

EXCEL HOMEWORK #1

I. Formulas and Conditional Formatting (20^{pts})

- Open the file *Problem1.xlsx*
- Calculate the HW Average (*items HW1-HW6*) with 1 decimal place, i.e.: 18.0 (2^{pts})
- Fill in the Bonus Point column for each student based on their attendance with the following rules: (5^{pts})
 - Attend 8 or 9 lectures: bonus 0.4 points
 - Attend 6 or 7 lectures: bonus 0.2 points
 - Attend less than 6 lectures: bonus 0 point
- Calculate the Course Grade using the given formula with 2 decimal places: (2^{pts})

$$\text{Course Grade} = \text{HW Average} * 0.3 + \text{Midterm Exam} * 0.3 + \text{Final Exam} * 0.4 + \text{Bonus}$$
- Use *Conditional Formatting* to highlight (*Light Magenta Fill with Bold Brown Text*) top-6 students who got the highest scores (3^{pts})
- Use *IF* and *CONCATENATE* functions to fill the Scholarship column the text “*Awarded Scholarship*” for students who got the Course Grade greater than 19.0, others leave the field empty (3^{pts})
- Use *VLOOKUP* function to fill in the table below the given data (5^{pts})

II. Basic Chart (10^{pts})

- Open the file *Problem2.xlsx*
- Plot a diagram like Figure 2 below in a new worksheet which names *Brigham Corp. Expenses*
- Chart type: *Bar of Pie*, chart style: *11*, text font: *Times New Roman*

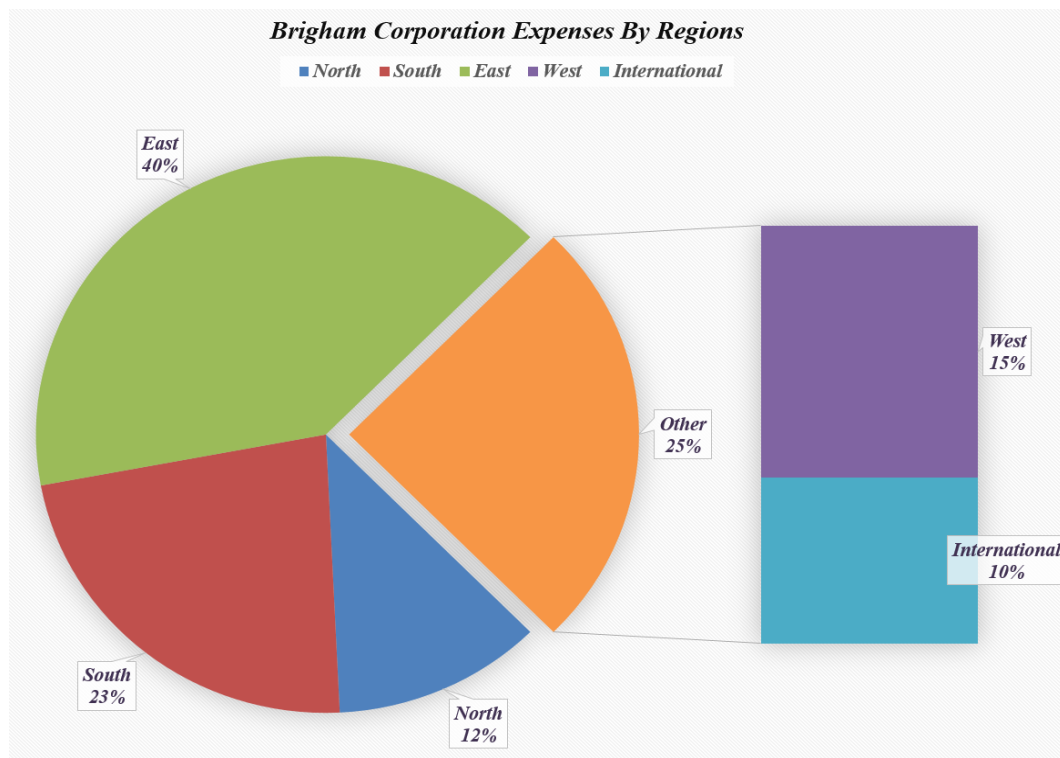


Figure 2. Brigham Corporation Expenses By Regions

III. Trend-Line (10^{pts})

- Open the file *Problem3.xlsx*
- Plot a scatter diagram in a new worksheet which names *BalloonsSold*.

- Modify each data and marker to fit with its color (for blue data, we use a diamond ♦ and for green data, we use a square, both are size: 6).
- Add the trend-line to forecast each data 3 periods in advance (trend-line type: *polynomial*, order: 4, line width: 1.5pt)
- For whole chart, use text font: *Times New Roman* as shown in Figure 3

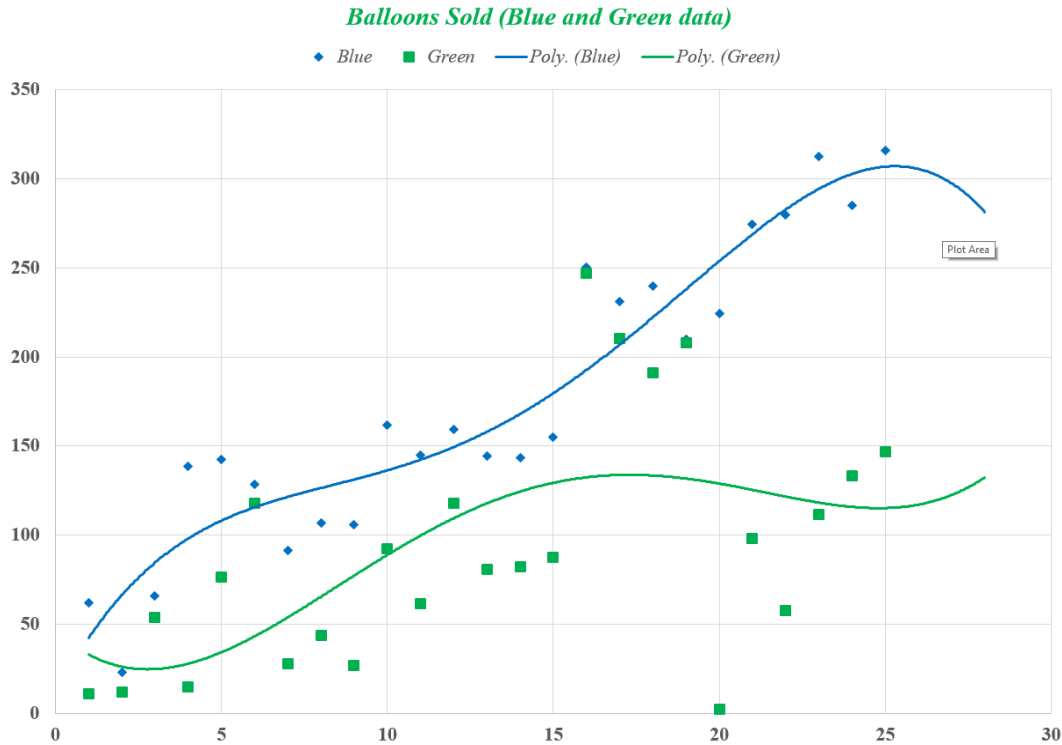


Figure 3. Balloons Sold (Blue and Green data)

IV. PivotTable and PivotChart (20^{pts})

- Open the file *Problem4.xlsx*
- Check the data consistency – three conditions to create PivotTable (2^{pts})
- Create a PivotTable in a new worksheet which names *HotelChainPivotTable* as in Figure 4.1: (10^{pts})

Sum of Expenditures	Qrts/Years												
	Q 1			Q 2			Q 3			Q 4			Grand Total
Dept./Hotel	2002	2004	2006	2002	2004	2006	2002	2004	2006	2002	2004	2006	
Conference Facilities													
Jackson Hotel	\$81,618	\$39,452	\$23,166	\$40,882	\$57,796	\$47,049	\$100,378	\$54,426	\$64,896	\$18,196	\$82,526	\$24,469	\$634,854
Miguel Ranch	\$26,499	\$33,406	\$19,403	\$33,490	\$22,510	\$42,993		\$36,926	\$54,437	\$18,572		\$38,238	\$326,474
Pengueno Place		\$53,495	\$31,137	\$22,261		\$29,891	\$46,838	\$31,845		\$18,484	\$38,830	\$39,998	\$312,779
Conference Facilities Total	\$108,117	\$126,353	\$73,706	\$96,633	\$80,306	\$119,933	\$147,216	\$123,197	\$119,333	\$55,252	\$121,356	\$102,705	\$1,274,107
Rooms													
Jackson Hotel	\$150,198	\$81,625	\$75,160	\$35,474	\$148,649	\$90,728	\$166,006	\$49,880	\$132,547	\$56,087	\$122,723	\$70,430	\$1,179,507
Miguel Ranch	\$54,507	\$21,782	\$54,935	\$32,012	\$24,869	\$40,488		\$47,147	\$33,547	\$27,484		\$53,610	\$390,381
Pengueno Place		\$53,181	\$30,910	\$28,106		\$43,806	\$26,335	\$40,160		\$51,908	\$38,658	\$40,421	\$353,485
Rooms Total	\$204,705	\$156,588	\$161,005	\$95,592	\$173,518	\$175,022	\$192,341	\$137,187	\$166,094	\$135,479	\$161,381	\$164,461	\$1,923,373
Grand Total	\$312,822	\$282,941	\$234,711	\$192,225	\$253,824	\$294,955	\$339,557	\$260,384	\$285,427	\$190,731	\$282,737	\$267,166	\$3,197,480

Figure 4.1. Hotel Chain PivotTable

- Create a PivotChart in a new worksheet which names *HotelChainPivotChart* as in Figure 4.2: (*Total Expenditures Over Quarters For Four Departments*), use text font: *Tahoma* (8^{pts})

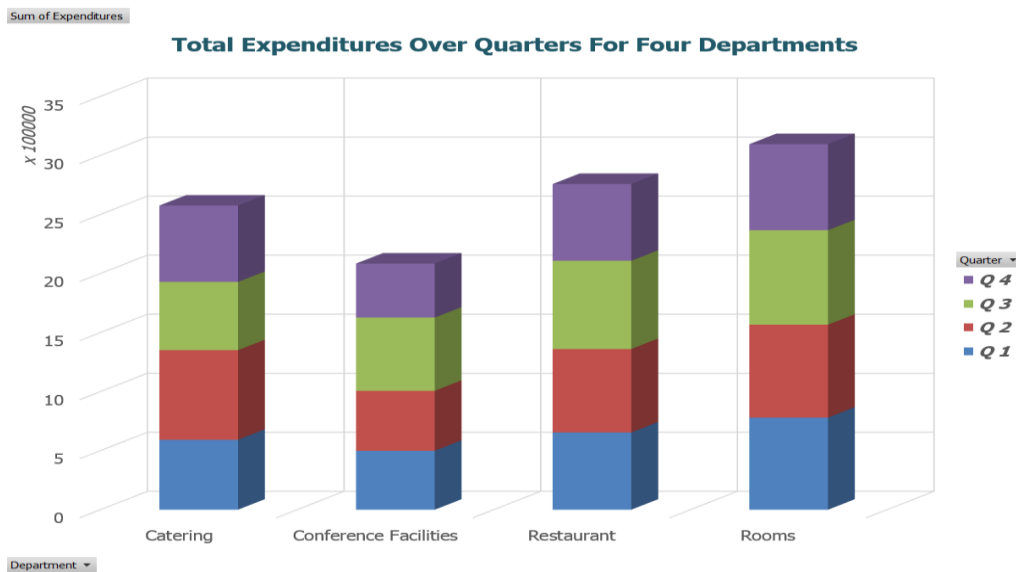


Figure 4.2. Hotel Chain PivotChart

V. Sorting and Filtering Data (5^{pts})

- Open the file *Problem5.xlsx*
- Apply quick filters to find out all students stated as Hispanic population (Ethnicity column has a value *H*) who have R-MSS in Top 50% and W-MSS less than 725 (176 records found).

VI. Validating Data (5^{pts})

- Open the file *Problem6.xlsx*
- Use *Data Tools* to remove duplicate data in *List of Discoverers* column
- Use *Data Validation* to circle all cells of column C (*Discoverer*) that do not belong to the list (*List of Discoverers*)

VII. What-If Analysis – Scenario Manager (10^{pts})

- Open the file *Problem7.xlsx*
- The manager of the restaurant plans to make some changes as follows:
 - Recruit 3 more staff in Kitchen
 - Increase Renting amount (Overhead) up to \$5,000
 - Increase Average hourly rate for Clean up staff to \$8.35
 - Decrease Supply amount to Kitchen down to \$28,000
- Create a scenario to see how these changes would affect on the monthly expense (*create a summary*)

VIII. What-If Analysis – Goal Seeking (5^{pts})

- Open the file *Problem8.xlsx*
- Currently, the restaurant spends annually \$1,221,600.00. However, the manager wants to decrease this spending down to \$1,150,000.00 each year.
- Use *Goal Seek* to find out what is the *Supply Amount* to kitchen department that you would pay to achieve the financial target the manager had set. Explain the result that you find.