

## CIS250 Quiz 2 - Excel Basics (“Take Home” Assignment)

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CIS250: -06 |  
Date: Tuesday, January 16, 2018 |  
Hours: .4 |

Read *Exploring: Microsoft Excel 2016* and complete the related simulation and Grader Project in MyITLab before working on this assessment. It will be included with the overall Quizzes tally and will help you prepare for the upcoming Test. You may work on this unique assessment with other CIS250 students.

The purpose of this second Quiz in Blackboard is to assess your knowledge, understanding, and application of:

- Basic calculations and mathematical formulas within the context of a spreadsheet
- Fundamental Microsoft® Excel® skills used in solving common problems in the world around you

Students should not use MS Excel® to solve any of the following problems. Instead, your responses should be entered directly into the respective answer fields provided on the next page. A couple of Web references are provided to assist with more complex formulas. You are also encouraged to review Excel Simulation 1 in the *Exploring: Excel* eTextbook along with the respective reference information in the two supplemental textbooks noted in *Course Syllabus*.

First, update the identification information in the shaded area above. Be sure to include your first and last name in both the identification section above as well as inside the parenthesis in the upper left corner of the page header. And, don't forget to include your CIS250 section number above. For the date, press the F1 key to request **Word Help**, then search for the term “date” in order to find out how to insert today's date in the remaining shaded area above, using the format:

“dddd, MMMM dd, yyyy” (day of the week and month should appear as a full text string)

Next, be sure to update the information in the page header by entering it in the upper left corner of page 2 only.

Students can use virtually any version of Microsoft® Word to solve the problems on the following pages, although you are *strongly encouraged* to use Microsoft® Word 2016. If you do not have access to a PC with this application software, Microsoft® Office 2016 is available on *many* UofL computers that are installed for student use in the College of Business (CoB), Davidson Hall, REACH/CRC (over in Ekstrom Library), and Miller Information Technology Center (MITC). Check the two related items in the **Getting Started** folder of Blackboard for additional information for accessing MS Office 2016.

Be sure to check your answers against the solution set that will be made available in Blackboard in a Portable Document Format (PDF) shortly before this assignment is due. Note that it is not necessary to include more than one answer for each problem, although you are certainly encouraged to consider alternative solutions that will also work. You should use Excel to validate a specific answer only if absolutely necessary.

Please feel free to email your professor should you have any questions or issues concerning this particular assignment. Students are encouraged to use tutoring services offered at no charge through REACH/CRC. Click on the following URL for additional details:

<http://www.reach.louisville.edu/tutoring/computer/>

Once you have finished responding to all of the questions below, enter the total elapsed time it took you to complete this assignment in the respective text box near the top of this page.

**Part 1:** If you have not already read through the Excel material in Chapter 1 of the *Exploring* text as well as completed the *Excel Ch 1 Quiz* and simulation, you should definitely do so before attempting to complete this unique assignment.

(a) If you enter 2,468\*5 in a cell exactly as shown here (without an equal sign), what value would result?

It would just say 2,468\*5

(b) If you enter =5+3^2\*4/2-1 in a cell exactly as shown, what value would result?

22

(c) Using a scale of 1 to 4 (first to last), rank each of the following operations in order of precedence:

| Operation                   | Rank |
|-----------------------------|------|
| addition and subtraction    | 4    |
| () parenthesis              | 1    |
| multiplication and division | 3    |
| exponentiation              | 2    |

(d) Refer to the figure directly below. Assume that cell A3 contains the formula =A1+A2. Explain the most likely reason why the value calculated appears to be incorrect.

|   | A | B   | C |
|---|---|-----|---|
| 1 | 1 | 10% |   |
| 2 | 2 |     |   |
| 3 | 4 |     |   |
| 4 |   |     |   |

The value could be different than the value specified

(e) What formula would you write to add a range of numbers stored in the *first three cells* of the *second row*?

=A2+B2+C2

(f) If the formula =\$B4\*K\$9 is copied from cell F9 to cell H10, what formula results?

=\$B5\*M\$9

(g) Refer to the following figure. Now create a formula to be entered in cell B2 and subsequently can be copied down the column and across all the rows to complete the multiplication table.

|   | A | B | C  | D  | E  | F  | G |
|---|---|---|----|----|----|----|---|
| 1 |   | 1 | 2  | 3  | 4  | 5  |   |
| 2 | 1 | 1 | 2  | 3  | 4  | 5  |   |
| 3 | 2 | 2 | 4  | 6  | 8  | 10 |   |
| 4 | 3 | 3 | 6  | 9  | 12 | 15 |   |
| 5 | 4 | 4 | 8  | 12 | 16 | 20 |   |
| 6 | 5 | 5 | 10 | 15 | 20 | 25 |   |
| 7 |   |   |    |    |    |    |   |

=\$A2\*B\$1

**Part 2:** Now let's do a little bit of shopping, and then get some good food and drink! Read each scenario thoroughly.

- (a) You and your college roommates are in the market for a new plasma TV to replace the antiquated television set that your parents gave you for your bedroom in their home. After looking around town and doing some price comparison on the Web, you decide to purchase a 55-inch digital model that is on sale at *GetRippinDeals.com* for \$549, reduced from the original list price of \$799.

Create a formula that will determine the amount of money that you will save.

What value will result?

`=799-549`

250

Create a formula to determine the percent discount for this new plasma TV.

What value will result?

`=(799-549)/799*100`

31.3

- (b) A high-end fashion retailer at a suburban mall scored an incredible deal on the latest purses from a European handbag manufacturer and expects to make a killing on them. They were able to purchase 250 of these new purses for \$200 each and plan to mark them up 250% for sale at their mall store.

Create a formula that will determine the *rack (or list) price* that they plan to sell these purses for.

`=200*2.5`

Create a formula that will determine the *gross profits* the store expects to generate (after covering the expense for the purses from the manufacturer, but no other costs of goods sold) from the sale of all of these handbags.

`200*2.5*250-200*250`

- (c) A group of six students is studying abroad in Amsterdam and has dinner and drinks at a new restaurant in the Red Light district. Their bill for the night comes to a total of \$209 (USD). Assume that the currency exchange rate is \$1.10 (USD) per Euro. No tip will be tendered as that is customary (*believe it or not!*) for Amsterdam.

Create a formula that will determine the total amount to be paid in Euros.

What value will result?

`=209/1.10`

190

The students decide to ignore the custom regarding tips because they have received excellent service (not to mention an extra round of drinks on the house) and decide to leave the server a 10% tip. What formula will determine how much each student will pay (in Euros, not USD) for the tab (including tip) if split equally?

`=((209/1.1)*1.1)/6`

- (d) After leaving the restaurant, an argument broke out between two of the guys about how much beer the group had consumed. They agreed that half the students each drank four one-liter draft beers, while the remaining students consumed a total of seven one-liter bottles of beer. Assuming that one gallon is equal to 3.78 liters and there are 128 ounces per gallon, create a formula that will allow these students to determine how many total ounces of beer were consumed by the students in this Amsterdam restaurant?

`=(3*4+7)/3.78*128`

**Part 3:** Click on the following Web link to learn how to convert a speed limit posted in miles per hour (MPH) for drivers in the U.S. to a comparable speed limit in Europe that would be posted in kilometers per hour (KPH).

[http://wiki.answers.com/Q/How do you convert mph to kph](http://wiki.answers.com/Q/How_do_you_convert_mph_to_kph)

- |  |                             |
|--|-----------------------------|
| (a) Create a formula that would accept any speed limit posted in MPH into cell A1 to the <u>precise</u> KPH.   | <code>=A1*1.609344</code>   |
| (b) If cell B1 contains the clocked speed of a vehicle in KPH, provide a formula to convert that figure into one that is expressed in meters per second.   | <code>=B1*1000/60/60</code> |
| (c) If cell C1 contains the total number of minutes that you have been driving and cell D1 contains the total mileage for this same trip, create a formula that will determine the average speed expressed in MPH.   | <code>=D1/C1*60</code>      |
| (d) Assume that you are making a long distance trip by car and make a single stop for gas and lunch along the way. Cell A2 contains the total miles driven during the initial part of the trip, while cell B2 contains the corresponding average speed expressed in MPH. Cells C2 and D2 will contain the respective figures for the second part of the trip. The time it took to gas up was 20 minutes and lunch took 40 minutes. Create a formula that will determine the estimated time in hours it took to complete the entire trip. | <code>=A2/B2+C2/D2+1</code> |
| (e) If cell F1 contains the total number of hours that you have been driving and cell G1 contains a posted speed limit for the interstate highway that you have driven on for the entire trip, create a formula that will determine the average speed expressed in MPH.  | Not enough information      |

**Part 4:** Click on the following Web link to learn more about how to convert temperatures using standard scales, including Celsius, Fahrenheit, and Kelvin.

<http://www.usatoday.com/weather/wtempcf.htm>

- |  |                                  |
|--|----------------------------------|
| (a) Create a formula that would accept any temperature expressed in degrees Fahrenheit and entered in cell A4 to the precise temperature in Celsius.                     | <code>=(5/9)*(A4-32)</code>      |
| (b) If the result of the temperature conversion in the step immediately above is stored in cell B4, provide a new and simple formula to convert that figure into Kelvin. | <code>=B4+273.16</code>          |
| (c) Assuming that the results of the preceding step have   | <code>=9/5*(H4-273.16)+32</code> |

been stored in cell H4, create a new, but more complex formula that will convert this same temperature given in Kelvin to degrees Fahrenheit.

**Part 5:** Judson Ford Realty uses an Excel® spreadsheet to keep track of October Sales. Answer the following questions based on the spreadsheet image directly below.

|    | A   | B                         | C                   | D                  | E                        | F                            | G                          | H                        |
|----|---|---------------------------|---------------------|--------------------|--------------------------|------------------------------|----------------------------|--------------------------|
| 1  | <b>Judson Ford Realty - October Sales</b>                                       |                           |                     |                    |                          |                              |                            |                          |
| 2  | <b>Property</b>   | <b>Size (square feet)</b> | <b>Asking Price</b> | <b>Sales Price</b> | <b>% of Asking Price</b> | <b>Price Per Square Foot</b> | <b>Commission</b>          | <b>Net to Home Owner</b> |
| 3  | 122 West 75 Street  | 4,000                     | \$ 450,000          | \$ 350,000         | 77.8%                    | \$ 87.50                     | \$ 12,250.00               | \$ 337,750.00            |
| 4  | 4567 S.W. 95 Street   | 5,750                     | \$ 750,000          | \$ 648,000         | 86.4%                    | \$ 112.70                    | \$ 22,680.00               | \$ 625,320.00            |
| 5  | 123 Alamo Road  | 3,000                     | \$ 350,000          | \$ 275,000         | 78.6%                    | \$ 91.67                     | \$ 9,625.00                | \$ 265,375.00            |
| 6  | 9000 Brickell Avenue  | 2,500                     | \$ 275,000          | \$ 250,000         | 90.9%                    | \$ 100.00                    | \$ 8,750.00                | \$ 241,250.00            |
| 7  | 5596 Powerline Road   | 2,250                     | \$ 189,000          | \$ 189,000         | 100.0%                   | \$ 84.00                     | \$ 6,615.00                | \$ 182,385.00            |
| 8  | 8900 N.W. 89 Street   | 4,200                     | \$ 456,000          | \$ 290,000         | 63.6%                    | \$ 69.05                     | \$ 10,150.00               | \$ 279,850.00            |
| 9  | 75 Maynada Avenue   | 2,475                     | \$ 300,000          | \$ 265,000         | 88.3%                    | \$ 107.07                    | \$ 9,275.00                | \$ 255,725.00            |
| 10 |   |                           |                     |                    |                          |                              |                            |                          |
| 11 | <b>Totals:</b>  | <b>24,175</b>             | <b>2,770,000</b>    | <b>2,267,000</b>   |                          |                              | <b>\$ 79,345</b>           | <b>\$ 2,187,655</b>      |
| 12 | <b>Averages:</b>  |                           |                     |                    | <b>83.7%</b>             | <b>\$ 93.14</b>              |                            |                          |
| 13 | <b>Commission:</b>  | <b>3.50%</b>              |                     |                    |                          | <b>Realtor:</b>              | <b>Your Name Goes Here</b> |                          |
| 14 |   |                           |                     |                    |                          |                              |                            |                          |
| 15 | <b>Notes:</b>   |                           |                     |                    |                          |                              |                            |                          |
| 16 | 1. The commission is paid on the actual sales price, not the asking price.      |                           |                     |                    |                          | <b>Average sales price</b>   | <b>\$</b>                  | <b>323,857</b>           |
| 17 | 2. The price per square foot is based on the sales price, not the asking price. |                           |                     |                    |                          | <b>Maximum sales price</b>   | <b>\$</b>                  | <b>648,000</b>           |
| 18 | 3. The net to the home owner is the actual sales price minus the commission.    |                           |                     |                    |                          | <b>Minimum sales price</b>   | <b>\$</b>                  | <b>189,000</b>           |

- (a) To calculate the percentage of the asking price, you will need to divide the sales price by the asking price. Write the formula that belongs in cell E3.

=D3/C3

- (b) To calculate the price per square foot, take the selling price divided by the number of square feet. Write the formula that belongs in cell F3.

=D3/B3

- (c) Now determine the realtor's commission. The realtor's commission is the commission percentage times the selling price. Write the formula for this in cell G3. Note that it must work when copied down the column.

=D3\*\$B\$13

- (d) To determine the net amount payable to the homeowner, take the selling price minus the commission to the realtor. Write the formula that belongs in cell H3.

=D3-G3

- (e) What simple mathematical expression can be used to compute the range (or spread) of sale prices for all the residential properties listed in the image above?

+H17-H18



**Congratulations - you are nearly done with *Quiz 2*! Perform one final review of this Microsoft® Word document and its accompanying instructions to ensure you have successfully completed all steps. During the review process, be sure to note the actual number of hours (elapsed clock time) that you spent on *Quiz 2* at the top of the first page of this document in the designated box. Then save this Microsoft® Word file to your PC hard drive or USB thumb drive and create a backup copy of it for future reference.**



**Be sure to rename your Microsoft® Word document template file beginning with your first and middle initials concatenated with your full last name, followed by a dash, then the text "*Quiz2-Solution*" before the ".docx" file extension. For example, if you have a first name of "Bubba" and a middle name of "Joe" plus a last name of "Gump" then you would name your file "*BJGump-Quiz2-Solution*" - once you have done this, you will need to convert your solution file to a PDF using the Microsoft® Office 2016 *File* option *Export*, then click on the *Create PDF/XPS* button.**

**If you are using a Mac, please see the respective instructions in *Step 14* of *Lab Assignment 1* for details about how to create a PDF. Finally, post your completed *Quiz 2* digital solution file into Blackboard under the respective ***Submit Work Here*** folder item for subsequent grading.**



*Due dates and times for assignments are documented in the Course Schedule and under **My Grades** in **Blackboard** or in MyITLab. No solution file will be accepted for grading after the due date unless you have notified me in advance of an extenuating circumstance described in the Course Syllabus. Please feel free to contact me via email if you have any questions/issues regarding this specific assignment. If you have any feedback about this assessment, you should make note of them in the blue comments area below and NOT in the ***Submit Work Here*** folder item before you upload the solution file into Blackboard for grading.*

*Type any comments about this "take home" assignment  
for the your professor (or grading assistant) here.*

***Note: The solution file for *Quiz 2* must be submitted in Adobe PDF document format for grading using the proper file name as noted in the 2nd paragraph of this page.***

*Students will be awarded up to 25 points for *Quiz 2* if it appears to be fully complete and only 15 points if it is materially incomplete. Zero points will be awarded if you fail to submit a digital file for grading or if it is substantially incomplete. Points will be deducted if filename/file type differ from the instructions above.*