

HOW TO GRAPH SALES IN EXCEL

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And initially posted on www.AppraisalScoop.com

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I. INTRODUCTION

It has been said that a picture can say a thousand words. This is especially true when that picture reflects what the value trend in the marketplace is doing. With the markets across the nation in transition, it is more important than ever to be able to relay to our clients exactly what the market is doing. One of the best methods of understanding complex ideas such as market trends is to demonstrate them with pictures - pictures that tell a story. Using very simple calculations within a spreadsheet programs, these pictures can be easily presented to your clients in the form of a simple chart. This is a rather simple process, yet provides very dramatic results.

The following steps will walk you through creating a chart from raw market data. This document is not intended to teach basic Excel procedures and assumes the reader knows the basics. For basic Excel training, Microsoft offers excellent training articles. <http://office.microsoft.com/en-us/training/default.aspx> Also, **please note that this article emphasizes the steps, rather than the data. We start off with illustrations from the East Bay (CA) Paragon MLS, and then switch to Excel illustrations from the original article that are using data in Florida.**

II. SELECTING THE DATA

The first step is to select the data to be analyzed – an important step. Most of the time, you will want to analyze the sales price trend for a specific property. You will want to select sold properties that are similar to the subject property. It is important to try to select properties that bracket the subject property. Based on your assignment problem and the scope of work you have selected, you may want to graph an entire zip code, or perhaps just a narrow range of the neighborhood. And to get a good sense of the changes over time, you will want at least two years of sales, and possibly three! For a graph, you usually will want to select at least 100 sales, or more, in order to have enough data to get a reasonably reliable trend line (discussed below). But collecting too many sales may mean that some sales are too different from the subject property. You might also want to analyze Expired and Withdrawn listings over the past year, perhaps, or maybe also Current Listings. For now, we will just talk about sales.

Data selection and downloading steps for this demonstration are shown for the Paragon 4 MLS system. Each data provider will differ in how you select data, and how you export a data file to your computer. If you have questions or problems with selecting or exporting, contact customer support at your data vendor!

Next, what information about the sales should be selected? In part, this will depend on how easy it is to download information from your data provider! At the very least, the date of sale, sale amount, and gross living area (GLA) must be obtained. This allows you to convert sale price to price per square foot (\$/sf), and graph it versus time, to see how it has changed. The address or MLS number or Assessors parcel number should also be obtained, so that you can know which sale is which, later on. Generally, however, it is better to select all of the data that you can get on each sale, and sort it out after you download it, as we will show you, below.

For this demonstration, we had selected a market that has a noticeable downward price trend, N. E. Richmond, in Contra Costa County, Ca. (The graph of those sales is not presented in this online article.) The average home in this neighborhood is an older two bedroom home. Most have one bathroom, between 700 and 1200 square feet of living space, and a one car garage. The search was for all two-bedroom sales in this district within the past three years. The selection screen is shown in Figure 1. The particular neighborhood is a specific location in this MLS, so only the location code needs to be used.

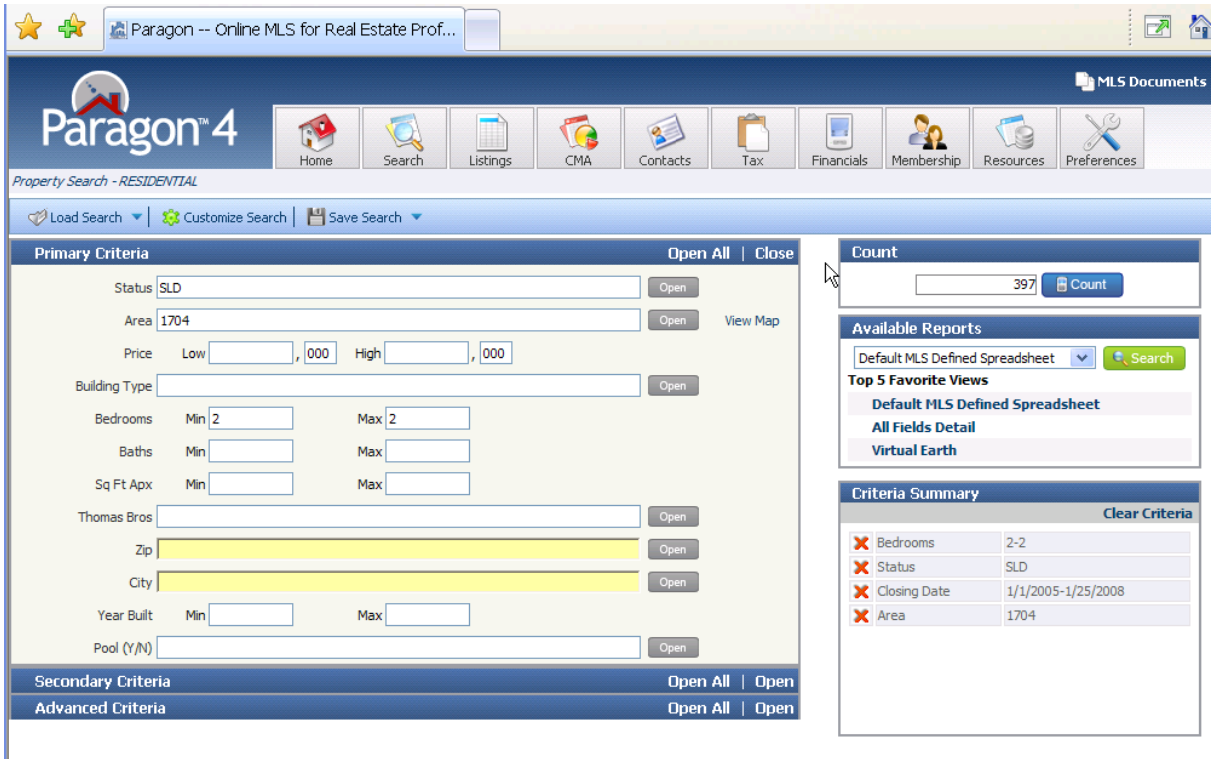


FIGURE 1: THE PARAGON DATA SELECTION SCREEN.

After entering your selection criteria, click the blue “Count” button, to the upper right, to see how many sales meet your criteria. If you have too few sales, consider widening your selected geographic and/or property characteristics and recounting. If you have over 250 or 300 sales, consider tightening your characteristics and recounting. When you are ready, select the report type in the “Available Reports” pull-down list just under the “Count” button. We have used “Default MLS Defined Spreadsheet.” Next, click on the green “Search” button. The MLS system will select the sales that meet the criteria, and display them in a table or spreadsheet view, shown in Figure 2.


HIGH	LOW	AVERAGE	MEDIAN	TOTAL PRICE	LISTING COUNT
\$2,155,000	\$459,650	\$274,324	\$835,000	\$1,410,217,638	1612
\$2,025,000	\$455,000	\$867,933	\$835,000	\$1,399,108,637	
DOM:	240	0	23	14	

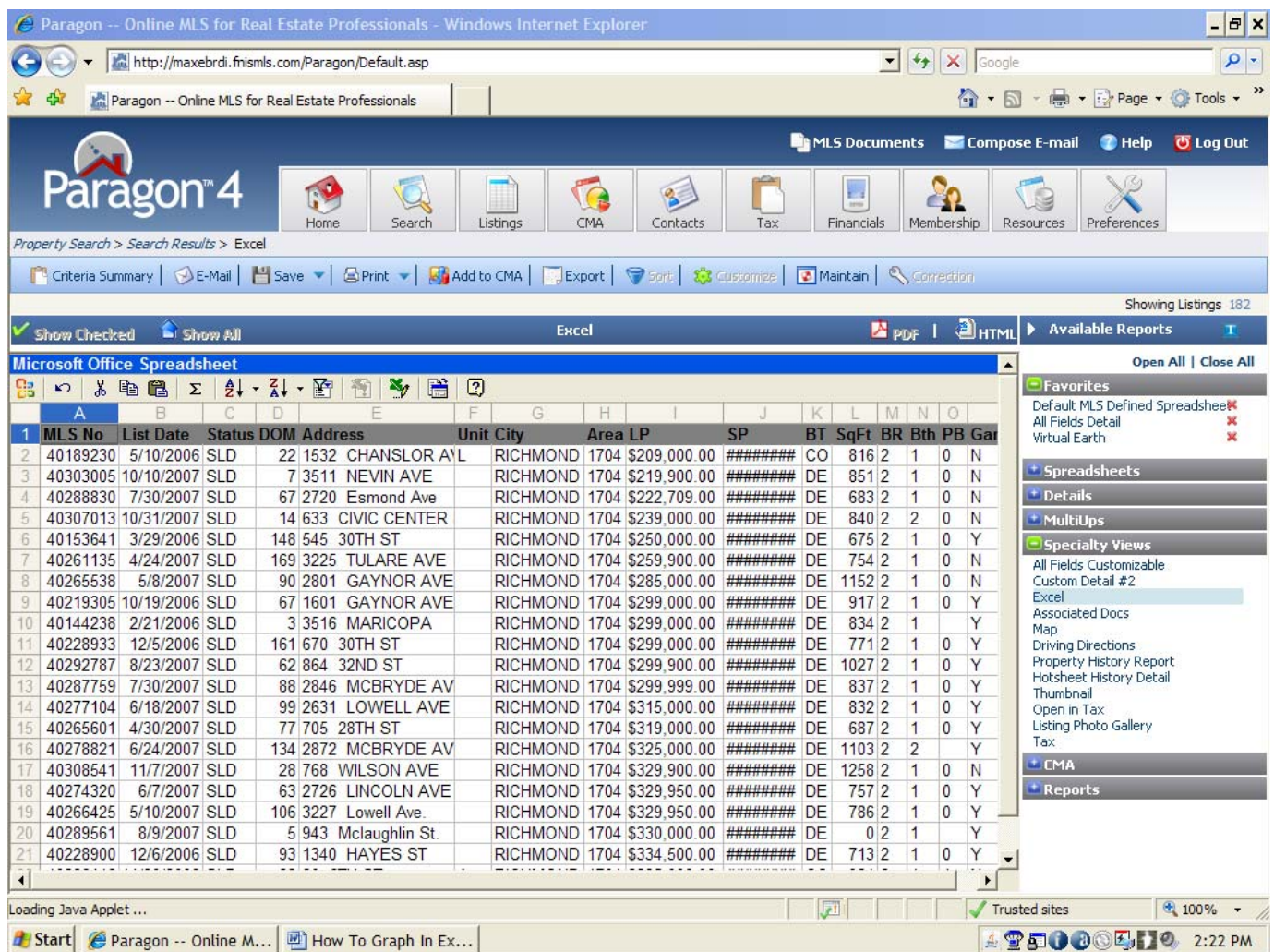
MLS No	Status	2..	Address	City	Area	1) LP	List \$/Sqft	Sold Price	Sale \$/Sqft	BT	Sqft	Closing Date	BR	Bth	PB	Gar?	GarSp
1587	40104368	SLD	33 244 SILK HILL CT	SAN RAMON	4400	\$1,439...	376	\$1,405,000	367	DE	3827	10/26/2005	4	3	1	Y	3
1588	40145185	SLD	20 10 CRESTED OAK CT	SAN RAMON	4400	\$1,458...	516	\$1,435,000	508	DE	2827	4/20/2006	4	3	0	Y	3
1589	40116208	SLD	42 21 PINE VALLEY PL	SAN RAMON	4400	\$1,459...	417	\$1,425,000	407	DE	3503	1/10/2006	4	3	1	Y	3
1590	40243196	SLD	68 9574 VELVETLEAF CIR	SAN RAMON	4400	\$1,475...	536	\$1,460,000	531	DE	2750	6/6/2007	4	2	1	Y	2
1591	40268241	SLD	55 2036 SORRELOWOOD CT..	SAN RAMON	4400	\$1,485...	510	\$1,460,000	501	DE	2913	8/9/2007	4	3	1	Y	3
1592	40208944	SLD	9 516 ESTANCIA CT	SAN RAMON	4400	\$1,489...	394	\$1,383,000	366	DE	3780	10/19/2006	4	3	0	Y	3
1593	40119533	SLD	35 9530 VELVETLEAF CIR.	SAN RAMON	4400	\$1,489...	543	\$1,489,000	543	DE	2740	1/6/2006	4	2	1	Y	2
1594	40138454	SLD	2 16 Winding Creek Way	SAN RAMON	4400	\$1,495...	447	\$1,480,000	443	DE	3342	2/14/2006	4	2	1	Y	3
1595	40187611	SLD	8 2009 Feathermint Drive	SAN RAMON	4400	\$1,499...	389	\$1,392,500	362	DE	3850	8/11/2006	4	3	Y	Y	3
1596	40237695	SLD	20 9 MAJESTIC OAK CT	SAN RAMON	4400	\$1,499...	426	\$1,475,000	419	DE	3517	4/16/2007	4	3	1	Y	3
1597	40136299	SLD	2 9586 VELVETLEAF CIR	SAN RAMON	4400	\$1,499...	547	\$1,500,000	547	DE	2740	3/8/2006	4	2	1	Y	3
1598	40142935	SLD	22 10046 NANTUCKET DR	SAN RAMON	4400	\$1,500...	423	\$1,400,000	395	DE	3547	5/18/2006	4	3	0	Y	3
1599	40135387	SLD	1 3518 ROSINGRESS DRIVE	SAN RAMON	4400	\$1,549...	446	\$1,550,000	446	DE	3472	1/25/2006	4	3	1	Y	2
1600	40211894	SLD	40 22 DIAMOND RANCH CT	SAN RAMON	4400	\$1,549...	464	\$1,452,000	434	DE	3342	12/7/2006	4	2	1	Y	3
1601	40058745	SLD	12 3104 Sorrelwood Drive	SAN RAMON	4400	\$1,575...	500	\$1,475,000	468	DE	3150	3/31/2005	4	3	1	Y	2
1602	40191326	SLD	33 9562 VELVETLEAF CR.	SAN RAMON	4400	\$1,595...	585	\$1,415,925	519	DE	2727	9/26/2006	4	2	1	Y	2
1603	40146146	SLD	7 111 PAULANILLA PLACE	SAN RAMON	4400	\$1,695...	837	\$1,710,000	844	DE	2026	4/20/2006	3	2	1	Y	3
1604	40075098	SLD	57 805 Jade Crest Drive	SAN RAMON	4400	\$1,739...	464	\$1,700,000	453	DE	3750	7/15/2005	4	3	1	Y	2
1605	40200992	SLD	16 2227 ASHBORNE DR	SAN RAMON	4400	\$1,749...	454	\$1,675,000	435	DE	3850	11/13/2006	4	2	1	Y	3
1606	40171600	SLD	30 5526 SATINLEAF WAY	SAN RAMON	4400	\$1,755...	474	\$1,680,000	454	DE	3700	7/21/2006	4	3	1	Y	3
1607	40061319	SLD	89 3083 SORRELOWOOD DR	SAN RAMON	4400	\$1,755...	468	\$1,755,000	468	DE	3750	5/24/2005	4	3	1	Y	2
1608	40290438	SLD	3 3083 SORRELOWOOD DR	SAN RAMON	4400	\$1,759...	466	\$1,660,000	440	DE	3777	9/17/2007	4	3	1	Y	2
1609	40109848	SLD	12 2259 BRITANNIA DR	SAN RAMON	4400	\$1,888...	404	\$1,888,000	404	DE	4673	10/27/2005	4	3	1	Y	3
1610	40219562	SLD	56 2024 Feathermint Drive	SAN RAMON	4400	\$1,895...	426	\$1,625,700	352	DE	4629	12/29/2006	4	3	1	Y	3
1611	40108823	SLD	39 3405 ASHBORNE CIRC..	SAN RAMON	4400	\$2,115...	535	\$1,825,500	487	DE	3950	7/28/2006	4	3	1	Y	3
1612	40193153	SLD	74 18869 Bollinger Canyon...	SAN RAMON	4400	\$2,195...	841	\$2,025,000	776	DE	2610	11/30/2006	3	3	Y	Y	2

FIGURE 2: THE PARAGON “DEFAULT MLS SPREADSHEET” SCREEN.

III. EXPORTING THE DATA

The process for exporting data is different for each data vendor. Most data vendors may have more than one way to export data. For example, Paragon has an “Export” button (in blue) in the second row top center. This can be used to convert the data to a “Comma Delimited” format (*.csv), which is the preferred format for moving data into Excel or another spreadsheet program from some other source. If you use this option, save the file on your computer, open Excel, click “File>Import”, navigate to where you saved the *.csv file, and follow the Text Import Wizard in Excel to open and convert the file.

However, Paragon 4 has a much easier method for you to use! In the “Available Reports” column at the right, there is a bar in the middle of the column labeled “Specialty Views”. Click on this bar to show the alternatives under this heading, and then click on “Excel”. The Paragon computer will process your data and show it to you in an Excel spreadsheet, but still within Paragon. The table now has an Excel toolbar at the top, and one button in the center of this new toolbar looks like this: . See Figure 3, below. Click on this button, wait, and the data file is automatically exported to your computer and opened in your own Excel program



The screenshot shows the Paragon 4 online MLS interface. The browser address bar displays "http://maxebrdi.frismls.com/Paragon/Default.asp". The page title is "Paragon -- Online MLS for Real Estate Professionals". The interface includes a navigation menu with options like Home, Search, Listings, CMA, Contacts, Tax, Financials, Membership, Resources, and Preferences. The main content area shows search results for "Excel" with 182 listings. A "Microsoft Office Spreadsheet" toolbar is overlaid on the data table, featuring an Excel icon. The data table has columns for MLS No, List Date, Status, DOM, Address, Unit, City, Area, LP, SP, BT, SqFt, BR, Bth, PB, and Gar. The right sidebar shows "Available Reports" and "Specialty Views" options.

MLS No	List Date	Status	DOM	Address	Unit	City	Area	LP	SP	BT	SqFt	BR	Bth	PB	Gar
40189230	5/10/2006	SLD	22	1532 CHANSLOR A\		RICHMOND	1704	\$209,000.00	#####	CO	816	2	1	0	N
40303005	10/10/2007	SLD	7	3511 NEVIN AVE		RICHMOND	1704	\$219,900.00	#####	DE	851	2	1	0	N
40288830	7/30/2007	SLD	67	2720 Esmond Ave		RICHMOND	1704	\$222,709.00	#####	DE	683	2	1	0	N
40307013	10/31/2007	SLD	14	633 CIVIC CENTER		RICHMOND	1704	\$239,000.00	#####	DE	840	2	2	0	N
40153641	3/29/2006	SLD	148	545 30TH ST		RICHMOND	1704	\$250,000.00	#####	DE	675	2	1	0	Y
40261135	4/24/2007	SLD	169	3225 TULARE AVE		RICHMOND	1704	\$259,900.00	#####	DE	754	2	1	0	N
40265538	5/8/2007	SLD	90	2801 GAYNOR AVE		RICHMOND	1704	\$285,000.00	#####	DE	1152	2	1	0	N
40219305	10/19/2006	SLD	67	1601 GAYNOR AVE		RICHMOND	1704	\$299,000.00	#####	DE	917	2	1	0	Y
40144238	2/21/2006	SLD	3	3516 MARICOPA		RICHMOND	1704	\$299,000.00	#####	DE	834	2	1		Y
40228933	12/5/2006	SLD	161	670 30TH ST		RICHMOND	1704	\$299,000.00	#####	DE	771	2	1	0	Y
40292787	8/23/2007	SLD	62	864 32ND ST		RICHMOND	1704	\$299,900.00	#####	DE	1027	2	1	0	Y
40287759	7/30/2007	SLD	88	2846 MCBRYDE AV		RICHMOND	1704	\$299,999.00	#####	DE	837	2	1	0	Y
40277104	6/18/2007	SLD	99	2631 LOWELL AVE		RICHMOND	1704	\$315,000.00	#####	DE	832	2	1	0	Y
40265601	4/30/2007	SLD	77	705 28TH ST		RICHMOND	1704	\$319,000.00	#####	DE	687	2	1	0	Y
40278821	6/24/2007	SLD	134	2872 MCBRYDE AV		RICHMOND	1704	\$325,000.00	#####	DE	1103	2	2		Y
40308541	11/7/2007	SLD	28	768 WILSON AVE		RICHMOND	1704	\$329,900.00	#####	DE	1258	2	1	0	N
40274320	6/7/2007	SLD	63	2726 LINCOLN AVE		RICHMOND	1704	\$329,950.00	#####	DE	757	2	1	0	Y
40266425	5/10/2007	SLD	106	3227 Lowell Ave.		RICHMOND	1704	\$329,950.00	#####	DE	786	2	1	0	Y
40289561	8/9/2007	SLD	5	943 McLaughlin St.		RICHMOND	1704	\$330,000.00	#####	DE	0	2	1		Y
40228900	12/6/2006	SLD	93	1340 HAYES ST		RICHMOND	1704	\$334,500.00	#####	DE	713	2	1	0	Y

FIGURE 3: THE PARAGON “EXCEL TABLE” SCREEN.

IV. CLEANING UP THE DATA

When first opened in Microsoft Excel, the data appears as shown in Figure 4, (using Excel 2003). At this point, we switch to the Florida data, so as to reuse Kat's excellent illustrations.

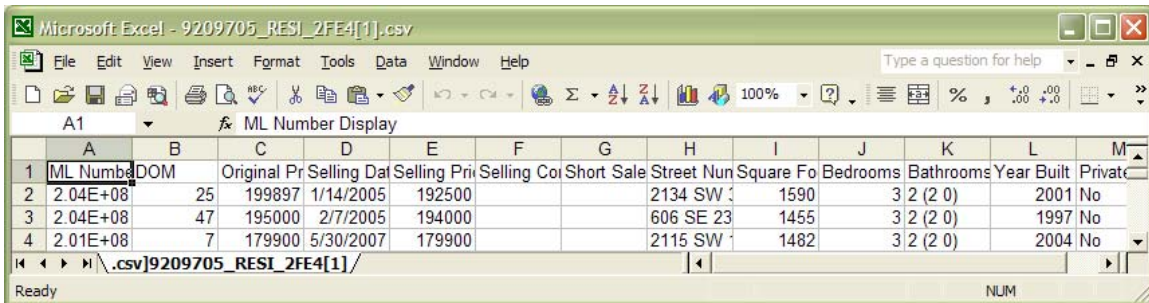


FIGURE 4: THE OPEN FILE IN EXCEL.

At the top of this window in Excel, depending on how you imported the data, the file name might have punctuation marks and end in “.csv”. If so, the file name must first be changed to an Excel format before any charts may be created. In any case, now is a good time to save the file! Select “File > Save As” from the menu. In the “Save as Type” pull-down box at the bottom of the window, be sure to select “Microsoft Excel Workbook (.xls)”. Give the worksheet an appropriate name, and click “Save”. See Figure 5.

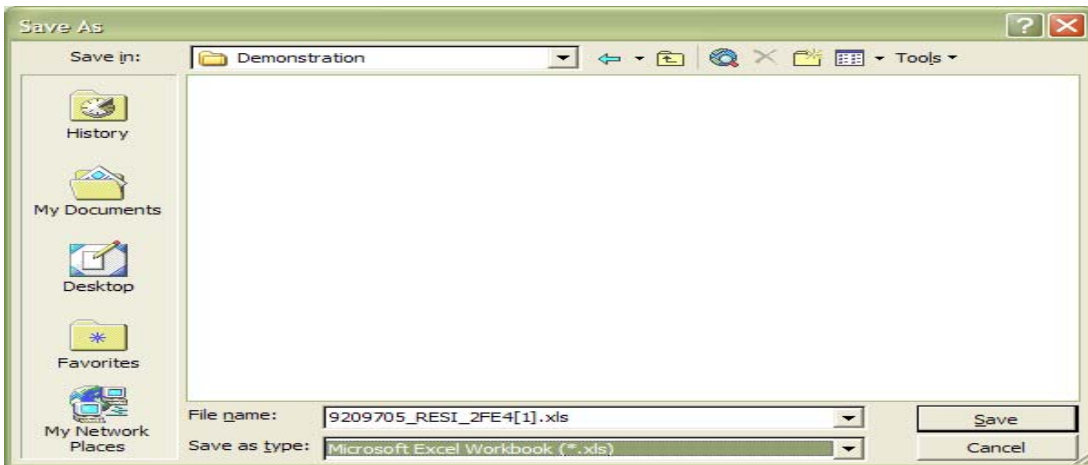


FIGURE 5: THE “SAVE AS” SCREEN.

Next, again depending on how you downloaded the data, you may need to rename the worksheet tab name, to remove any punctuation marks. To rename the sheet, double-click on the sheet tab, which is labeled “.csv]9209705_RESI_FE4[1]” in the illustration below. You may now change the name. In this demonstration, the sheet tab is renamed “Raw,” because it contains the raw downloaded data. Type in the new name and press “Enter”.

Next, it is good practice to create a copy of this raw data on the next sheet. This new sheet will be used for all calculations, thereby preserving the initial search download, intact, on the “raw” page. To do this, right mouse-click on the tab labeled “raw” at the bottom of this sheet. Select “Move or Copy” from the menu, then select “(move to end)” from the menu, and check the “Create a Copy” checkbox. Click OK, as shown on Figure 6.

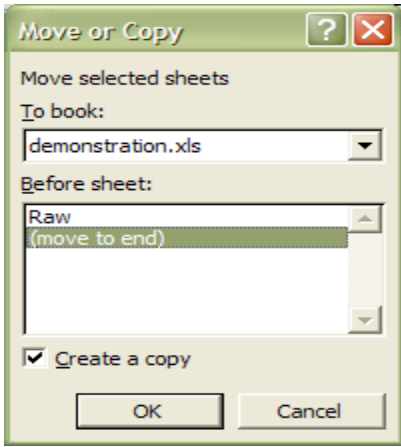


FIGURE 6: THE “MOVE OR COPY” SHEET SCREEN.

A new sheet is created with a carbon copy of the data and it is named "Raw (2)". Rename this new sheet to "Cleaned" by first selecting this tab, then double clicking the name. Change the name to "Cleaned" and press Enter.

Now is the time to clean up the data. First, consider shrinking the cell widths, to try and get the whole table width visible on the screen at once. To narrow a particular column, place the cursor on the line at the right side of the column heading, (a "left-right arrow" should appear), hold down the left mouse-button, and drag the divider bar to the left. Note that you might want to completely close or shrink some columns that may not be important, such as the city, (since you know what city these sales are all in)! You can also delete any columns that are completely useless. Just place your cursor on the bar at the top of the column in question, right click, and select "delete". However, as a general rule, be slow to delete columns, as you may later change your mind and want that column for some reason! (Remember that detailed help with Excel can be found at the website mentioned on page 1.)

The second step is to review the sales data, to see if any of the sales are too different from the subject property to be left in the analysis. Since we only used location and bedroom count to do this sort, perhaps you should check lot size, to see if there is a sale with a double lot. Or perhaps there is a sale of a brand-new home, which would be very different from the typical houses in this neighborhood! Remove any sales records that don't fit the model that you intended. Since you have kept all of the raw data on the "Raw" tab, you could delete these sales on the "Cleaned" tab: right-click on the row number for the sale you want to delete, and then select "Delete."

You will now have something that looks like Figure 7, which follows. Note the two Sheet tabs at the bottom left, named "Raw" and "Cleaned".

	A	B	C	D	E	F	G	H
1	ML Number	DOM	Original Price	Selling Date	Selling Price	Selling Comments	Short Sale	Street Number
2	205065496	15	279900	7/27/2005	279900			148 SE 27th T
3	205090052	57	265000	11/4/2005	259900			1707 SW 2nd
4	200526207	144	275000	5/15/2006	247000			2116 SW 1st

FIGURE 7: EXCEL TABLE, WITH RENAMED TABS.

IV. PREPARING THE DATA TO MAKE THE GRAPH

You must decide what you want to graph. We believe that, to examine what is happening to sales prices over time, nothing beats calculating sales based on \$/Sq.Ft. versus time! But there are other aspects of the sales that you might want to analyze, such as price per sq. ft. versus size: How does price per sq. ft. change with building size? Or price per sq. ft. versus age? Or homes in the east half of the neighborhood versus those in the west half? Or Days on Market versus time? Or number of sales per month? All of these, and a lot more, can be graphed!

So, we want to make a graph that shows the date on the bottom, the “horizontal axis” or “X axis”, and price per sq. ft. on the “vertical” or “Y” axis. First, we need to insert a column in which to calculate the price per sq. ft. We’ll call it “\$/SF”. It makes the charting process much simpler if the \$/SF column is immediately to the right of the “date of sale” column. To do this, select the letter associated with the field immediately to the right of the field that contains the date of sale column on the spreadsheet. This is column E on figure 7, above. This will highlight that entire column. Type “Cntrl+” (“Control” plus the “+” sign), or select “Insert > Column” from the menu.

Move to the first cell at the top in this newly created column. Type the label name for this new column. For the example, it is “\$/SF”, and then press “Enter”. You should now be in the first empty row below this new name. Type “=” (the equal sign), then select the cell that contains your sale price, type “/” for divide, and then select the cell that contains the GLA. These steps should create the formula to calculate price per sq. ft. The formula is “=F2/J2” in the example. Press “Enter”. This cell should now contain your first row’s sold price in \$/SF. If it does, you’re 90% there! See Figure 8.

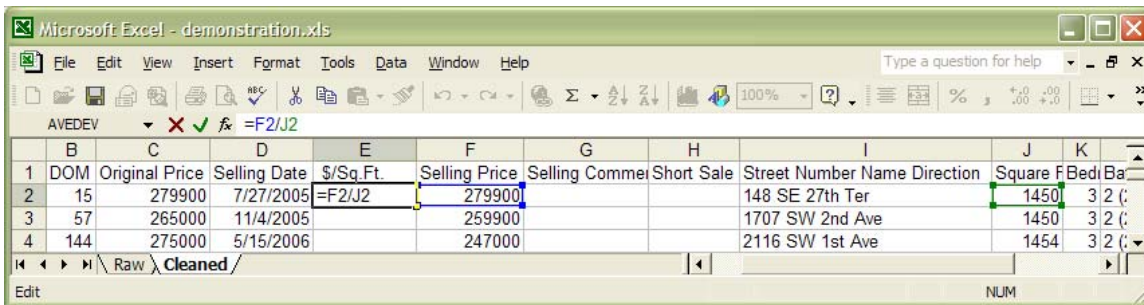


FIGURE 8: EXCEL TABLE, WITH FORMULA IN CELL E2.

Oops... After you press “Enter,” does your formula look like a date? To format that column as a number, first select the column. Next, select “Format > Cells” from the menu. Finally, select “Number” from the pop-up window.

To copy this formula to the rest of the cells in the column, double-click on the lower right hand corner of the box that surrounds this new formula. There is a funny little box in that corner (see yellow arrow below). When the little box is double-clicked, Excel will copy this formula down the column for the rest of the spreadsheet. It will stop at the first blank row it comes to. So, double click on the lower right corner box, as pointed out by the arrow in Figure 9.

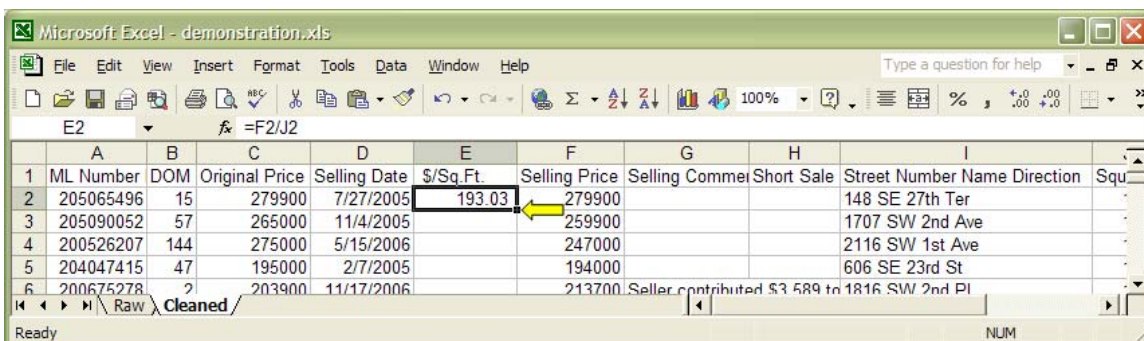


FIGURE 9: EXCEL TABLE – THE “BOX” TO COPY A FORMULA.

The formula is copied to the last row in the column, and a \$/sf is calculated for each sale, shown in Figure 10.

	A	B	C	D	E	F	G	H	I	J
1	ML Number	DOM	Original Price	Selling Date	\$/Sq.Ft.	Selling Price	Selling Commer	Short Sale	Street Number Name Direction	Squ
38	200512986	16	299000	10/31/2005	179.79	290000			528 SE 27th St	
39	200717212	82	220900	6/19/2007	119.50	193000			164 SE 22nd Ter	
40	200710948	23	260000	3/5/2007	157.41	255000			212 SW 21st Ln	
41	205009677	28	199000	2/23/2005	122.47	200000			709 SW Sw 24th St	
42	205024827	41	235000	5/16/2005	140.67	230000			200 SE 27th St	
43	80168208	13	189990	10/18/2004	113.09	184900			136 SE 19th Ter	
44	200603651	107	339900	5/31/2006	167.79	275000			242 SW 29th St	
45										

FIGURE 10: EXCEL TABLE – WITH THE FORMULA COPIED.

With Paragon, your file may have just the listing date, but not the sale date! However, it probably also has “Days on Market.” Decide where your sale date column needs to be, just to the left of your “\$/SF” column, and insert a column there. Label it “Sale Date.” In the second cell down, type in “+” then click on the listing date, then click “+” and then the Days on Market. Click “Enter” to get the sale date! Copy the formula down the rest of the column.

It’s nice to have the data sorted by the date sold. As you can see in the example above, the dates are not in order. To sort on the date field, first type “Cntrl A,” to select the entire spreadsheet. Then, from the menu, select “Data > Sort”. The “Sort” menu will open, as shown in Figure 11, below. First, select the “Header row” radio button, near the bottom of this menu. Select from the “Sort by” drop list the field name that has the sales date. It is “Selling Date” in the example. Select the corresponding “Ascending” Radio button and click “OK.”

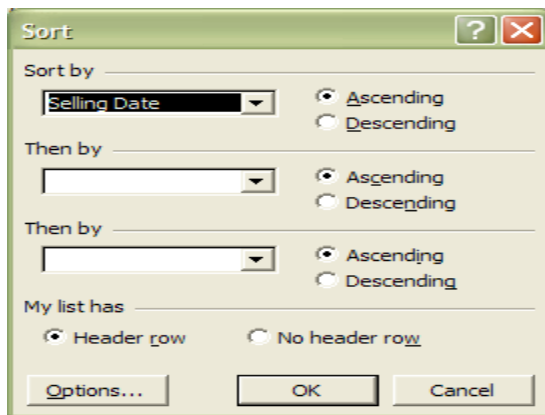


FIGURE 11: EXCEL TABLE – SORT MENU SCREEN.

Hopefully, you now have a worksheet with your data sorted by date of sale and the \$/SF calculated for each row, as shown on Figure 12, below. If the sort did not work, you might want to select the date column, place your cursor on the top cell, right-click, and select “Format cells”. Under the “Number” tab, select “date” and then “OK”. Then, retry the “sort” steps. You might even have to reformat each cell individually! Now is a good time to save your work again. Select “File > Save” from the menu.

	A	B	C	D	E	F	G	H	I	J	
1	ML Number	DOM	Original Price	Selling Date	\$/Sq.Ft.	Selling Price	Selling Comm	Short Sale	Street Number	Name Direction	Squ
39	200729609	7	179900	5/30/2007	121.39	179900			2115 SW	1st Ave	
40	200701586	105	239900	6/1/2007	135.55	201150	3% Seller Contributions		1413 SW	1st Pl	
41	200730103	7	199900	6/1/2007	127.50	191000			522 SE	27th Ter	
42	200717212	82	220900	6/19/2007	119.50	193000			164 SE	22nd Ter	
43	200733833	6	199000	7/3/2007	126.41	190000			1417 SW	1st Pl	
44	200665056	319	279000	8/17/2007	126.93	189000			304 Aviation	Pkwy	
45											
46											


FIGURE 12: EXCEL TABLE: AFTER SORTING BY SALE DATE.

VI. PREPARING THE TABLE OR CHART

Now you are ready to chart! The first step is to indicate the data to be charted or graphed. Select the cells that contain the data both for the date of sale, "Sale Date" in the example, and "S/Sq.Ft." This may be done by dragging the mouse from the first cell of the first column of graph data to the bitter end on the second column, last cell. A quicker way is to select the top row cell that contains the label "Selling Date", (or whatever your export named it). Next, click "Cntrl Shift ↓" (down arrow), all three of these at once. Then, release all keys. Now, hold down the "Shift" key and press the "right arrow key". You should now have highlighted all of the sale date and \$/Sq.Ft. columns, shown in Figure 13, below. If that didn't work for you, use your mouse to select these two columns.

	A	B	C	D	E	F	G	H	I	J	
1	ML Number	DOM	Original Price	Selling Date	\$/Sq.Ft.	Selling Price	Selling Comm	Short Sale	Street Number	Name Direction	Squ
39	200729609	7	179900	5/30/2007	121.39	179900			2115 SW	1st Ave	
40	200701586	105	239900	6/1/2007	135.55	201150	3% Seller Contributions		1413 SW	1st Pl	
41	200730103	7	199900	6/1/2007	127.50	191000			522 SE	27th Ter	
42	200717212	82	220900	6/19/2007	119.50	193000			164 SE	22nd Ter	
43	200733833	6	199000	7/3/2007	126.41	190000			1417 SW	1st Pl	
44	200665056	319	279000	8/17/2007	126.93	189000			304 Aviation	Pkwy	
45											
46											

FIGURE 13: EXCEL TABLE, WITH BOTH COLUMNS OF DATA SELECTED.

Next, there should be an icon on the top menu that looks like a bar chart. It should look like this:  Clicking on this icon button will open the Chart Wizard. Or you can select "Insert > Chart" from the menu.

The Chart Wizard will open, shown in Figure 14, below. Under the "Standard Types" tab, select "XY (Scatter)" from the left window. Note that this screen is labeled "Step 1 of 4."

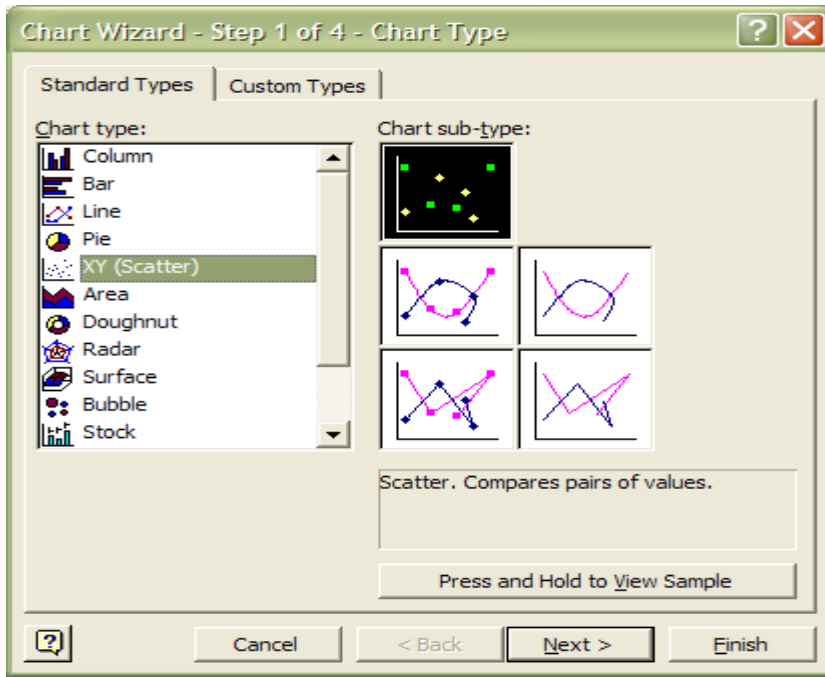


FIGURE 14: THE CHART WIZARD, STEP ONE, “STANDARD TYPES” TAB.

Select “Next” at the bottom of the Step 1 screen. You do not have to enter anything in Step 2, as you have already defined the data, so just select “Next”. In the “Step 3 of 4 – Chart Options” screen, select the “Title” tab, and in the “Chart Title” box, type a name for this chart. We used “Sales Trends at \$/Sq. Ft.” This screen is shown in Figure 15, below.

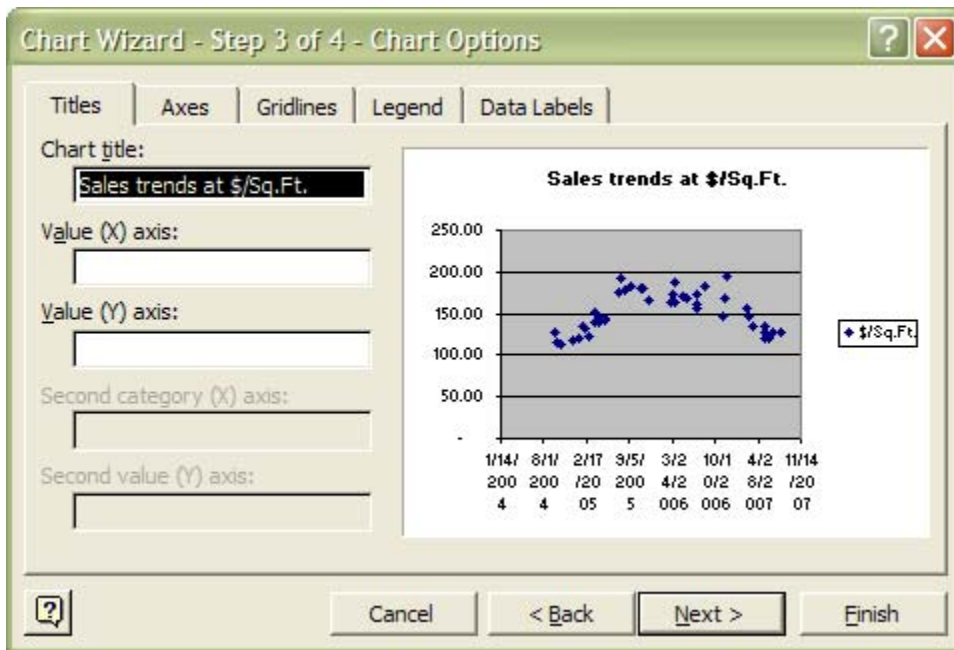


FIGURE 15: “TITLE” TAB OF THE CHART WIZARD, “STEP 3 OF 4”.

Still in the “Step 3 of 4” screen, select the “Legend” tab, and then select the “Top” Radio Button from the choices on the left. Click “Next,” and then in Step 4, click “Place chart as: New Sheet.” This will place your chart on a separate sheet, with its own tab, rather than at the bottom of your sales table. This is much more convenient if you want to quickly find and print the chart or table. Finally, click “Finish”. Tada!!! Here’s your chart (Figure 16)!

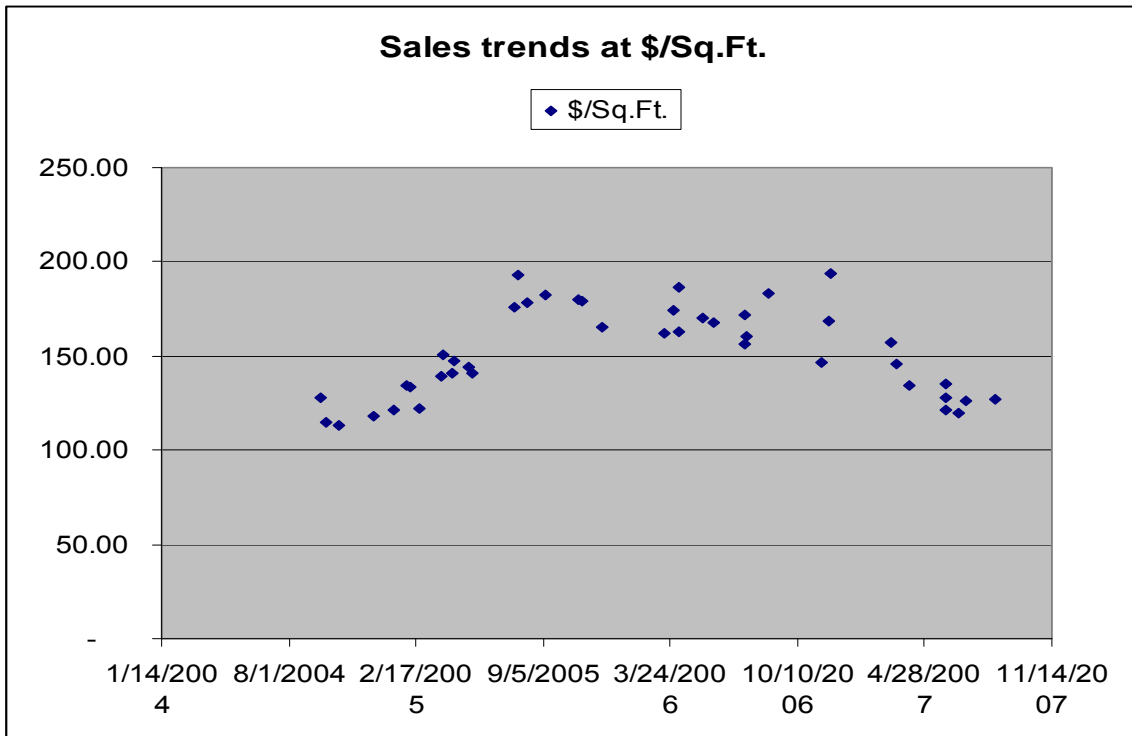


FIGURE 16: GRAPH OF "SALES TRENDS AT \$/SQ. FT."

This is a pretty basic graph! Next, we want to add a Trendline, which is a major help in interpreting the data. And we can improve the formatting of the chart, to make it easier to read, and more attractive, if needed! To add a Trendline, right mouse-click on any one of the 'dots' (data points) on your chart. From the menu that pops up (shown in Figure 17 below, select "Add Trendline".

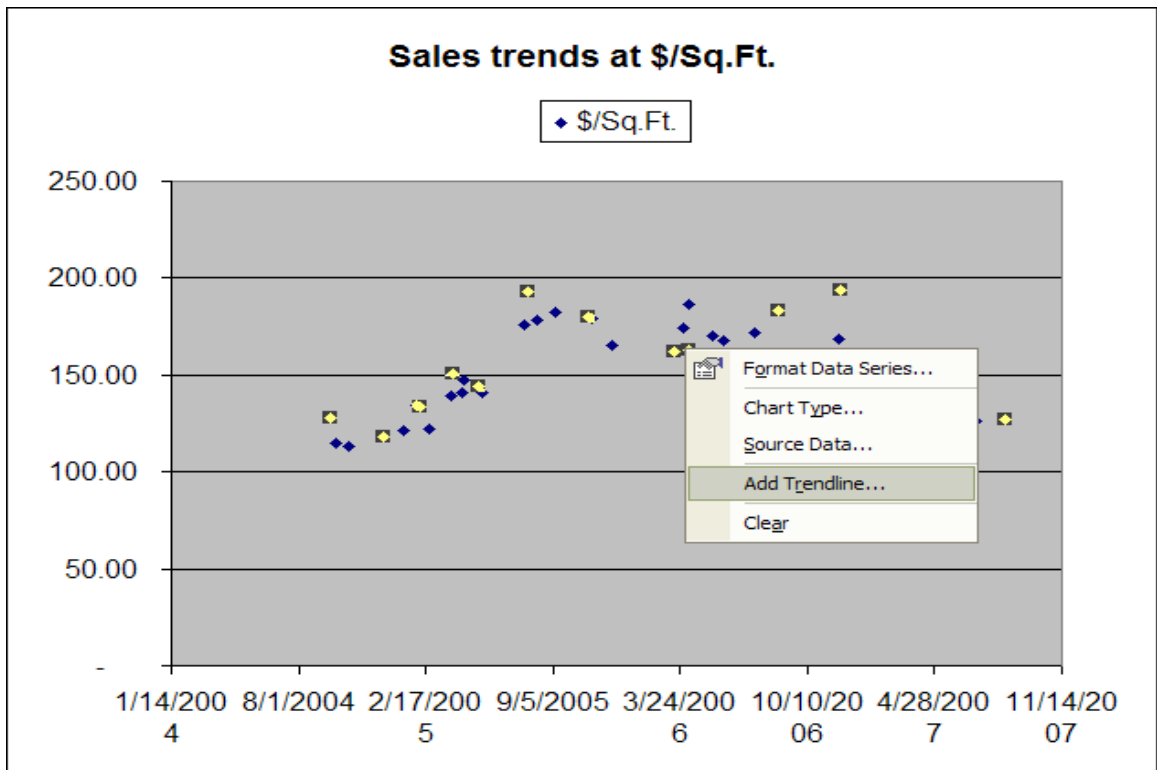


FIGURE 17: DATA POINTS "RIGHT-CLICK" SELECTION MENU.

The “Add Trendline” menu will appear, shown in Figure 18, below. From the menu, select the “Type” tab and then select “Polynomial”. In the right “Order” counter, change the “Order” to 3. Press “OK”.

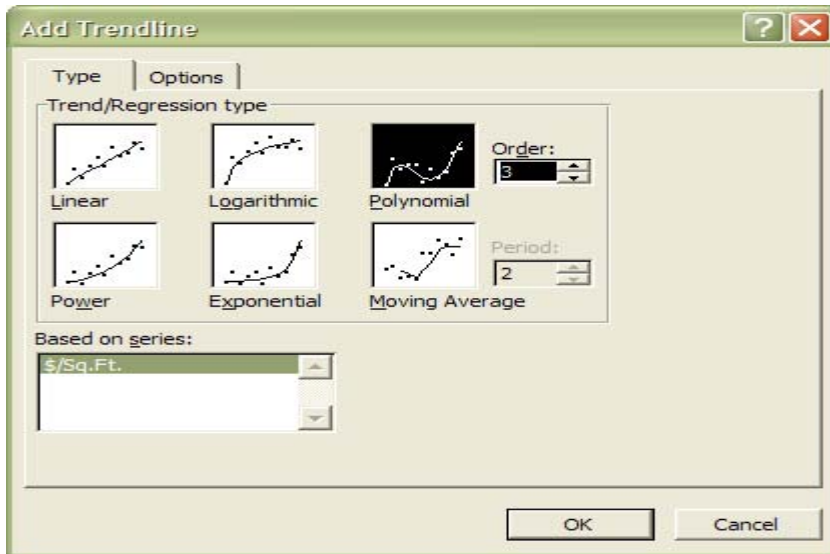


FIGURE 18: “ADD TRENDLINE” SCREEN.

Your chart should now look like Figure 19. It is desirable to experiment with different orders of “Polynomial” graph, to see how the Trendline changes, and which appears to best match the pattern of the sales. A “two” will straighten the graph compared to a “three,” while a “four” will make the curves greater. The “Linear” also can match the pattern of the sales, in cases where the change is relatively constant over time.

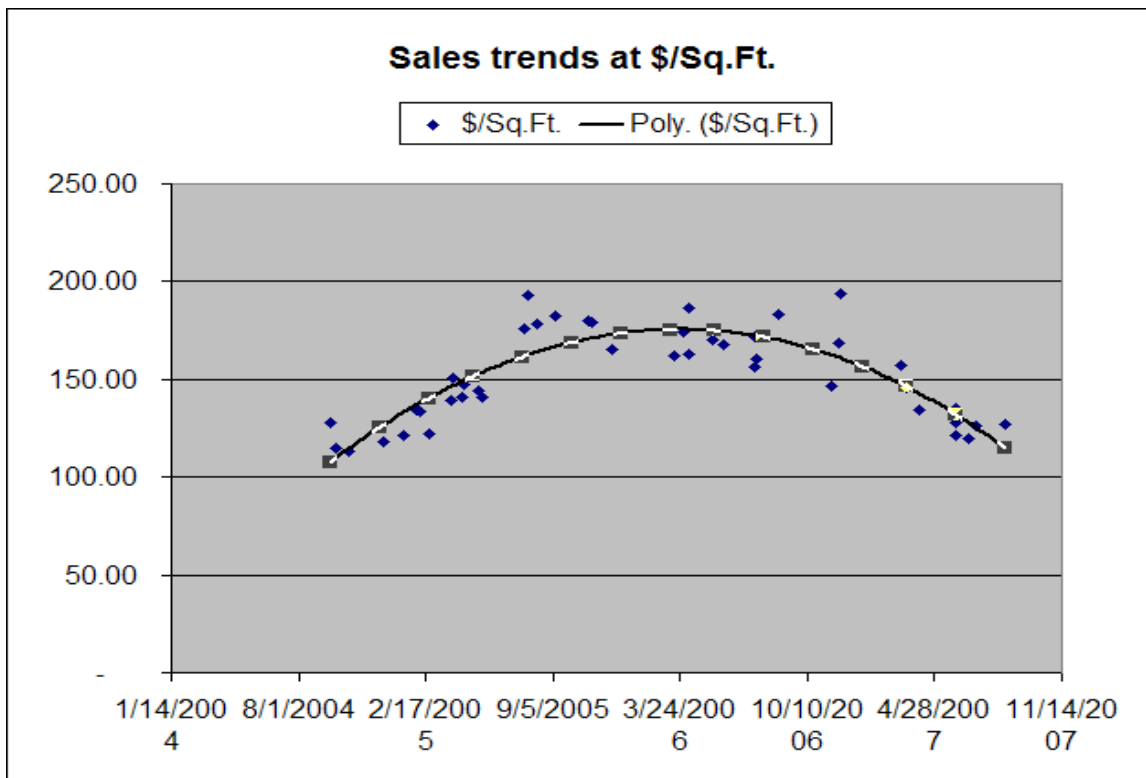


FIGURE 19: SCATTERPLOT GRAPH WITH POLYNOMIAL TREND LINE.

There are several things that you can do to make the chart clearer. Generally, these are changes to some of the formatting. To make the "Date of Sale" information easier to understand, right mouse-click over any one of the dates and select "Format Axis". A menu will load to allow you to change how the numbers are formatted and the scale. Select the "Number" tab, and from the right window pane, select the format of "Mar-01". Next, select the "Scale" tab. Change the "Major Unit" to a value that will allow some readability. For this axis, the major unit is in days, so select 60 days. Also set the "Minor Unit" to "15". Verify that the "Auto" boxes to the left of the "Major Unit" and "Minor Unit" cells are not checked. Finally, click on "OK" to close the formatting screen.

A right-click near the top in an open space on your chart brings up a menu that gives you numerous options for further formatting your chart. One option is "Format Chart Area", which brings up a menu that allows you to change the border, or the color of the graph body. Another selection is "Chart Options", which offers the ability to change the titles, the axes, the gridlines, the legend or the data labels.

In Figure 20, below, the vertical (Y-Axis) scale was changed to expand the curve, the colors of the chart and trendline were changed and the trendline was change to a polynomial order-4.

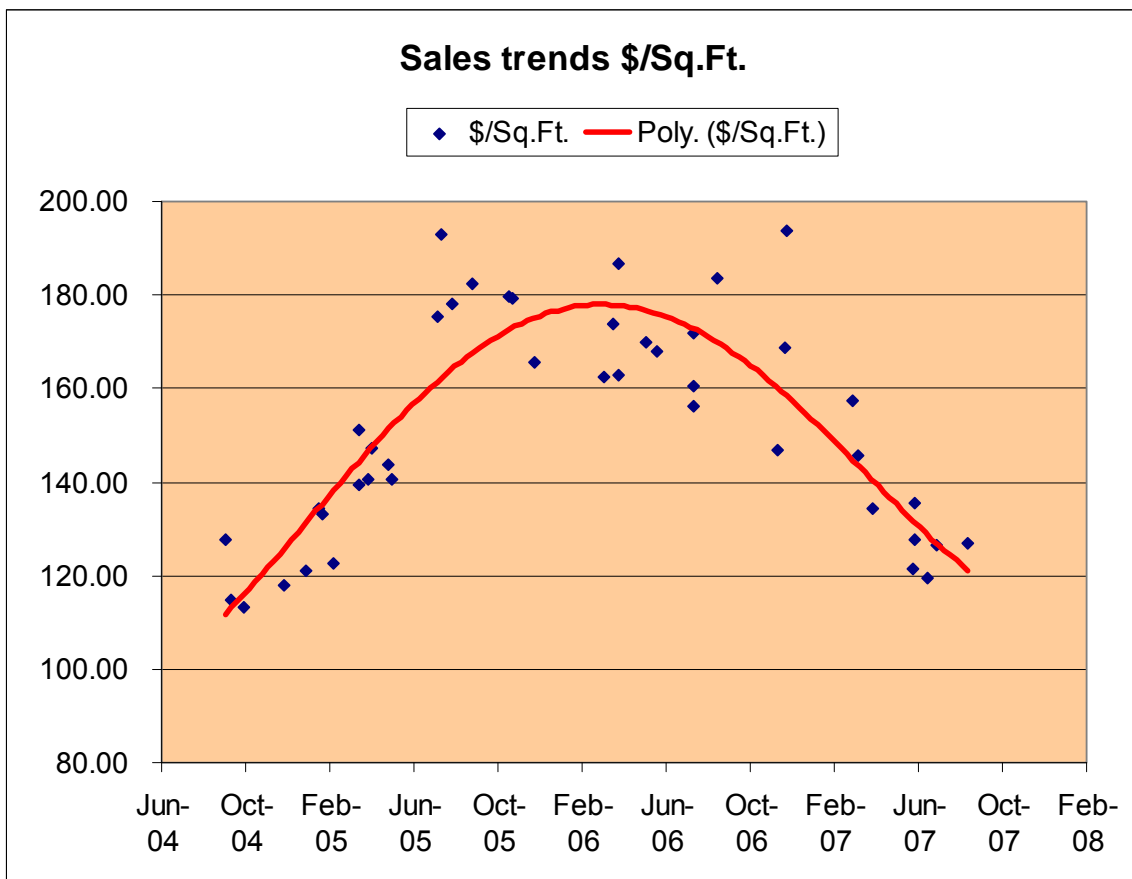


FIGURE 20: THE FINAL GRAPH.

As you can see, the formatting options are endless.

The final step is to insert the chart in your report. Just "right mouse-click" the graph in a clear area in the center, select "Copy", right-click in your report, and select "Paste"! There is nothing like a chart to clearly show factual evidence as to what the current market conditions are!