2016 Level II Tutorials

The Sales Comparison Approach
Sales Comparison Approach

- The Sales Comparison Approach uses sales prices as evidence of the value of similar properties.

- The price at which a particular property sells is the price determined by the interaction of supply and demand at the time of sale.
Sales Comparison Approach

- If supply or demand factors shift, prices generally rise or fall.

- The sales comparison approach is most suitable when there are frequent sales of similar properties.
Sales Comparison Approach

• Because no two properties are exactly alike, methods must be used to adjust the prices of sold properties, or comparables.

• The known prices are adjusted by adding or subtracting the amount which a given feature appears to add to, or subtract from, the price of the comparison property.
Sales Comparison Approach

- Adjustments may also need to be made for time and terms of sale.
- We will take a look at how the sales comparison approach is used and some of the factors that are involved in using it.
Let’s look at a few basic definitions:

- **Demand:** the desire and ability to purchase commodities and/or services at various price levels. Demand is represented by buyers.

- **Supply:** the quantity of goods or services available for sale at various price levels. Supply is represented by sellers.
Sales Comparison Approach

- An inverse relationship exists between price and quantity demanded.
- As the price goes down, the quantity demanded increases; as the price goes up, the quantity demanded decreases.
Sales Comparison Approach

- Factors that affect demand:
  - The price of the commodity
  - Consumer income
  - The price of related goods – substituting one brand of paint for another at a lower price or buying a house in neighborhood A instead of in neighborhood B
  - The price of complimentary goods – paint brushes, nails, etc.
Sales Comparison Approach

- Consumer expectations of future price changes – increases in interest rates, the price of winter gas or heating oil, automaker incentives.
Sales Comparison Approach

- Factors that affect supply:
  - The price of the commodity
  - The availability of land, labor, management and capital
  - Available technology
  - Housing prices
  - Size of the housing stock available
  - Construction costs and methodologies
Sales Comparison Approach

- When the quantity of goods offered for sale equals the amount of goods demanded for purchase, you have the **market value**.

- The **marketplace** is where the buyers and sellers meet to exchange property rights for other assets.
Sales Comparison Approach

- A **buyer’s market** is a market that exists when oversupply and excess capacity permit buyers to drive price levels down.

- A **seller’s market** is a market that exists when demand is so strong that supply levels fall and sellers escalate prices.
Markets and their products are interconnected (or linked) with other markets. Horizontal linkages occur when substitute or complimentary products create relationships between related and unrelated markets. (For example, changes in interest rates affect demand for real estate.)
Sales Comparison Approach

- Horizontal market linkages provide the rationale for:
  - The sales comparison approach to value
  - Determining adjustments to the comparables
  - Establishing how market participants purchase land
Sales Comparison Approach

• Let’s look at value:
  • Value is composed of five economic factors that must be present to create it. They are:
    • Utility – the ability of a good to create and satisfy human desires and needs; usefulness
    • Scarcity – demand must exceed supply for a commodity to have value
Sales Comparison Approach

• Desire – the wish to acquire an item to satisfy human needs that goes beyond the essentials to supply life
• Purchasing power – the ability to purchase goods for sale with cash or its equivalent
• Salability – a commodity that for any reason cannot be sold has no value
A distinction must be made between the terms *real estate* and *real property*.

*Real Estate* is the physical land and the appurtenances affixed to the land. It is the tangible part of *real property*. 
Sales Comparison Approach

- *Real Property* includes all the interests, rights and benefits included in owning the physical real estate. We can give up some of the rights and retain others, such as selling mineral rights or retaining a life estate.
Sales Comparison Approach

- **Market value** is defined as by the IAAO in “Mass Appraisal of Real Property” as: “The most probable price (in terms of money) which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus.”
Sales Comparison Approach

- Implications of the definition:
  - Buyer and seller are typically motivated by self interest and personal gain.
  - Both parties are well informed or advised and act in what they consider to be their best interests.
  - A reasonable time is allowed for exposure on the open market.
Sales Comparison Approach

- Payment is made in terms of cash or in terms of financial arrangements comparable to cash.
- The price is unaffected by special financing or concessions.
Sales Comparison Approach

• The steps required in the sales comparison approach:
  1. Definition of the appraisal problem.
  2. Data collection and verification.
  3. Analysis of market data to develop units of comparison and select attributes for adjustment.
  4. Development of reasonable adjustments.
5. Application of the adjustments to the comparable sales.
6. Analysis of adjusted prices to estimate value of subject property.

The formula for the sales comparison approach is:

$$SP_C +/- Adj. = V$$
Sales Comparison Approach

- The sales comparison approach estimates the market value of a subject property by adjusting the sale price of comparable properties for differences between the comparables and the subject.
Sales Comparison Approach

- **Comparability** is a measure of similarity between a sale and a subject.

- Sale property and subject property should be similar with respect to date of sale, economic conditions, physical attributes and competitiveness in the same market.
Sales Comparison Approach

- Selecting the Comparables:
  - Three to five is usually adequate, but a larger number improves confidence in the final estimate, increases the awareness of patterns of value and stabilizes assessments over time.
  - Units of comparison may be the property as a whole or some smaller measure of the size of the property.
Sales Comparison Approach

- Common units of comparison are square feet of gross building area; square feet of net rentable area; front footage; number of rooms or units; and the gross rent multiplier.
Sales Comparison Approach

- Attributes are such things as age, size, number of bathrooms, quality of construction, design, land area, and location.

- The sale price is a function of how buyers and sellers perceive the utility of important property attributes.
Sales Comparison Approach

• Is the attribute quantitative or qualitative?

• Qualitative attributes usually represent demand because they measure utility, and are usually adjusted with percentages. They are based on discrete, predefined categories.
• Quantitative attributes that measure the range of housing services available usually represent supply, but they can represent demand as well. They are usually adjusted with dollar amounts, and are based on measuring or counting.
Sales Comparison Approach

- Let’s look at some attributes and whether they are quantitative or qualitative:
  - Building size – quantitative
  - Air conditioning – qualitative
  - Condition – qualitative
  - Bathrooms – quantitative
  - Year built - quantitative
Sales Comparison Approach

• How do the relationships between the attributes contribute to value?
• How do they relate to one another? Are the adjustments added together to form a total adjustment, or are they to be multiplied, or some combination?
• How do changes in quality and size relate to changes in value? Does a second bathroom make the same contribution to value as the first?
Sales Comparison Approach

• Once you have selected your comparables and your attributes and determined the relationship of your attributes and their contribution to value, you are ready to determine the adjustment amounts (coefficients).
Sales Comparison Approach

• Making proper adjustments to value is the most important step in order to arrive at credible value indications for the subject property.

• There are five steps in the adjustment process.
Sales Comparison Approach

• Step 1 – Identify all elements of comparison affecting the market value of the subject property.
• Step 2 – Compare the amenities of each comparable with those of the subject, quantifying the difference between the comps and the subject property.
Step 3 – Apply the appropriate adjustments for each difference to the unit of comparison or the total sale price of the comps and develop a net adjustment for each comp.

Step 4 – Bracket the adjusted values of the comps by identifying those that are superior, similar or inferior to the subject.
Sales Comparison Approach

• Step 5 – Reconcile the indications of value into a final estimate of the subject.

• Sales with inferior amenities are adjusted upward to the subject.

• Sales with superior amenities are adjusted downward to the subject.
Sales Comparison Approach

Superior – Better – More Than
\[ \downarrow - \]
MV Subject__________________________
\[ \uparrow + \]
Inferior – Poorer – Less Than
Sales Comparison Approach

- Lump sum adjustments are actual dollar amounts that represent the market’s perception of the difference between the comp and the subject. For example, an adjustment of $1,000 may represent the market’s opinion of the contributory value of a second bathroom.
Sales Comparison Approach

- Percentage adjustments represent a value difference between the comp and the subject, expressed as a percentage of the sale price.
- Cumulative percentage adjustments – differences are expressed as a percentage for each item and are summed to determine the net adjustment to the comp sale price.
Sales Comparison Approach

- Multiplicative percentage adjustments – individual adjustment percentages are multiplied by each other to determine the total adjustment.
Sales Comparison Approach

- Percentage and lump sum adjustments are made in successive order:
  - Property rights conveyed
  - Financing terms
  - Conditions of sale
  - Market conditions
  - Location
  - Physical characteristics
  - Non-realty components
Sales Comparison Approach

• The adjustments always have to be done in this order.

• There are several different ways to determine the adjustments, and we will briefly discuss them.
Sales Comparison Approach

• Paired sales:
  • Useful when many homogenous sales are available
  • One method of determining time adjustments as long as there have been no changes between the sale dates of the resale properties
  • Can be used to estimate qualitative and quantitative adjustments
Sales Comparison Approach

- Multiple Regression Analysis:
  - Does not require strict similarity between parcels
  - Statistical technique for estimating unknown data on the basis of known and available data (sale prices and property characteristics)
Sales Comparison Approach

- Adaptive Estimation Procedure (AEP or feedback):
  - A valuation equation is specified and adjusted as data on individual sales are sequentially processed and analyzed. The process continues, with each sale processed many times, until the model converges on a satisfactory solution.
Sales Comparison Approach

• Cost Method:
  • Based on the theory that the market value of an improved parcel can be estimated by the sum of the land value and the depreciated value of the improvements.
  • Formula is: \( MV = LV + (RCN - D) \)
In the sales comparison approach, procedures are similar but the units of comparison and attributes selected are different for different property types.

From an analysis of value indicators, a unit of measurement is selected that most clearly reflects the purchaser’s behavior in the marketplace.

As a general rule, the best market indicator is the one with the lowest variance.
Sales Comparison Approach

- The unit of measurement chosen is used as the starting point for adjustments.
- The next step is market analysis to select the attributes to be adjusted and the size of the adjustments.
- For instance, if you are working with apartment buildings, you might use price per apartment, price per room or square footage.
- For a general-purpose commercial building, you might use sale price per square foot.
Sales Comparison Approach

- Please go to your problem packet and let’s work **Problem Number 1—Comparative Attributes of an Apartment Building.**
Sales Comparison Class Problem # 1
Comparative Attributes of an Apartment Building

You are trying to determine if the current value you have on an apartment building is accurate. Currently it is assessed at $310,000. Part of your analysis involves comparing the subject apartment building to comparable buildings in your jurisdiction that have sold in the last two years. Values have not changed significantly during this two year period. The subject and all comparable properties all consist of one bedroom apartment units and each apartment contains three rooms. The information on the subject and the comparable sales that you have found are as follows:

Subject: 10 years old and two stories with 16 units, good location, average condition, Grade C quality of construction. all units have central air conditioning. The building contains 12,800 square feet.

Sale # 1: 12 year old building, 2 stories, 16 units, contains 12,800 square feet. It is identical to the subject with the exceptions of no central air and the location is average. It sold 8 months ago for $351,200.

Sale # 2: 15 year old building, 2 stories, 16 units, average condition, Grade C quality in a good location. All units have central air. The building contains 13,000 square feet and it sold for $369,900 10 months ago.

Sale # 3: 8 year old building, 2 stories, 16 units, average condition, C-1 Grade, and in a good location. Units do not have central air. The building has 13,120 square feet and sold 15 months ago for $348,000.

Sale # 4: 18 year old building, 2 stories, 18 units, average condition, Grade C, and good location. The units do not have central air. The building has 14,400 square feet and sold 15 months ago for $397,000.

Sale # 5: 10 year old building, 2 stories, 18 units, fair condition, Grade C, and average location. The units have central air and the building contains 14,400 square feet. It sold 2 years ago for $371,000.
Using the sales grid below, analyze the sales to determine if your current value for the subject property is correct. You do not have to make quantitative adjustments, just compare the comparable sales to the subject to determine if your value is correct.

<table>
<thead>
<tr>
<th>Sale #</th>
<th>Subject</th>
<th>Sale # 1</th>
<th>Sale # 2</th>
<th>Sale # 3</th>
<th>Sale # 4</th>
<th>Sale # 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale Price</td>
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<tr>
<td>Square Feet</td>
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<tr>
<td>Apartments</td>
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<td>Rooms</td>
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<td>$ per apartment</td>
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<td>$ per room</td>
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<tr>
<td>Sale Date</td>
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<tr>
<td>Age</td>
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<tr>
<td>Stories</td>
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<tr>
<td>Condition</td>
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<td>Quality</td>
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<tr>
<td>Location</td>
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<tr>
<td>Central A/C</td>
<td></td>
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<tr>
<td>Overall Comparability</td>
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</tr>
</tbody>
</table>
## Comparative Attributes of an Apartment Building

### Sales Comparison Class Problem # 1 Answer

<table>
<thead>
<tr>
<th>Sale #</th>
<th>SUBJECT</th>
<th>SALE 1</th>
<th>SALE 2</th>
<th>SALE 3</th>
<th>SALE 4</th>
<th>SALE 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale Price</td>
<td>$351,200</td>
<td>$369,900</td>
<td>$348,000</td>
<td>$397,000</td>
<td>$371,000</td>
<td></td>
</tr>
<tr>
<td>Square feet</td>
<td>12,800</td>
<td>12,800</td>
<td>13,000</td>
<td>13,120</td>
<td>14,400</td>
<td>14,400</td>
</tr>
<tr>
<td>Apartments</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Rooms</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>$/SF</td>
<td>$364,160.00</td>
<td>$27.44</td>
<td>$28.45</td>
<td>$26.52</td>
<td>$27.57</td>
<td>$25.76</td>
</tr>
<tr>
<td>$/Apt</td>
<td>$369,904.00</td>
<td>$21,950.00</td>
<td>$23,119.00</td>
<td>$21,750.00</td>
<td>$22,056.00</td>
<td>$20,611.00</td>
</tr>
<tr>
<td>$/Room</td>
<td>$369,888.00</td>
<td>$7,317.00</td>
<td>$7,706.00</td>
<td>$7,250.00</td>
<td>$7,352.00</td>
<td>$6,870.00</td>
</tr>
</tbody>
</table>

### Sale Date
- CURRENT = 8 mo = 10 Mo = 15 mo = 15 mo = 24 mo =
- Age = 12 + 15 + 8 - 18 + 10 =
- Stories = 2 = 2 = 2 = 2 = 2 =
- Condition = Ave = Ave = Ave = Ave = Ave = Ave = Ave = Ave = Ave = Ave = Ave =
- Quality = C = C = C = C = C =
- Location = Good = Good = Good = Good = Good = Good =
- Central A/C = Yes = Yes = Yes = Yes = Yes =

### Overall Comparison
- 3 + 0 - Inferior
- 1 + 0 - Slightly inferior
- 2 + 1 - Inferior
- 2 + 0 - Inferior
- 2 + 0 - Inferior

### Range of Unit Values and the Median Value for Each Unit of Comparison

<table>
<thead>
<tr>
<th>Unit of Comparison</th>
<th>Range</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>$/SF</td>
<td>$25.76 to $28.45</td>
<td>$27.44</td>
</tr>
<tr>
<td>$/Apt</td>
<td>$20,611 to $23,119</td>
<td>$21,950.00</td>
</tr>
<tr>
<td>$/Room</td>
<td>$6,870 to $7,706</td>
<td>$7,317.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit of Comparison</th>
<th># of Square Feet and/or Units in Subject</th>
<th>Median Values</th>
<th>Indicated Value of the subject</th>
<th>Sale # 2 Values</th>
<th>Indicated Value of the Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>$/SF</td>
<td>12,800</td>
<td>$27.44</td>
<td>$351,232</td>
<td>$28.45</td>
<td>$364,160</td>
</tr>
<tr>
<td>$/Apt</td>
<td>16</td>
<td>$21,950.00</td>
<td>$351,200</td>
<td>$23,119.00</td>
<td>$369,904</td>
</tr>
<tr>
<td>$/Room</td>
<td>48</td>
<td>$7,317.00</td>
<td>$351,216</td>
<td>$7,706.00</td>
<td>$369,888</td>
</tr>
</tbody>
</table>

It appears that the value of the subject property is somewhere between $351,000 and $370,000. These are well above the current $310,000 it is assessed for. The property needs to be re-valued.
You are using the sales comparison approach to value, to determine the true tax value of a single family residence. You have determined the following elements of comparison contribute significantly to value and have estimated their values.

<table>
<thead>
<tr>
<th>Element</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement</td>
<td>$10,000</td>
</tr>
<tr>
<td>Fireplace</td>
<td>$3,000</td>
</tr>
<tr>
<td>Garage Space</td>
<td>$3,000</td>
</tr>
<tr>
<td>Time</td>
<td>+1.5% per month</td>
</tr>
<tr>
<td>Size</td>
<td>$40 per square foot</td>
</tr>
<tr>
<td>Location</td>
<td>10% more for waterfront</td>
</tr>
<tr>
<td>Brick Exterior</td>
<td>$15,000</td>
</tr>
</tbody>
</table>

The subject property is a 2,400 square foot cedar sided ranch home located on a lot with water frontage. It has a full basement, 2 car garage, 1 fireplace, and 2 full bathrooms.

Sale # 1: Sold for $210,000 five months ago. It is identical to the subject in all aspects except it does not have a basement.

Sale # 2: Sold last week for $240,000. It is a brick home with 2,250 square feet. It has a full basement, 2 full bathrooms, 2 fireplaces and a 2 car garage. It is located on the water.

Sale # 3: It is a 2,600 square foot cedar sided ranch home on a slab foundation. It has a 3 car garage, 2 fireplaces, and 2 full bathrooms. It is not located on the water. It sold 11 months ago for $195,000.

Sale # 4: It is a brick ranch home with a full basement. It has 2,520 square feet. It has 2 full bathrooms, a 1 car garage, and 1 fireplace. It is not located on the water. It sold 20 months ago for $172,500.

Using the sales rating grid provided on the next sheet, estimate the value of the subject property.
## Sales Comparison Class Problem #2 Answer
### Lump Sum and Percentage Adjustments

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sale # 1</th>
<th>Sale # 2</th>
<th>Sale # 3</th>
<th>Sale # 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale Price</td>
<td>Current</td>
<td>$210,000</td>
<td>$240,000</td>
<td>$195,000</td>
</tr>
<tr>
<td>Date of Sale</td>
<td>Current</td>
<td>5 months</td>
<td>Current</td>
<td>11 months</td>
</tr>
<tr>
<td>Time Adjustment</td>
<td>none</td>
<td>$15,750</td>
<td>$0</td>
<td>$32,175</td>
</tr>
<tr>
<td>Time Adj Sale Price</td>
<td>none</td>
<td>$225,750</td>
<td>$240,000</td>
<td>$227,175</td>
</tr>
<tr>
<td>Other Adjustments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basement</td>
<td>Full</td>
<td>$10,000</td>
<td>$0</td>
<td>$10,000</td>
</tr>
<tr>
<td>Garage</td>
<td>2 car</td>
<td>$0</td>
<td>$0</td>
<td>-$3,000</td>
</tr>
<tr>
<td>Size Sq Feet</td>
<td>2400</td>
<td>$0</td>
<td>$6,000</td>
<td>-$8,000</td>
</tr>
<tr>
<td>Fireplace</td>
<td>1</td>
<td>$0</td>
<td>-$3,000</td>
<td>-$3,000</td>
</tr>
<tr>
<td>Location</td>
<td>Water</td>
<td>$0</td>
<td>$0</td>
<td>$22,718</td>
</tr>
<tr>
<td>Exterior</td>
<td>Cedar</td>
<td>$0</td>
<td>-$15,000</td>
<td>$0</td>
</tr>
<tr>
<td>Bathrooms</td>
<td>2</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Net Adjustments</td>
<td></td>
<td>$10,000</td>
<td>-$12,000</td>
<td>$18,718</td>
</tr>
<tr>
<td>Adjusted Price</td>
<td></td>
<td>$235,750</td>
<td>$235,750</td>
<td>$228,000</td>
</tr>
<tr>
<td>MEDIAN</td>
<td></td>
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</tr>
</tbody>
</table>

**MEDIAN** $232,813
### Sales Comparison Practice Problem # 1
#### Paired Sales Problem

<table>
<thead>
<tr>
<th>Sale #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale Price</td>
<td></td>
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<tr>
<td>Square Ft.</td>
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</tr>
<tr>
<td>Price/SF</td>
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<td></td>
</tr>
<tr>
<td>Bedrooms</td>
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</tr>
<tr>
<td>Bathrooms</td>
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</tr>
<tr>
<td>Garage</td>
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</tr>
<tr>
<td>Basement</td>
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</tr>
</tbody>
</table>

Using the information below, fill in the grid and then determine the price per square foot that each attribute contributes. Round any odd cents to the nearest whole dollar.

Sale # 1 has three bedrooms, two baths, a 2-car garage and a full basement. It sold for $120,000 and has 2,000 square feet.

Sale #2 sold for $129,500 and has 2,056 square feet. It contains three bedrooms, two bathrooms, a 3-car garage and a full basement.

Sale #3 has four bedrooms, two baths, a 2-car garage and a full basement. It sold for $134,400 and has 2,100 square feet.

Sale #4 sold for $116,000 and has 2,000 square feet. It has three bedrooms, one bathroom, a 2-car garage and a full basement.

Sale #5 has three bedrooms, two bathrooms, a 3-car garage, but no basement. It sold for $121,540 and has 2,060 square feet.

**PRICE PER SQUARE FOOT FOR:**

- Bedrooms  
- Bathrooms  
- Garage  
- Basement  


Sales Comparison Practice Problem # 1 Answer
Paired Sales Problem

<table>
<thead>
<tr>
<th>Sale #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>Sale Price</td>
<td>$120,000</td>
<td>$129,500</td>
<td>$134,400</td>
<td>$116,000</td>
<td>$121,540</td>
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<tr>
<td>Square Ft.</td>
<td>2,000</td>
<td>2,056</td>
<td>2,100</td>
<td>2,000</td>
<td>2,060</td>
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<tr>
<td>Price/SF</td>
<td>$60</td>
<td>$63</td>
<td>$64</td>
<td>$58</td>
<td>$59</td>
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<td>Bedrooms</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Bathrooms</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Garage</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Basement</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

Using the information below, fill in the grid and then determine the price per square foot that each attribute contributes. Round any odd cents to the nearest whole dollar.

Sale # 1 has three bedrooms, two baths, a 2-car garage and a full basement. It sold for $120,000 and has 2,000 square feet.

Sale #2 sold for $129,500 and has 2,056 square feet. It contains three bedrooms, two bathrooms, a 3-car garage and a full basement.

Sale #3 has four bedrooms, two baths, a 2-car garage and a full basement. It sold for $134,400 and has 2,100 square feet.

Sale #4 sold for $116,000 and has 2,000 square feet. It has three bedrooms, one bathroom, a 2-car garage and a full basement.

Sale #5 has three bedrooms, two bathrooms, a 3-car garage, but no basement. It sold for $121,540 and has 2,060 square feet.

PRICE PER SQUARE FOOT FOR:

- Bedrooms 64-60 = 4  (House 3 – House 1)
- Bathrooms 60-58 = 2  (House 1 – House 4)
- Garage 63-60 = 3  (House 2 – House 1)
- Basement 63-59 = 4  (House 2 – House 5)
Practice Problem # 2
Sales Comparison

Your subject home is 20 years old. It contains 2,400 square feet. There is a 2 car attached garage, 2 baths, and has a full basement. It also has 1 fireplace and is located on a lake and has a Cedar wood exterior.

Sale # 1 was five months ago for $210,000. It is 20 years old and has 2,400 square feet. There is no basement but it has a 2 car attached garage. It has cedar wood siding and is located on the water. It also has 1 fireplace and 2 baths.

Sale # 2 was 2 weeks ago for $240,000. It is 15 years old and has 2,250 square feet. There is a full basement and a 2 car attached garage. It is located on the water and has a brick exterior. It also has 2 fireplaces and 2 baths.

Sale # 3 was eleven months ago for $195,000. It is 25 years old and has 2,600 square feet. There is no basement but it has a 3 car attached garage. It is not located on the water but has cedar wood siding. It has 2 fireplaces and 2 baths.

Sale # 4 was 20 months ago for $172,500. It is 22 years old and has 2,520 square feet. There is a full basement and a 1 car attached garage. It is not located on the water and it has a brick exterior. It has 1 fireplace and 2 baths.

The following elements contribute significantly to value and the contributory value of each has been extracted from paired sales analysis:

Time: $500 per month
Age: $1,600 per year
Floor area: $40.00/square foot
Garage: $3,000 for an extra bay
Fireplace: Adds $3,000
Brick: Sells for $15,000 more than non brick homes
Basement: Adds $10,000
Location: On the water: Adds $22,700
<table>
<thead>
<tr>
<th>SALE #</th>
<th>SUBJECT</th>
<th>SALE # 1</th>
<th>SALE # 2</th>
<th>SALE # 3</th>
<th>SALE # 4</th>
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<tr>
<td>SALE PRICE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DATE OF SALE</td>
<td></td>
<td></td>
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<tr>
<td>TIME ADJ</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>TIME ADJ SALE PRICE</td>
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</tr>
<tr>
<td>OTHER ADJ</td>
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<tr>
<td>SIZE</td>
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</tr>
<tr>
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<tr>
<td>LOCATION</td>
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</tr>
<tr>
<td>EXTERIOR</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>BATHS</td>
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<td>ADJ PRICE</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Practice Problem # 2 Answer

Sales Comparison

Sale # 1)  Basement--Our subject has a basement and our comp does not. We have to adjust the comp to come to the subject. Since our comp does not have a basement but our subject does. We have to add for the value of a basement which is $10,000 This is the only adjustment that needs to be made since everything else the subject has the comp has the same.

Sale # 2)  Our subject is 20 years old and the comp is 15 years old. That means our subject has had 5 more years of depreciation than the comp. Each year is worth $1,600. 5 years times $1,600 per year equals $8,000. This is a deduction of $8,000 because our subject is older. We have to deduct the value each year has to make the comp a 20 year old house like the subject. The next item is the square feet. We have less square feet in our comp so we have to bring it upward since it is inferior to our subject so it is added. 150 square feet times $40/square foot = $6,000. The next adj is the fireplace. Our comp has 2 and the subject has 1. We have to deduct the value of 1 fireplace from the comp since it is superior to our subject. The value is $3,000. We have 1 more adj to make and that is for the brick. Our subject has cedar wood and the comp has brick which is superior so we have to subtract the amount of value that brick adds to a home, which is $15,000.
Sale # 3) The first adj is time per this class. It sold 11 months ago and our research in the market shows time is an increase of $500 per month. This gives us $5,500 to add since it inferior to our subject. The next adj is the age. The comp is 25 years old and as such is 5 years older than our comp. This makes it an inferior adjustment which is upward. The subject is 5 years older at $1,600 per year for an addition of $8,000. The next adjustment is the basement. Our subject has one and the comp does not. This makes it inferior and the value to add for a basement from our research is $10,000. The next adj made is for the 3 car garage which is 1 more bay than our subject which makes the comp superior for which we adjust downwards to the subject. The amount from our research for an extra garage bay is $3,000. Next we have the square foot to adjust for. Our comp has 2,600 and our subject has 2,400 so the comp is superior to our subject and must be adjusted downward. The value of a square foot is $40.00. The comp has 200 more square feet at $40 to equal a deduction of $8,000. Continuing on the fireplace is next. Our comp has 2 and our subject has 1 so the comp is superior to our subject the adj is a deduction. The value is $3,000. The last adj we make is for water location. The subject is on the water and the comp is not so it is inferior to our subject. We add inferior adjustments. The amount of the adj based on our research is $22,700.

Sale # 4) The first adj is time per this class. It sold 20 months ago and our research shows time is an increase of $500 per month. This gives us $10,000. ($500 times 20 months). The next adjustment is for age. The subject is 20 years old and the comp is 22 years old. Therefore the comp is inferior to our subject because it is older. We have to add 2 years of age value to the comp to bring it to a 20 year old home. The amount for each year is $1,600 and we have 2 years which makes a + adj of $3,200. The next adj is for the garage. Our subject has a 2 car and the comp has a 1 car. The value of a one car is $3,000. The next adjustment is for size. The subject is 2,400 square feet and the comp is 2,520 square feet which makes the comp superior to our subject. The adj is $40/square feet times 120 square feet or $4,800. Our subject is on a lake and the comp is not which makes the comp inferior to the subject so we have to adjust the comp upwards. The amount to add is $22,700. The last adj is for brick. Our subject is cedar and the comp is brick so it is superior to our subject and must be adjusted downwards. The adj is $15,000.
### Practice Problem # 2 Answer

#### Sales Comparison

<table>
<thead>
<tr>
<th>SALE #</th>
<th>SUBJECT</th>
<th>SALE # 1</th>
<th>SALE # 2</th>
<th>SALE # 3</th>
<th>SALE # 4</th>
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I WOULD USE $222,500 BASED ON ONLY ONE ADJUSTMENT FROM THE COMP TO THE SUBJECT. CLOSEST TO OUR SUBJECT.
Practice Problem # 3
Time Adjustment Practice

1.) Property sells for $208,000 and resells one year later for $233,000. What is the amount of the time adjustment? What is the % per month?

2.) In completing an appraisal, the following properties sold.

Sale 1 – House sold 5 months ago for $150,000. What is the adjusted sales price today using the answer from number 1?

Sale 2 – House sold 11 months ago for $140,000. What is the adjusted sales price today using the answer from number 1?
Practice Problem # 3 Answer
Time Adjustment Practice

1.) Subtract difference between sale prices which is $25,000. Then divide the $25,000 by 1st sale price of $208,000.

1st sale price of $208,000. You come up with .1202 or 12.02%. This is the % increase per year, divide by 12, average increase per month is 1%.

2.) Sale #1 - $150,000 x 5% = $7,500 (this is amount of time adjustment). The time adjusted sale price is $150,000 + $7,500 = $157,500

Sale #2 = $140,000 x 11% = $15,400 (time adjustment). Time adjusted sale price is the $140,000 + $15,400 = $155,400.
This concludes the Sales Comparison Approach tutorial and is a reminder that should you have questions you can email these questions to the DLGF.

Please send emails to Level2@dlgf.in.gov.