

# Excel Module 1

Getting Started with Excel 2016





## Module Objectives

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- Understand spreadsheet software
- Identify Excel 2016 window components
- Understand formulas
- Enter labels and values and use the AutoSum button
- Edit cell entries
- Enter and edit a simple formula
- Switch worksheet views
- Choose print options



# Understand Spreadsheet Software (Slide 1 of 4)

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- Microsoft Excel is an electronic spreadsheet program
  - An **electronic spreadsheet** program allows you to perform numeric calculations
  - The spreadsheet is called a **worksheet**
    - Individual worksheets are stored in a **workbook** which is the Excel file



# Understand Spreadsheet Software (Slide 2 of 4)

## Business tasks you can accomplish

you can use spreadsheets to by	
Perform calculations	Adding formulas and functions to worksheet data; for example, adding a list of sales results or calculating a car payment
Represent values graphically	Creating charts based on worksheet data; for example, creating a chart that displays expenses
Generate reports	Creating workbooks that combine information from multiple worksheets, such as summarized sales information from multiple stores
Organize data	Sorting data in ascending or descending order; for example, alphabetizing a list of products or customer names, or prioritizing orders by date
Analyze data	Creating data summaries and short lists using PivotTables or AutoFilters; for example, making a list of the top 10 customers based on spending habits
Create what-if data scenarios	Using variable values to investigate and sample different outcomes, such as changing the interest rate or payment schedule on a loan



# Understand Spreadsheet Software (Slide 3 of 4)

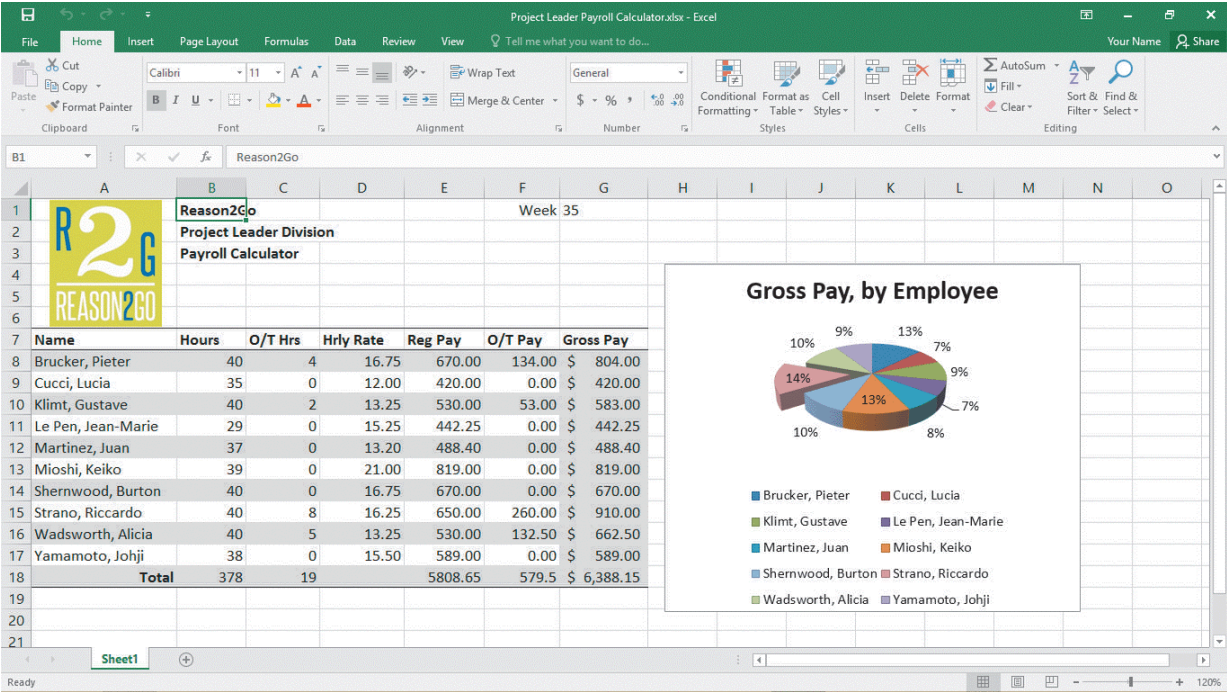
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- Advantages of using Excel
  - Enter data quickly and accurately
  - Recalculate data easily
  - Perform what-if analysis
  - Change the appearance of information
  - Create charts
  - Share information
  - Build on previous work



# Understand Spreadsheet Software (Slide 4 of 4)

## Excel worksheet





## Identify Excel 2016 Windows Components (Slide 1 of 3)

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- A **cell** is the intersection of a column and a row
- Each cell has its own unique location called a **cell address**
- The cell in which you are working is called the **active cell**
- The **Name box** displays the active cell address
- The **formula bar** allows you to enter or edit data
- **Sheet tabs** let you switch from sheet to sheet in a workbook
- The **status bar** provides a brief description of the active command or task in progress
- The **mode indicator** provides additional information about certain tasks



# Identify Excel 2016 Windows Components (Slide 2 of 3)

## Open workbook

EX 1-Project Leader Payroll Calculator.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... Your Name Share

Clipboard Font Alignment Number Styles Cells Editing

Reason2Go

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Reason2Go					Week 35											
2	Project Leader Division		Payroll Calculator														
3																	
4	Name	Hours	O/T Hrs	Hrly Rate	Reg Pay	O/T Pay	Gross Pay										
5	Brucker, Pieter	40	4	16.75	670	134											
6	Cucci, Lucia	35	0	12	420	0											
7	Klimt, Gustave	40	2	13.25	530	53											
8	Le Pen, Jean-Marie	29	0	15.25	442.25	0											
9	Martinez, Juan	37	0	13.2	488.4	0											
10	Mioshi, Keiko	39	0	21	819	0											
11	Sherwood, Burt	40	0	16.75	670	0											
12	Strano, Riccardo	40	8	16.25	650	260											
13	Wadsworth, Alice	40	5	13.25	530	132.5											
14	Yamamoto, Johji	38	0	15.5	589	0											
15																	
16																	
17																	
18																	
19																	
20																	
21																	

Sheet1

Ready 120%





# Identify Excel 2016 Windows Components (Slide 3 of 3)

A **range** is a selection of two or more cells

EX 1-Project Leader Payroll Calculator.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do...

Clipboard Font Alignment Number Styles Cells Editing

B5 40

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Reason2Go					Week 35											
2	Project Leader Division		Payroll Calculator														
3																	
4	Name	Hours	O/T Hrs	Hrly Rate	Reg Pay	O/T Pay	Gross Pay										
5	Brucker, Pieter	40	4	16.75	670	134											
6	Cucci, Lucia	35	0	12	420	0											
7	Klimt, Gustave	40	2	13.25	530	53											
8	Le Pen, Jean-Marie	29	0	15.25	442.25	0											
9	Martinez, Juan	37	0	13.2	488.4	0											
10	Mioshi, Keiko	39	0	21	819	0											
11	Sherwood, Burt	40	0	16.75	670	0											
12	Strano, Riccardo	40	8	16.25	650	260											
13	Wadsworth, Alice	40	5	13.25	530	132.5											
14	Yamamoto, Johji	38	0	15.5	589	0											
15																	
16																	
17																	
18																	
19																	
20																	
21																	

Sheet1

Ready Average: 37.8 Count: 10 Sum: 378 120%



# Understand Formulas (Slide 1 of 3)

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- **Formulas** are equations in a worksheet
- When creating calculations in Excel, it is important to:
  - Know where the formulas should be
  - Know exactly what cells and arithmetic operations are needed
  - Create formulas with care
  - Use cell references rather than values
  - Determine what calculations will be needed



## Excel arithmetic operators

operator	purpose	example
+	Addition	=A5+A7
-	Subtraction or negation	=A5-10
*	Multiplication	=A5*A7
/	Division	=A5/A7
%	Percent	=35%
^ (caret)	Exponent	=6^2 (same as 6 <sup>2</sup> )



# Understand Formulas (Slide 3 of 3)

## Viewing a formula

EX 1-Project Leader Payroll Calculator.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do...

Clipboard Font Alignment Number Styles Cells Editing

Calibri 11

General

Conditional Formatting Table Cell Styles Insert Delete Format AutoSum Fill Clear Sort & Find & Filter Select

E5 =B5\*D5

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Reason2Go					Week 35											
2	Project Leader Division		Payroll Calculator														
3																	
4	Name	Hours	O/T Hrs	Hrly Rate	Reg Pay	O/T Pay	Gross Pay										
5	Brucker, Pieter	40	4	16.75	670	134											
6	Cucci, Lucia	35	0	12	420	0											
7	Klimt, Gustave	40	2	13.25	530	53											
8	Le Pen, Jean-Marie	29	0	15.25	442.25	0											
9	Martinez, Juan	37	0	13.2	488.4	0											
10	Mioshi, Keiko	39	0	21	819	0											
11	Sherwood, Burt	40	0	16.75	670	0											
12	Strano, Riccardo	40	8	16.25	650	260											
13	Wadsworth, Alice	40	5	13.25	530	132.5											
14	Yamamoto, Johji	38	0	15.5	589	0											



## Enter Labels and Values and Use the AutoSum Button (Slide 1 of 2)

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- **Labels** contain text and numerical information not used in calculations
- **Values** are numbers, formulas, and functions that can be used in calculations
- A **function** is a built-in formula
  - A function includes arguments, the information necessary for the calculation
- Clicking the Sum button sums the adjacent range above or to the left, though you can adjust the range
- The fill handle fills cells based on the first number sequence in the range





# Enter Labels and Values and Use the AutoSum Button (Slide 2 of 2)

## Creating a formula using the AutoSum button

EX 1-Project Leader Payroll Calculator.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... Your Name Share

Clipboard Font Alignment Number Styles Cells Editing

AVERAGE X ✓ f\_x =SUM(B5:B14)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Reason2Go					Week 35											
2	Project Leader Division		Payroll Calculator														
3																	
4	Name	Hours	O/T Hrs	Hrly Rate	Reg Pay	O/T Pay	Gross Pay										
5	Brucker, Pieter	40	4	16.75	670	134											
6	Cucci, Lucia	35	0	12	420	0											
7	Klimt, Gustave	40	2	13.25	530	53											
8	Le Pen, Jean-Marie	29	0	15.25	442.25	0											
9	Martinez, Juan	37	0	13.2	488.4	0											
10	Mioshi, Keiko	39	0	21	819	0											
11	Sherwood, Burt	40	0	16.75	670	0											
12	Strano, Riccardo	40	8	16.25	650	260											
13	Wadsworth, Alice	40	5	13.25	530	132.5											
14	Yamamoto, Johji	38	0	15.5	589	0											
15	Totals	=SUM(B5:B14)															
16		SUM(number1, [number2], ...)															



## Edit Cell Entries (Slide 1 of 3)

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- You can change, or **edit**, the contents of an active cell at any time
- To edit the contents of the active cell:
  - Double-click the cell, or
  - Click in the formula bar, or
  - Just start typing
- Excel switches to Edit mode when you are making cell entries



# Edit Cell Entries (Slide 2 of 3)

## Worksheet in Edit mode

EX 1-Project Leader Payroll Calculator.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... Your Name Share

Clipboard Font Alignment Number Styles Cells Editing

Calibri 11 A A

B I U Wrap Text General Conditional Formatting Format as Table Cell Styles Insert Delete Format AutoSum Fill Sort & Filter Find & Select Clear

A5 Brucker, Pieter

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Reason2Go					Week 35											
2	Project Leader Division		Payroll Calculator														
3																	
4	Name	Hours	O/T Hrs	Hrly Rate	Reg Pay	O/T Pay	Gross Pay										
5	Brucker, Pieter	40	4	16.75	670	134											
6	Cucci, Lucia	35	0	12	420	0											
7	Klimt, Gustave	40	2	13.25	530	53											
8	Le Pen, Jean-Marie	29	0	15.25	442.25	0											
9	Martinez, Juan	37	0	13.2	488.4	0											
10	Mioshi, Keiko	39	0	21	819	0											
11	Sherwood, Burt	40	0	16.75	670	0											
12	Strano, Riccardo	40	8	16.25	650	260											
13	Wadsworth, Alice	40	6	13.25	530	159											
14	Yamamoto, Johji	38	0	15.5	589	0											
15	Totals	378	20	153.2	5808.65	606	0										
16																	
17																	
18			Average Gross Pay														
19																	
20																	
21																	

Sheet1







Edit 120%





## Edit Cell Entries (Slide 3 of 3)

### Common pointers in Excel

name	pointer	use to	visible over the
Normal		Select a cell or range; indicates Ready mode	Active worksheet
Fill handle		Copy cell contents to adjacent cells	Lower right corner of the active cell or range
I-beam		Edit cell contents in active cell or formula bar	Active cell in Edit mode or over the formula bar
Move		Change the location of the selected cell(s)	Perimeter of the active cell(s)
Copy		Create a duplicate of the selected cell(s)	Perimeter of the active cell(s) when [Ctrl] is pressed
Column resize		Change the width of a column	Border between column heading indicators



## Enter and Edit a Simple Formula (Slide 1 of 2)

- Formulas start with the equal sign (=), also called the **formula prefix**
- **Calculation operators** in formulas indicate what type of calculation you want to perform
- **Arithmetic operators** perform mathematical calculations
  - Examples of arithmetic operators are  
 $+ \quad - \quad * \quad / \quad \% \quad ^$
- **Comparison operators** compare values for the purpose of true/false results
  - Examples of comparison operators are  
 $= \quad > \quad < \quad >= \quad <= \quad <>$



## Enter and Edit a Simple Formula (Slide 2 of 2)

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- **Text concatenation operators** join strings of text in different cells
  - An example of a text concatenation operator is **&**
- **Reference operators** enable you to use ranges in calculations
  - Examples of reference operators are  
**: , (space)**



## Switch Worksheet Views (Slide 1 of 3)

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- You can change your view of the worksheet window by using either:
  - View tab on the Ribbon
  - View buttons on the status bar
- **Normal view** shows the worksheet without headers and footers or tools such as rulers and a page number indicator
- **Page Layout View** provides a more accurate view of how a worksheet will look when printed
  - It shows page margins, headers and footers, rulers, etc.
- **Page Break Preview** displays a reduced view of each page of the worksheet, along with page break indicators



# Switch Worksheet Views (Slide 2 of 3)

## Page Layout view

EX 1-Project Leader Payroll Calculator.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... Your Name Share

Normal Page Break Preview Custom Views

☒ Ruler ☒ Formula Bar ☒ Gridlines ☒ Headings

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes Unhide Window

View Side by Side Synchronous Scrolling Switch Windows Macros

F5 X ✓ fx =C5\*(2.5\*D5)

A B C D E F G H I J K L M N

Add header

Reason2Go		Week 35				
Project Leader Division		Payroll Calculator				
Name	Hours	O/T Hrs	Hrly Rate	Reg Pay	O/T Pay	Gross Pay
Brucker, Peter	40	4	16.75	670	167.5	837.5
Cucci, Lucia	38	0	12	456	0	
Klimt, Gustave	40	2	13.25	530	53	
Le Pen, Jean-Marie	29	0	15.25	442.25	0	
Martinez, Javier	37	0	13.2	488.4	0	
Mioshi, Keiko	39	0	21	819	0	
Shermwood, Burt	40	0	16.75	670	0	
Strano, Riccardo	40	4	16.25	650	130	
Wadsworth, Alice	40	6	13.25	530	159	
Yamamoto, Johji	38	0	15.5	589	0	
Totals	381	16	153.2	5844.65	509.5	837.5
Average Gross Pay						

Sheet1

Ready Page: 1 of 1



# Switch Worksheet Views (Slide 3 of 3)

## Page Break Preview

EX 1-Project Leader Payroll Calculator.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do...

Normal Page Break Preview Page Layout Custom Views

Workbook Views Show

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes Split View Side by Side Synchronous Scrolling Switch Windows Macros

Window

A1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1																																			
2																																			
3																																			
4	Name	Hours	OIT Hrs	Hrly Rat	Reg Pay	OIT Pay	Gross Pay																												
5	Brucker, Peter	40	4	16.75	670	167.5	837.5																												
6	Cucci, Lucia	38	0	12	456	0																													
7	Kilmt, Gustave	40	2	13.25	530	53																													
8	Le Pen, Jean-Mar	29	0	15.25	442.25	0																													
9	Martinez, Javier	37	0	13.2	488.4	0																													
10	Mioshi, Keiko	39	0	21	819	0																													
11	Shermwood, Burt	40	0	16.75	670	0																													
12	Strano, Riccardo	40	4	16.25	650	130																													
13	Vadsworth, Alice	40	6	13.25	530	159																													
14	Yamamoto, Johji	38	0	15.5	589	0																													
15	Totals	381	16	153.2	5844.7	509.5	837.5																												
16																																			
17																																			
18																																			
19																																			
20																																			

Average Gross Pay



## Choose Print Options (Slide 1 of 3)

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- You can see how a worksheet would look when printed using:
  - Page Layout tab
    - The dotted line indicates the **print area**, the area to be printed
  - Print Preview
    - Click File on the Ribbon then click Print in Backstage view
- Page Layout tab
  - Page Setup group (Print orientation: **landscape** or **portrait**)
  - Scale to Fit group
  - Sheet Options group
  - Printing in Backstage view lets you choose the number of copies, the printer, and so on





## Choose Print Options (Slide 2 of 3)

### Worksheet with Portrait orientation

EX 1-Project Leader Payroll Calculator.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... Your Name Share

Themes Colors Fonts Margins Orientation Size Print Area Breaks Background Print Titles Width: Automatic Height: Automatic Scale: 100% Gridlines View Print Bring Forward Send Backward Selection Pane Align Group Rotate Arrange

A20 Your Name

Name	Hours	O/T Hrs	Hrly Rate	Reg Pay	O/T Pay	Gross Pay
Brucker, Peter	40	4	16.75	670	167.5	837.5
Cucci, Lucia	38	0	12	456	0	
Klimt, Gustave	40	2	13.25	530	53	
Le Pen, Jean-Marie	29	0	15.25	442.25	0	
Martinez, Javier	37	0	13.2	488.4	0	
Mioshi, Keiko	39	0	21	819	0	
Sherwood, Burt	40	0	16.75	670	0	
Strano, Riccardo	40	4	16.25	650	130	
Wadsworth, Alice	40	6	13.25	530	159	
Yamamoto, Johji	38	0	15.5	589	0	
Totals	381	16	153.2	5844.65	509.5	837.5

Average Gross Pay

Your Name





# Choose Print Options (Slide 2 of 3)

## Worksheet in Backstage view

EX 1-Project Leader Payroll Calculator.xlsx - Excel

Print

Copies: 1

Printer: Canon MF210 Series Ready

Printer Properties

Settings

Print Active Sheets  
Only print the active sheets

Pages: 1 to 1

Print on Both Sides  
Flip pages on long edge

Collated  
1,2,3 1,2,3

No Staples

Portrait Orientation

Letter  
8.5" x 11"

Normal Margins  
Left: 0.7" Right: 0.7"

No Scaling  
Print sheets at their actual size

Page Setup

1 of 1

Project Leader Payroll Calculator

Week 15

Name	Hours	OT Hrs	Wkly Rate	Reg Pay	OT Pay	Gross Pay
Bruckner, Peter	40	4	28.75	670	187.5	857.5
Cook, Linda	36	0	25	900	0	900
Kurtz, Gustave	40	0	33.25	1330	0	1330
Le Pen, Jean-Marie	28	0	33.25	932	0	932
Martinez, Javier	37	0	33.25	1230.25	0	1230.25
Morgan, Keith	39	0	21	819	0	819
Ortiz, Maria	40	0	28.75	1150	0	1150
Ortiz, Ricardo	40	0	28.75	1150	0	1150
Widdoworth, Alice	40	0	33.25	1330	0	1330
Widdoworth, Bob	36	0	25	900	0	900
Totals	381	4	25.72	2644.25	187.5	2831.75
Average Gross Pay						

Your Name