAGE LAYOUT tab.
- Tap or click the Adjust Margins button (PAGE LAYOUT tab | Page Setup group) to display the Margins gallery (Figure 2–60).

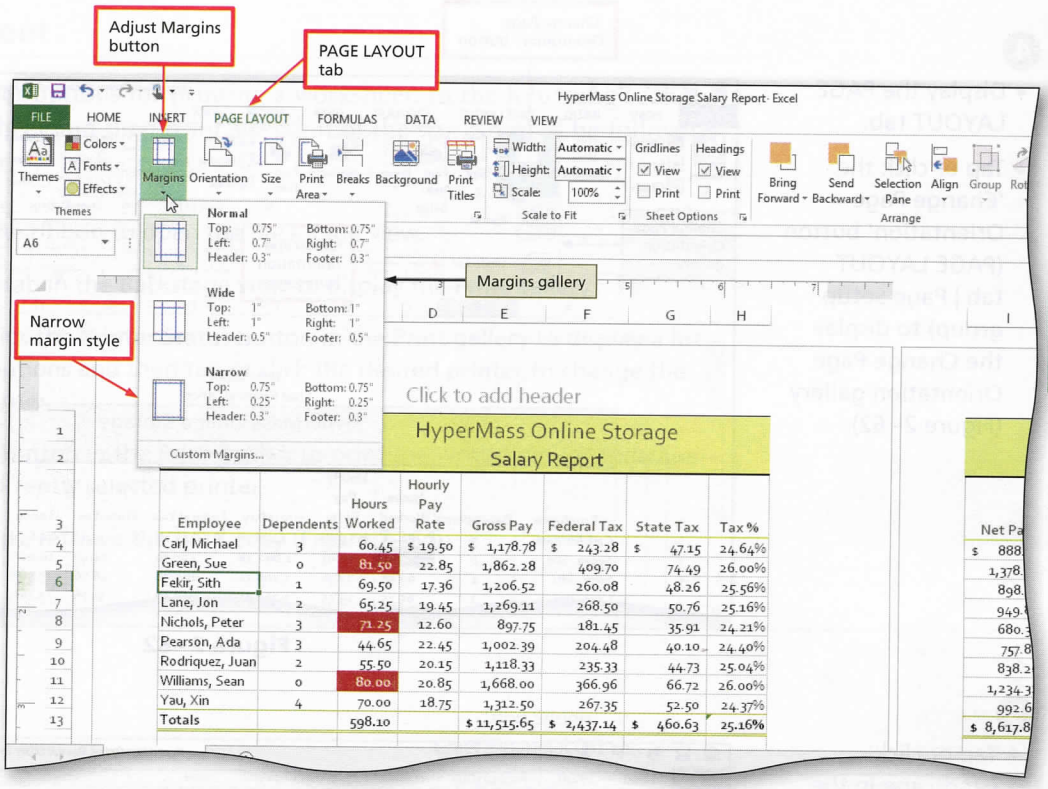


Figure 2–60

3

- Tap or click Narrow in the Margins gallery to change the worksheet margins to the Narrow margin style.
- Select cell A6 to deselect the header. Tap or click above the worksheet title in cell A1 in the center area of the Header area.
- Type `John Simon` and then press the ENTER key. Type `Chief Financial Officer` to complete the worksheet header (Figure 2–61).

If requested by your instructor, type your name instead of John Simon.

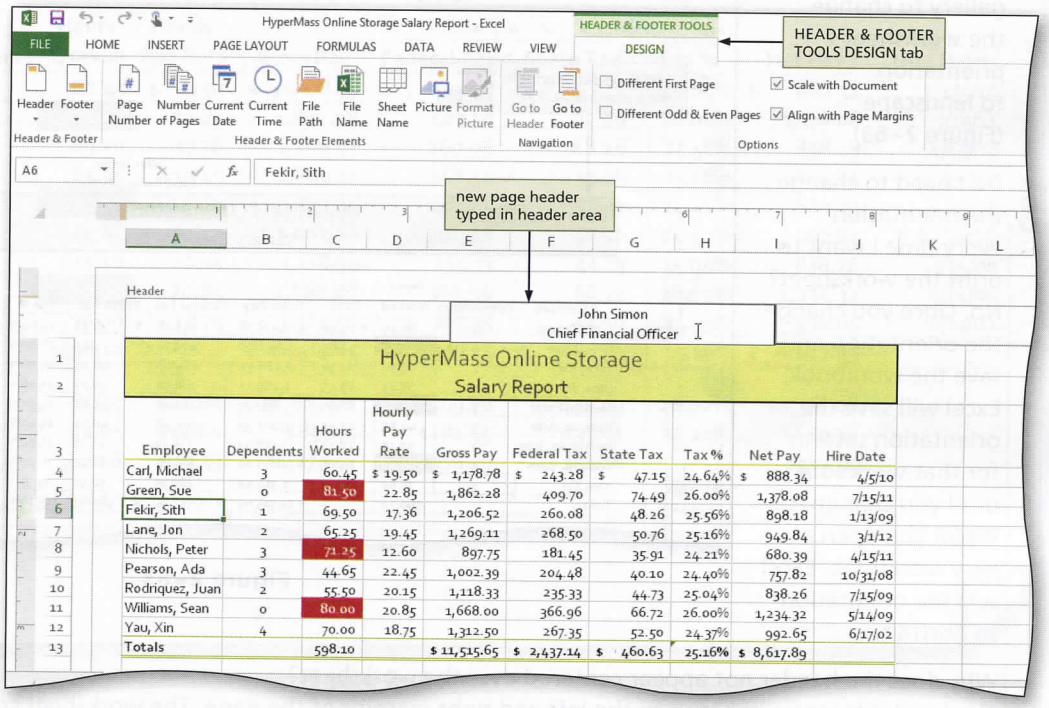


Figure 2–61

- Select cell A6 to deselect the header.

Q&A What else can I place in a header?

You can add text, page number information, date and time information, the file path of the workbook, the file name of the workbook, the sheet name of the workbook, and pictures to a header.

4

- Display the PAGE LAYOUT tab.
- Tap or click the 'Change Page Orientation' button (PAGE LAYOUT tab | Page Setup group) to display the Change Page Orientation gallery (Figure 2–62).

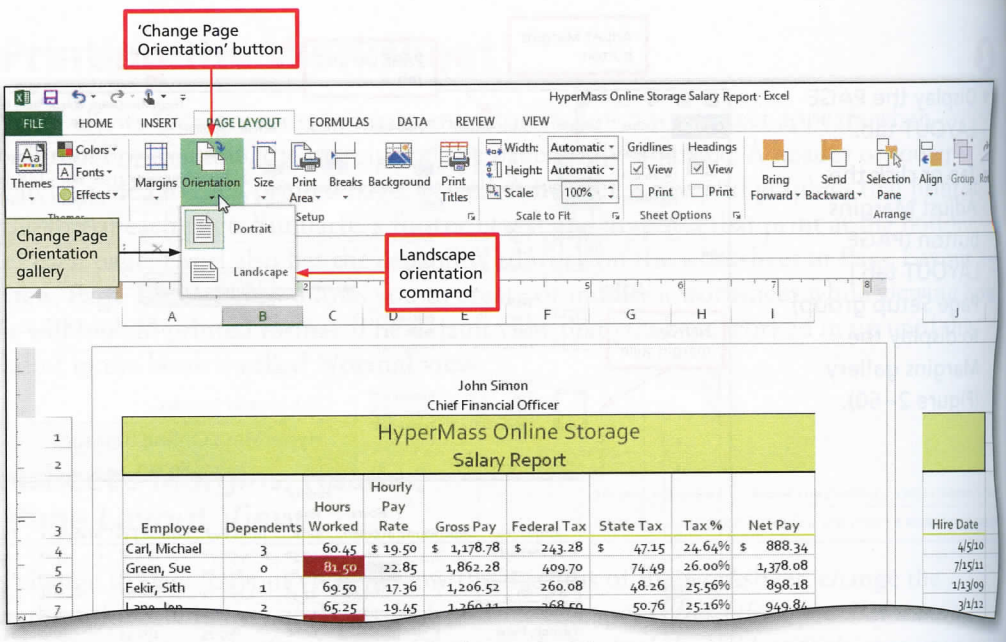


Figure 2–62

5

- Tap or click Landscape in the Change Page Orientation gallery to change the worksheet's orientation to landscape (Figure 2–63).

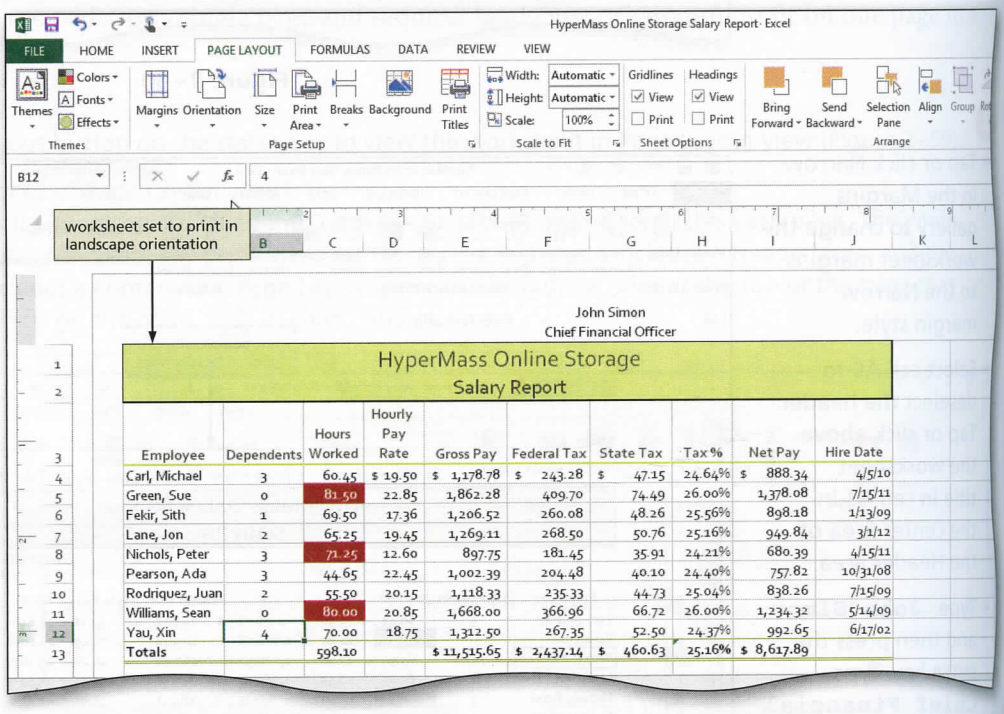


Figure 2–63

Q&A

Do I need to change the orientation every time I want to print the worksheet?
No. Once you change the orientation and save the workbook, Excel will save the orientation setting for that workbook until you change it. When you open a new workbook, Excel sets the orientation to portrait.

Why does the header not appear centered over the worksheet?
The header is centered between the left and right margins of the page. The worksheet contents do not extend across the page from margin to margin, which makes the header appear off center.

Other Ways

1. Tap or click Page Setup Dialog Box Launcher (PAGE LAYOUT tab | Page Setup group), tap or click Page tab (Page Setup dialog box), tap or click Portrait or Landscape, tap or click OK button

To Print a Worksheet

Excel provides other options for printing a worksheet. In the following sections, you first print the worksheet and then print a section of the worksheet. The following steps print the worksheet.

1. Tap or click FILE on the ribbon to open the Backstage view.
2. Tap or click the Print tab in the Backstage view to display the Print gallery.
3. If necessary, tap or click the Printer Status button in the Print gallery to display a list of available Printer options and then tap or click the desired printer to change the currently selected printer.
4. Tap or click the Print button in the Print gallery to print the worksheet in landscape orientation on the currently selected printer.
5. When the printer stops, retrieve the hard copy (Figure 2–64).

John Simon
Chief Financial Officer

HyperMass Online Storage
Salary Report

Employee	Dependents	Hours Worked	Hourly Pay Rate	Gross Pay	Federal Tax	State Tax	Tax %	Net Pay	Hire Date
Carl, Michael	3	60.45	$ 19.50	$ 1,178.78	$ 243.28	$ 47.15	24.64%	$ 888.34	4/5/10
Green, Sue	0	81.50	22.85	1,862.28	409.70	74.49	26.00%	1,378.08	7/15/11
Fekir, Sith	1	69.50	17.36	1,206.52	260.08	48.26	25.56%	898.18	1/13/09
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Williams, Sean	0	80.00	20.85	1,668.00	366.96	66.72	26.00%	1,234.32	5/14/09
Yau, Xin	4	70.00	18.75	1,312.50	267.35	52.50	24.37%	992.65	6/17/02
Totals		**598.10**		**$ 11,515.65**	**$ 2,437.14**	**$ 460.63**	**25.16%**	**$ 8,617.89**	
Highest	4	81.50	$22.85	$1,862.28	$409.70	$74.49	26.00%	$1,378.08	
Lowest	0	44.65	$12.60	$897.75	$181.45	$35.91	24.21%	$680.39	
Average	2	66.46	$19.33	$1,279.52	$270.79	$51.18		$957.54	

Figure 2–64

To Print a Section of the Worksheet

You can print portions of the worksheet by selecting the range of cells to print and then tapping or clicking the Selection option button in the Print what area in the Print dialog box. ***Why?*** *To save paper, you only want to print the portion of the worksheet you need, instead of printing the entire worksheet.* The following steps print the range A3:E16.

1

- Select the range to print, cells A3:E16 in this case.
- Tap or click FILE on the ribbon to open the Backstage view.
- Tap or click the Print tab to display the Print gallery.
- Tap or click 'Print Active Sheets' in the Settings area (Print tab | Print gallery) to display a list of options that determine what Excel should print (Figure 2–65).

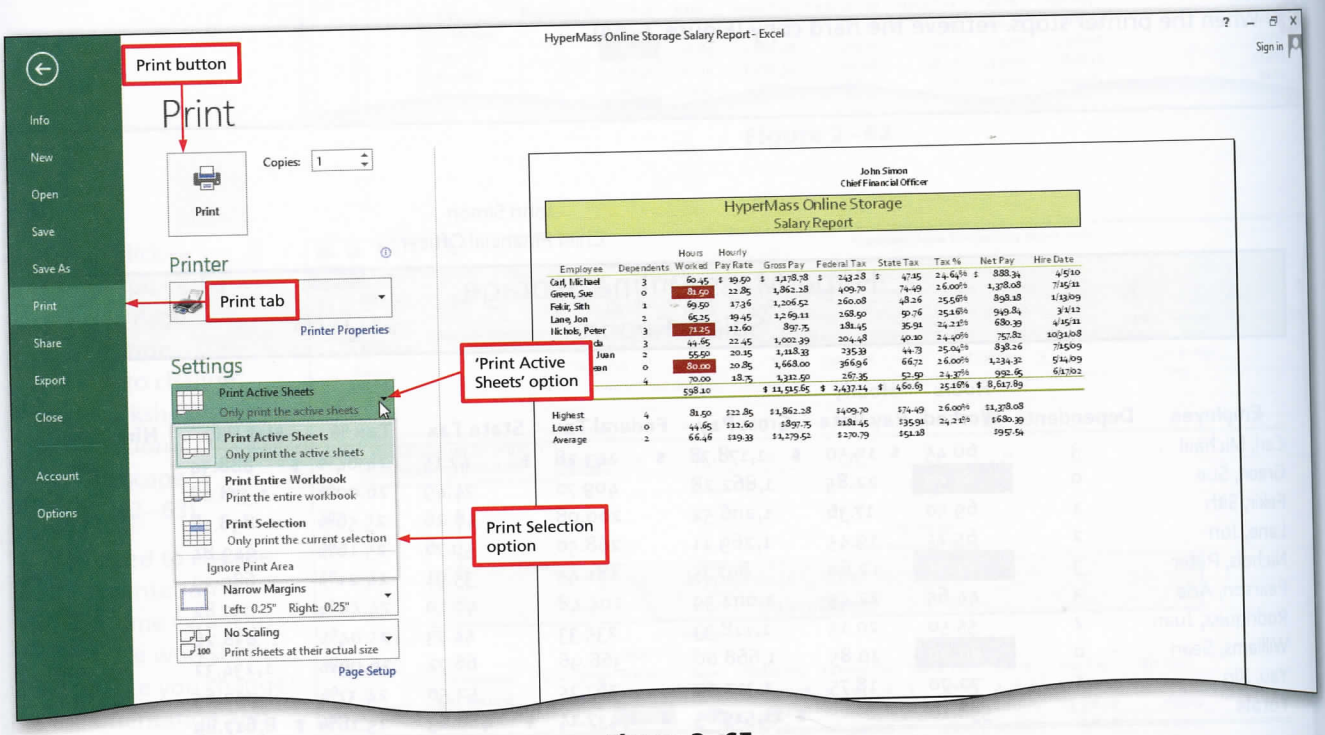

Figure 2–65

2

- Tap or click Print Selection to instruct Excel to print only the selected range.
- Tap or click the Print button in the Print gallery to print the selected range of the worksheet on the currently selected printer (Figure 2–66).
- Tap or click the Normal button on the status bar to return to Normal view.
- Tap or click cell A18 to deselect the range A3:E16.

Q&A What are my options for telling Excel what to print?

Excel includes three options to allow you to determine what should be printed (Figure 2–65). As shown in the previous steps, the Print Selection option instructs Excel to print the selected range. The 'Print Active Sheets' option instructs Excel to print the active worksheet (the worksheet currently on the screen) or the selected worksheets. Finally, the 'Print Entire Workbook' option instructs Excel to print all of the worksheets in the workbook.

John Simon
Chief Financial Officer

Employee	Dependents	Hours Worked	Hourly Pay Rate	Gross Pay
Carl, Michael	3	60.45	$ 19.50	$ 1,178.78
Green, Sue	0	81.50	22.85	1,862.28
Fekir, Sith	1	69.50	17.36	1,206.52
Lane, Jon	2	65.25	19.45	1,269.11
Nichols, Peter	3	71.25	12.60	897.75
Pearson, Ada	3	44.65	22.45	1,002.39
Rodriquez, Juan	2	55.50	20.15	1,118.33
Williams, Sean	0	80.00	20.85	1,668.00
Yau, Xin	4	70.00	18.75	1,312.50
Totals		**598.10**		**$ 11,515.65**
Highest	4	81.50	$22.85	$1,862.28
Lowest	0	44.65	$12.60	$897.75
Average	2	66.46	$19.33	$1,279.52

selected range prints

Figure 2–66

Other Ways

1. Select range, tap or click Print Area button (PAGE LAYOUT tab | Page Setup group), tap or click 'Set Print Area', tap or click FILE tab to open Backstage view, tap or click Print tab, tap or click Print button

Displaying and Printing the Formulas Version of the Worksheet

Thus far, you have been working with the **values version** of the worksheet, which shows the results of the formulas you have entered, rather than the actual formulas. Excel also can display and print the **formulas version** of the worksheet, which shows the actual formulas you have entered, rather than the resulting values.

The formulas version is useful for debugging a worksheet. **Debugging** is the process of finding and correcting errors in the worksheet. Viewing and printing the formulas version instead of the values version makes it easier to see any mistakes in the formulas.

When you change from the values version to the formulas version, Excel increases the width of the columns so that the formulas and text do not overflow into adjacent cells on the right. The formulas version of the worksheet, thus, usually is significantly wider than the values version. To fit the wide printout on one page, you can use landscape orientation, which already has been selected for the workbook, and the Fit to option in the Page sheet in the Page Setup dialog box.

To Display the Formulas in the Worksheet and Fit the Printout on One Page

1 ENTER FORMULAS | 2 ENTER FUNCTIONS | 3 VERIFY FORMULAS | 4 FORMAT WORKSHEET | 5 CHECK SPELLING | 6 PRINT WORKSHEET

The following steps change the view of the worksheet from the values version to the formulas version of the worksheet and then print the formulas version on one page. ***Why?*** *Printing the formulas in the worksheet can help you verify your formulas are correct and the worksheet is making the correct calculations.*

1

- Press CTRL+ACCENT MARK (`) to display the worksheet with formulas.
- Tap or click the right horizontal scroll arrow until column J appears (Figure 2–67).

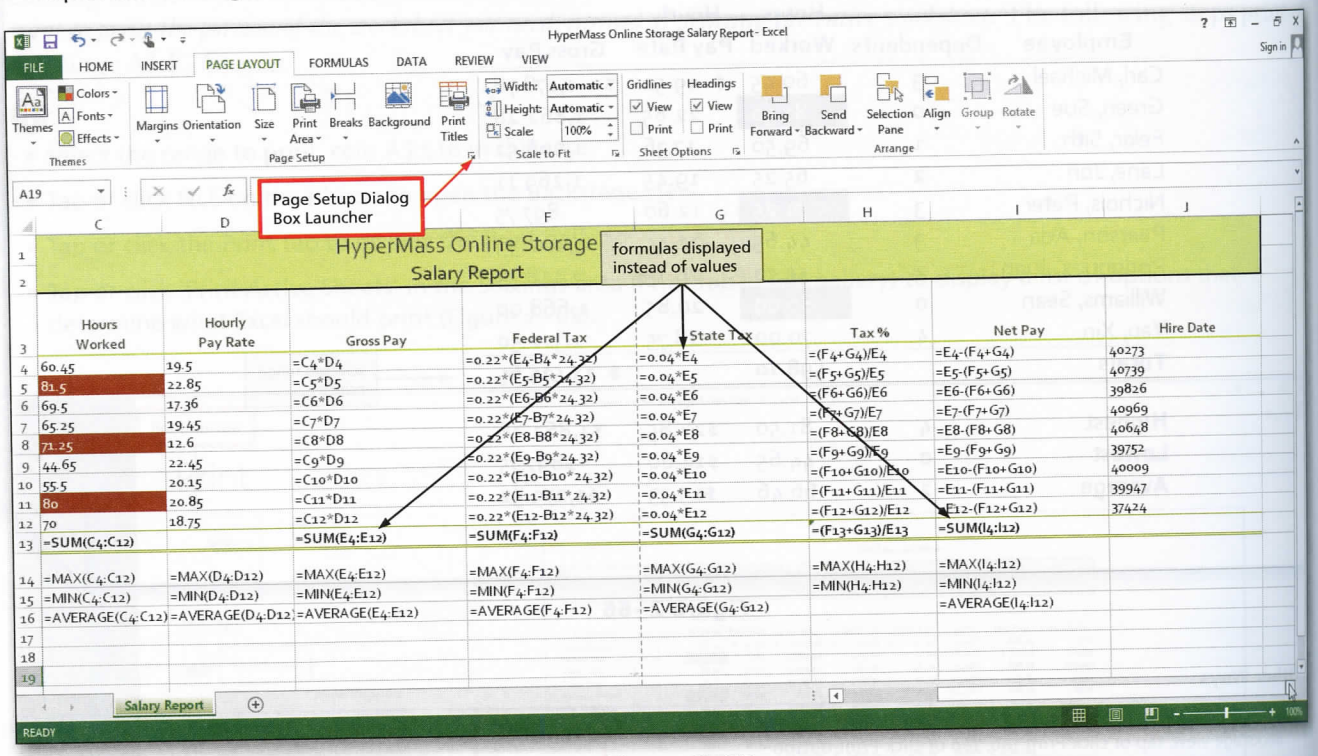

Figure 2–67

2

- Tap or click the Page Setup Dialog Box Launcher (PAGE LAYOUT tab | Page Setup group) to display the Page Setup dialog box (Figure 2–68).
- If necessary, tap or click Landscape in the Orientation area in the Page sheet to select it.
- If necessary, tap or click Fit to in the Scaling area to select it.

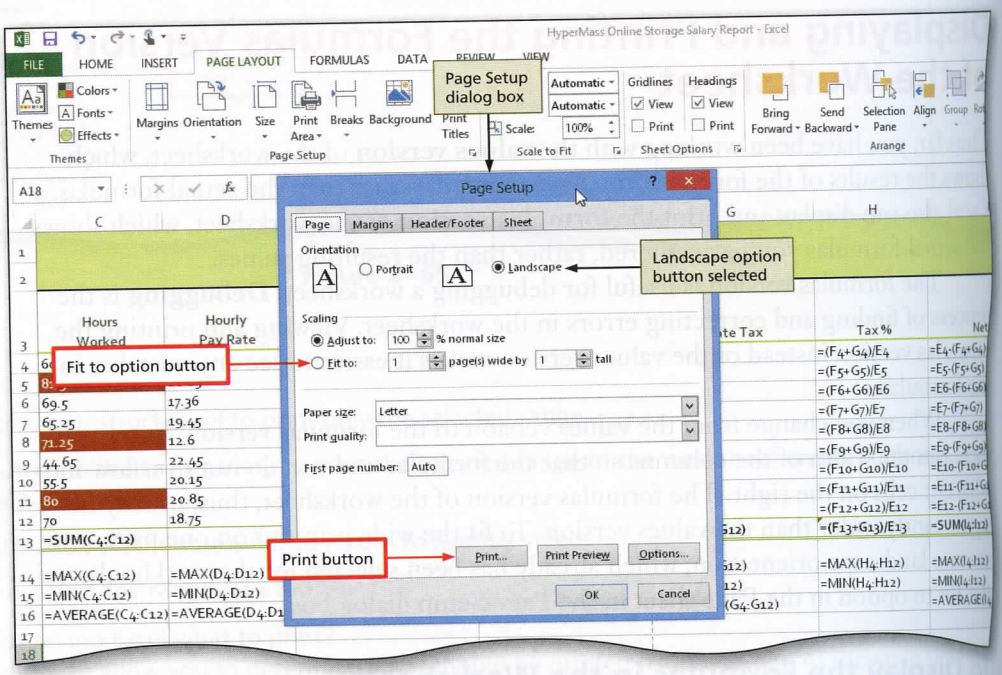

Figure 2–68

3

- Tap or click the Print button (Page Setup dialog box) to print the formulas in the worksheet on one page in landscape orientation (Figure 2–69). If necessary, in the Backstage view, select the Print Active Sheets option in the Settings area of the Print gallery.
- When Excel opens the Backstage view, tap or click the Print button to print the worksheet.

John Simon
Chief Financial Officer

HyperMass Online Storage
Salary Report

Employee	Dependents	Hours Worked	Hourly Pay Rate	Gross Pay	Federal Tax	State Tax	Tax %	Net Pay	Hire Date
Carl, Michael	3	60.45	19.5	=C4*D4	=0.22*[E4-B4*24.32]	=0.04*E4	=[F4+G4]/E4	=E4-[F4+G4]	40273
Green, Sue	0	81.5	22.85	=C5*D5	=0.22*[E5-B5*24.32]	=0.04*E5	=[F5+G5]/E5	=E5-[F5+G5]	40739
Fekir, Sith	1	69.5	17.36	=C6*D6	=0.22*[E6-B6*24.32]	=0.04*E6	=[F6+G6]/E6	=E6-[F6+G6]	39826
Lane, Jon	2	65.25	19.45	=C7*D7	=0.22*[E7-B7*24.32]	=0.04*E7	=[F7+G7]/E7	=E7-[F7+G7]	40969
Nichols, Peter	3	71.25	12.6	=C8*D8	=0.22*[E8-B8*24.32]	=0.04*E8	=[F8+G8]/E8	=E8-[F8+G8]	40648
Pearson, Ada	3	44.65	22.45	=C9*D9	=0.22*[E9-B9*24.32]	=0.04*E9	=[F9+G9]/E9	=E9-[F9+G9]	39752
Rodriquez, Juan	2	55.5	20.15	=C10*D10	=0.22*[E10-B10*24.32]	=0.04*E10	=[F10+G10]/E10	=E10-[F10+G10]	40009
Williams, Sean	0	80	20.85	=C11*D11	=0.22*[E11-B11*24.32]	=0.04*E11	=[F11+G11]/E11	=E11-[F11+G11]	39947
Yau, Xin	4	70	18.75	=C12*D12	=0.22*[E12-B12*24.32]	=0.04*E12	=[F12+G12]/E12	=E12-[F12+G12]	37424
Totals		=SUM[C4:C12]		=SUM[E4:E12]	=SUM[F4:F12]	=SUM[G4:G12]	=[F13+G13]/E13	=SUM[I4:I12]	
Highest		=MAX[B4:B12]	=MAX[C4:C12]	=MAX[D4:D12]	=MAX[E4:E12]	=MAX[F4:F12]	=MAX[G4:G12]	=MAX[H4:H12]	=MAX[I4:I12]
Lowest		=MIN[B4:B12]	=MIN[C4:C12]	=MIN[D4:D12]	=MIN[E4:E12]	=MIN[F4:F12]	=MIN[G4:G12]	=MIN[H4:H12]	=MIN[I4:I12]
Average		=AVERAGE[B4:B12]	=AVERAGE[C4:C12]	=AVERAGE[D4:D12]	=AVERAGE[E4:E12]	=AVERAGE[F4:F12]	=AVERAGE[G4:G12]		=AVERAGE[I4:I12]

formulas printed on one page

Figure 2–69

4

- After viewing and printing the formulas version, press CTRL+ACCENT MARK (`) to instruct Excel to display the values version.
- Tap or click the left horizontal scroll arrow until column A appears.

To Change the Print Scaling Option Back to 100%

Depending on your printer, you may have to change the Print Scaling option back to 100% after using the Fit to option. Doing so will cause the worksheet to print at the default print scaling of 100%. The following steps reset the Print Scaling option so that future worksheets print at 100%, instead of being resized to print on one page.

1. If necessary, display the PAGE LAYOUT tab and then tap or click the Page Setup Dialog Box Launcher (PAGE LAYOUT tab | Page Setup group) to display the Page Setup dialog box.
2. Tap or click Adjust to in the Scaling area to select the Adjust to setting.
3. If necessary, type `100` in the Adjust to box to adjust the print scaling to a new percentage.
4. Tap or click the OK button (Page Setup dialog box) to set the print scaling to normal.
5. Display the HOME tab.

Q&A What is the purpose of the Adjust to box in the Page Setup dialog box?
The Adjust to box allows you to specify the percentage of reduction or enlargement in the printout of a worksheet. The default percentage is 100%. When you tap or click the Fit to option, this percentage automatically changes to the percentage required to fit the printout on one page.

To Sign Out of a Microsoft Account

If you are signed in to a Microsoft account and are using a public computer or otherwise wish to sign out of your Microsoft account, you should sign out of the account from the Account gallery in the Backstage view before exiting Excel. Signing out of the account is the safest way to make sure that nobody else can access SkyDrive files or settings stored in your Microsoft account. The following steps sign out of a Microsoft account from Excel. For a detailed example of the procedure summarized below, refer to the Office and Windows chapter at the beginning of this book.

1. If you wish to sign out of your Microsoft account, tap or click FILE on the ribbon to open the Backstage view and then tap or click the Account tab to display the Account gallery.

2. Tap or click the Sign out link, which displays the Remove Account dialog box. If a Can't remove Windows accounts dialog box appears instead of the Remove Account dialog box, click the OK button and skip the remaining steps.

Q&A Why does a Can't remove Windows accounts dialog box appear?
If you signed in to Windows using your Microsoft account, then you also must sign out from Windows, rather than signing out from within Excel. When you are finished using Windows, be sure to sign out at that time.

3. Tap or click the Yes button (Remove Account dialog box) to sign out of your Microsoft account on this computer.

Q&A Should I sign out of Windows after signing out of my Microsoft account?
When you are finished using the computer, you should sign out of your account for maximum security.

4. Tap or click the Back button in the upper-left corner of the Backstage view to return to the worksheet.

To Save the Workbook and Exit Excel

With the workbook complete, the following steps save the workbook and exit Excel.

1. Tap or click the Save button on the Quick Access Toolbar.
2. Tap or click the Close button on the upper-right corner of the title bar.
3. Sign out of your account and shut down the computer as directed by your instructor.

Chapter Summary

In this chapter you have learned how to enter formulas, calculate an average, find the highest and lowest numbers in a range, verify formulas using Range Finder, add borders, align text, format numbers, change column widths and row heights, and add conditional formatting to a range of numbers. In addition, you learned to spell check a worksheet, print a section of a worksheet, and display and print the formulas version of the worksheet using the Fit to option. The items listed below include all the new Excel skills you have learned in this chapter, with the tasks grouped by activity.

Enter Formulas
Enter a Formula Using the Keyboard (EX 73)
Enter Formulas Using Point Mode (EX 76)

Enter Functions
Determine the Highest Number in a Range of Numbers Using the Insert Function Box (EX 82)
Determine the Lowest Number in a Range of Numbers Using the Sum Menu (EX 84)
Determine the Average of a Range of Numbers Using the Keyboard (EX 86)

Verify Formulas
Verify a Formula Using Range Finder (EX 89)

Format a Worksheet
Change the Workbook Theme (EX 91)
Change the Background Color and Apply a Box Border to the Worksheet Title and Subtitle (EX 93)
Format Dates and Center Data in Cells (EX 96)
Apply an Accounting Number Format and Comma Style Format Using the Ribbon (EX 97)
Apply a Currency Style Format with a Floating Dollar Sign Using the Format Cells Dialog Box (EX 98)
Apply a Percent Style Format and Use the Increase Decimal Button (EX 99)
Apply Conditional Formatting (EX 100)
Change Column Width (EX 103)
Change Row Height (EX 106)

Spell Check a Worksheet
Check Spelling on the Worksheet (EX 108)

Print a Worksheet
Change the Worksheet's Margins, Header, and Orientation in Page Layout View (EX 110)
Print a Section of the Worksheet (EX 114)
Display the Formulas in the Worksheet and Fit the Printout on One Page (EX 116)

What decisions w
1. Determine
a) Dete
b) Sketc
2. Create the
a) Ente
b) Ente
3. Format the
a) Dete
b) Forn
c) Forn
d) Forn
e) Resi

Apply Y
Reinforce th

Cost Analy
Note: To co
www.cengag
information

Instructions:
formulas an
numbers. As
taxi compan