



SPREADSHEETS



(1) Making projections: A spreadsheet program stores and calculates information in a structured array of data cells. By defining relationships between information in cells, a user can see the effects of data changes on other data in the spreadsheet (see tutorial). Spreadsheets are "number crunchers" and are useful when ever teachers or students need to perform numerous calculations.

- Both students and teachers should be able to perform "what-if" analyses to project budgets, grades or other numeric values. Analyze the sample family budget and make reasonable recommendations to balance the budget should one of the wage earners lose their job. Include a printout of your balanced budget.

If Joyce loses her job, I cut out one vehicle from the budget all together. I lowered the car insurance by one half due to cutting one vehicle. I took out all personal expenses, as the times are tough, and people will need to cut back. I also reduced many of the household expenses that can be cut back, such as water, phone, electric, gas, and groceries, along with the vacation and misc. funds. I realize that this means many sacrifices, but if someone loses their job, sacrifices must be made. They will still have a car to drive, along with a home to live in, and all utilities and insurance bills can be kept and paid. It may mean no movies or new clothes for a while though. Here is a screen capture of the budget.

	1975	1976	1977	1978
INCOME				
Tom	9975	9976	9975	9925
Joyce	0	0	0	0
Total Income	9975	9976	9975	9925
EXPENSES				
House				
Mortgage	1095	1095	1095	3180
Insurance	75	75	75	225
Property taxes	100	100	100	300
Insurance				
Life	80	80	80	240
Auto	55	55	55	165
Homeowners	40	40	40	120
Medical	110	110	110	330
Transport				
Ford-gas	40	40	40	120
Ford-payment	147	147	147	441
Ford-repair	0	0	0	0
Van-gas	0	0	0	0
Van-repair	0	0	0	0
Household				
Groceries	133	133	133	399
Gas & Electric	75	75	75	225
Telephone	30	30	30	90
Water	20	20	20	60
Garbage	15	15	15	45
Vacation Saver	0	0	0	0
Miscellaneous	0	0	0	0
Personal				
Church/charity	0	0	0	0
Clothing	0	0	0	0
Pocket Money	0	0	0	0
IRAs	0	0	0	0
Entertainment	0	0	0	0
Total Expenses	1875	1875	1875	5625
Total Net Cash Flow	0	0	0	0
Beginning Cash Level	0	0	0	0
ENDING CASH LEVEL	0	0	0	0

(2) Graphing and interpreting data: One of the most important analytical skills for students is the ability to read and interpret graphs. Fortunately, spreadsheet programs can graph data and provide opportunities for analysis and discussion.

- Create two or more different types of graphs (chart) from spreadsheets related to your discipline. Make sure the graph is meaningful and is fully and correctly labeled. Copy the graphs into the portfolio. Write two or more questions (and provide answers) for each graph.

Chart #1 String Orchestra. What is the primary instrument in a string orchestra? What is the ratio violins to each of the other three instruments in a string orchestra?

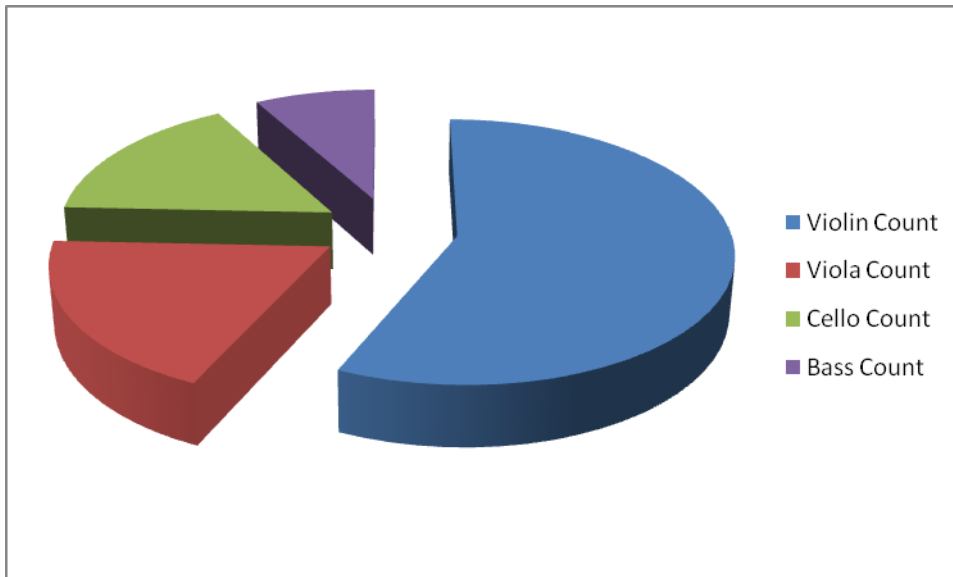
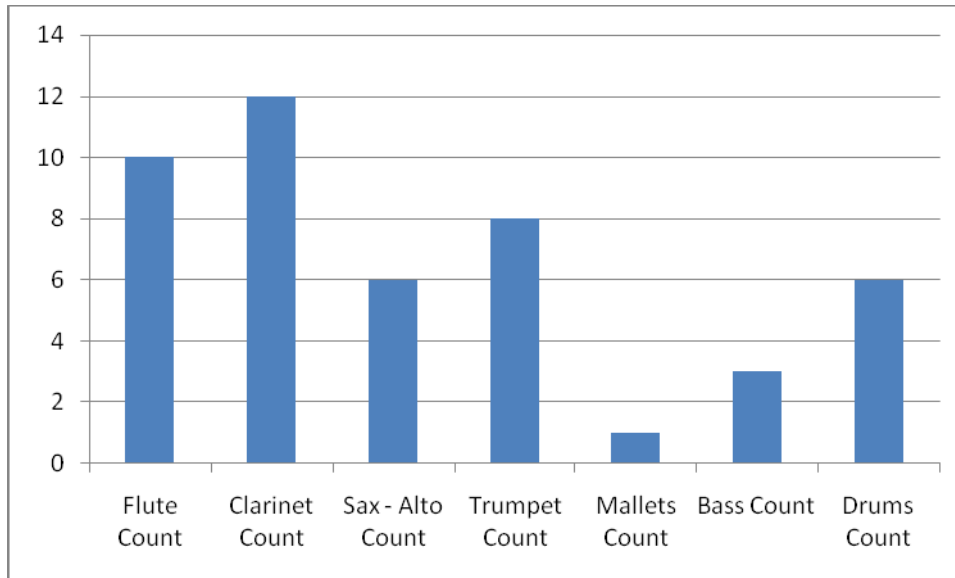


Chart #2 Concert Band. What are the primary instruments in a concert band performance? What is the ratio of all wind instruments (both woodwind & brass) to the rest of the concert band?



(3) Creating a spreadsheet for your subject:

- Create a new spreadsheet or a new worksheet in an existing spreadsheet file. Your worksheet should include a variety of useful calculations based upon cells in your new worksheet and/or associated ones in your modified spreadsheet file. Include a printout of your new spreadsheet in your portfolio and describe the purpose of your spreadsheet and describe how you would use it in your class.

I use spreadsheets all the time when I am doing my ordering. While I do not use them to teach in my class, I find them invaluable when doing my budgeting for the school year. I can calculate the totals with tax, shipping, etc. and then total all my orders from different vendors all on one sheet. Below is a screen capture from one of my spreadsheets:

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The screenshot shows a Microsoft Excel spreadsheet with two main sections. The first section, titled 'Woodwind & Brasswind', lists various musical instruments and their prices. The second section, titled 'Sam Ash Music', lists guitar-related items. The spreadsheet includes columns for Item Description, Item #, Item Price, Quantity, and Total Price. The total for the first section is \$4,454.22, and the total for the second section is \$311.28. The overall order total is \$4,765.50.

Woodwind & Brasswind					
Item Description	Item #	Item Price	Quantity	Total Price	
Shure PG14 Mic System	15554	\$419.00	1	\$419.00	
4/4 Violin Outfit Strunal	119891	\$270.99	2	\$541.98	
Yamaha Guitar Outfit	141885	\$149.99	3	\$449.97	
Jupiter Piccolo	109813	\$549.00	1	\$549.00	
Jupiter Alto Sax	34743	\$989.00	1	\$989.00	
Jupiter Brass Clarinet	34739	\$1,369.00	1	\$1,369.00	
King Baritone	26332	\$1,649.00	1	\$1,649.00	
			Subtotal	\$5,965.95	
			Tax	\$222.27	
			Order Total	\$6,188.22	
Sam Ash Music					
Item Description	Item #	Item Price	Quantity	Total Price	
Complete Book of Guitar Chords	M94792	18.95	20	\$379.20	
			Tax	\$31.28	
			Order Total	\$410.48	
LAMS					
Item Description	Unit	Item Price	Quantity	Total Price	
Claret Mouthpiece - B-Bar	each	\$7.00	2	\$14.00	
Trumpet Mouthpiece	each	\$13.35	3	\$40.05	
			Total	\$54.05	