



Excel Chapter 6: Date Functions and Conditional Formatting



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Learning Objectives

- After studying this chapter, you will be able to:
 - ▲ Identify date serial numbers
 - ▲ Apply custom date formatting
 - ▲ Enter times in Excel
 - ▲ Create functions using dates
 - ▲ Perform date and time calculations
 - ▲ Create customized conditional formatting rules
 - ▲ Edit rules using the conditional formatting rules manager



Date Serial Numbers

- Dates are stored as sequential serial numbers
- Dates stored as serial numbers allows dates to be used in calculations

	A	B	C
1	Today	Due Date	Days
2	3/8/2016	4/5/2016	28

Formula in cell C2 is:
=B2-A2

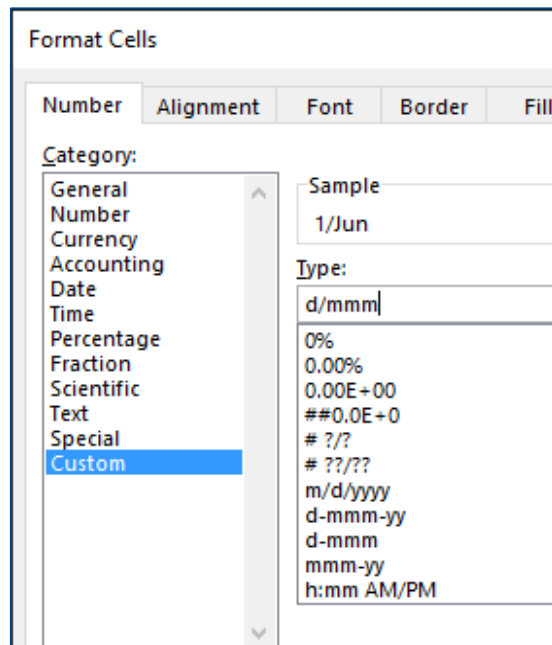
- Apply custom date formatting

CUSTOM DATE FORMATTING			
Category	Format Type	Description	Display for April 15, 2016
Custom	d-mmm	Day-Month	15-Apr
	d-mmmm	Day-Month	15-April
	d-mmm-yy	Day-Month-Year	15-Apr-16
	dddd mmmm "the" d	Weekday Month the Day	Friday April the 15

Date Serial Numbers (cont.)



- Custom date format codes:
 - ▲ Day, Month, and Year (d, m, and y)
 - ▲ Slash and Dash (/ and –)
- Create in Format Cells dialog box



Entering Time Information in Excel

- Times have serial numbers attached, like dates
- Excel applies the correct custom number formatting
 - ▲ Example: Excel knows that 6:00 is 6:00 AM because it assumes you are using a 24-hour clock
- Times can be customized

TIME ENTRIES		
Entry	Display	Time Stored As
6:00	6:00	6:00:00 AM or 0.25
9:00 AM	9:00 AM	9:00:00 AM or 0.375
12:00	12:00 PM	12:00:00 PM or 0.5
13:30	13:30	1:30:00 PM or 0.5625



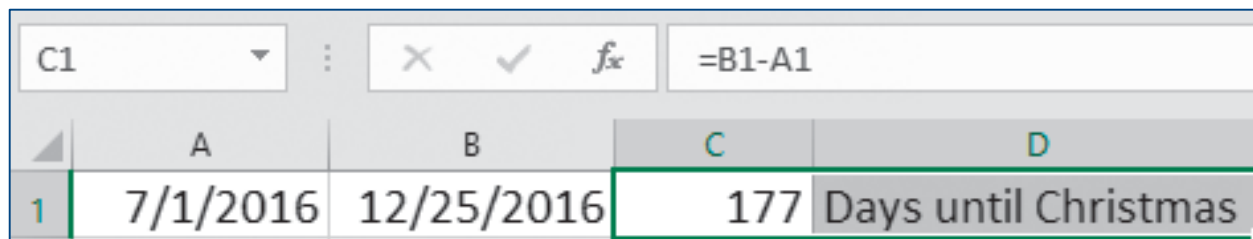
Using Date Functions

- Date functions are entered like all other functions

DATE FUNCTIONS	
Function	Description
TODAY()	No arguments are inserted inside the brackets. It displays the current date based on today's serial number; the formula updates the date automatically when the worksheet is recalculated or reopened.
NOW()	No arguments are inserted inside the brackets. This function is similar to the TODAY function but also displays the time, based on your computer's clock.
DATE(year,month,day)	This function returns a specific date, based on the arguments entered.
	Example: Result:
	=DATE(2020,12,20) 12/20/2020
YEAR(date)	Use this function to return the year of the specified date, which can be entered as a serial number or as a cell reference to a cell containing a date.
	Example: Result:
	=YEAR(B23) 2020

Entering Date and Time Calculations

- Use mathematical operations in date and time formulas
 - ▲ Subtract to find the number of days between two dates or two times
 - ▲ Add a number of days to a particular date
- Combine mathematical operations with a date function



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D
1	7/1/2016	12/25/2016	177	Days until Christmas

The formula bar at the top shows the formula `=B1-A1` for cell C1. The cell C1 is highlighted with a green border.

Conditional Formatting

- Applies formatting to cells meeting a certain criteria
- Preset options can be applied
- Create multiple rules for same set of data
- Conditional formatting updates cells when data is entered
- Conditional formatting with graphics
 - ▲ Apply data bars, color scales, or icon sets

Expenses	Actual	Budget	Difference
Bank Fees	<div><div></div></div> 7,200	7,300	✓ 100
Insurance	<div><div></div></div> 18,230	17,000	✗ -1,230
Rent	<div><div></div></div> 25000	25000	✓ 0

Conditional Formatting (cont.)

- Using the conditional formatting Rules Manager
 - ▲ Create, edit, and delete rules or rearrange the order
- Rules manager displays existing rules for entire worksheet or current selection

