

## 09 Complex Formulas

### Introduction

A simple formula is a mathematical expression with one operator, such as  $7+9$ . A **complex formula** has more than one mathematical operator, such as  $5+2*8$ . When there is more than one operation in a formula, the **order of operations** tells Excel which operation to calculate first. In order to use Excel to calculate complex formulas, you will need to understand the order of operations.

Click the link below to view the video:

 [Link: Complex Formulas](#)

### Exercise 09a

Complete the exercise below + on the following page.

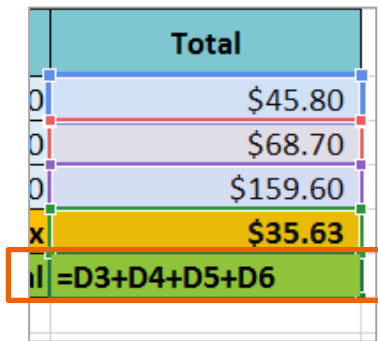
- Open UNIT 6 EXCEL > 09 EXCEL EXERCISE > **Excel 09a Template COMPLEX FORMULAS**
- File > Save As > My Documents
- Name your file:  
**Excel 09a YourFirstNameLastInitial COMPLEX FORMULAS**  
Click Save
- Calculate the **Total** of each Menu Item (Cells D3, D4, D5) using a one operation simple formula calculation: Price x Quantity.

Price	Quantity	Total
\$2.29	20	=B3*C3
\$2.29	20	

- Calculate** the cost of sales **Tax** (cell D6) for the catering invoice. Enter a formula in cell D6 that: **adds** the total amounts for each menu item and **multiplies** by the Manitoba provincial tax rate of 13%.

Total
\$45.80
\$68.70
\$159.60
<b>=(D3+D4+D5)*13%</b>

- Calculate** the total of the Catering Invoice (cell D7) by entering a formula that adds the Menu Item Totals and the Tax. (Don't use the SUM tool).



The image shows a portion of an Excel spreadsheet. The first row is a header with the word "Total" in a teal cell. Below it are four rows of data: a blue row with "\$45.80", a grey row with "\$68.70", a light blue row with "\$159.60", and a yellow row with "\$35.63". The final row is a green cell containing the formula "=D3+D4+D5+D6", which is highlighted with an orange border. The column headers are partially visible as "0", "0", "0", "x", and "il".

	Total
0	\$45.80
0	\$68.70
0	\$159.60
x	\$35.63
il	=D3+D4+D5+D6

- Save your assignment and email it to your instructor.**

## Exercise 09b

Complete the exercise below.

- Open 09 EXCEL EXERCISE > **Excel 09b Template COMPLEX DATA**
- File > Save As > My Documents
- Name your file: **Excel 09b YourFirstNameLastInitial COMPLEX FORMULAS**  
Click Save.
- Calculate the **PST%** of first Item using a simple formula calculation. Drag the fill handle to copy the formula to fill the other cells.

Price	PST 8%
\$5.95	=D4*8%

- Calculate the **GST%** of first Item using simple formula calculation. Drag the fill handle to copy the formula to fill the other cells.

Price	PST 8%	GST 5%
\$5.95	\$0.48	=D4*5%

- Calculate** the cost of Sub Totals for each Item Line. Enter a formula on the first item line that: **adds** the price, the GST and PST and **multiplies** by the Quantity. Drag the fill handle to copy the formula to fill the other cells.

Price	PST 8%	GST 5%	Quantity	Sub Total
\$5.95	\$0.48	\$0.30	5	=(D4+E4+F4)*G4

- Calculate** the total of the Greenhouse Invoice (cell H21). Use either the SUM tool or a formula.

<b>Total</b>	=SUM(H4:H20)
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- Save your assignment and email it to your instructor.