

XIII. CHOOSING COMPARABLES

I originally did not think any training on comparable (Comp) selection was necessary in this material. However, I have been approached by other regression vendors and told that one of the biggest stumbling blocks is training appraisers to gather the correct comps for regression analysis. In discussions with some of my customers they seem to be confused on this issue as well. The problem is not limited to just regression analysis, but to appraising in general. Patrick Egger an appraiser in Nevada developed and taught a seminar on the housing market several years ago. Later he developed and taught a seminar on the 1004MC form (residential market analysis). In a recent conversation Pat made it clear to me that I would not be able to just skip over comparable selection in the introductory series of workbooks because appraisers across the country are very confused on this issue.

After committing to covering this material I realized that there was more to gathering the proper comps than meets the eye, both for the traditional sales grid as well as for regression analysis. I have traced the root of the problem to a general lack of understanding of markets and sub-markets. This lack of understanding has many causes; the two that stand out are misinformation from clients and there has been little evolution of the subject in the appraisal principles. The appraisal profession is a relatively young profession and there is a lot of theory and principles yet to be published. I ran into this same issue when I wrote the book APPRAISING IN THE NEW MILLENNIUM; Due Diligence & Scope of Work. In that book I included some 30 new definitions. In order to clearly explain comp selection I have introduced the term “Purchaser’s Price Point Range” and restructured the definition of “Subject Property’s Sub-market” and introduced a new condition for determining when a property is or is not a part of a market. In addition I have introduced a new principle on market behavior called “Cascading Sub-markets”. These new and clarified terms, and new principle fill in the gap in current appraisal practice. A comp can be a sale, active listing, pending

contract, or expired listing. The type of comp is not critical to this discussion as it applies to all of these types.

Setting the proper criteria for comparable selection is determined by the type of analysis in which the comps will be used. Consider two analysis that appraisers currently perform; a comparative analysis (such as a sales grid), and a paired-sales analysis. In the first situation the goal is to find comps that are very similar if not identical to the subject property in every aspect. Imagine the thrill of finding three sales that are so similar to the subject that no adjustments are necessary! Now take those same three sales and try to extract the line-item adjustment for the gross living area (GLA) of the market. The first step is to calculate the difference in the GLA between the properties. “Houston, we have a problem”! The very set of data that was perfect on a comparison grid is absolutely useless to extract line-item adjustments. To successfully extract adjustments we need sales that vary in terms of the property characteristics, and we need a lot of them. After considering the analysis the comps will be used in, **the valuator must choose comps that lead to a credible value opinion.**

A. Premise 4

To lead to a credible value opinion comparables must have similar value relationships (coefficients) to the subject property under the current market conditions. This results because specific sets of purchasers tend to shop this specific collection of properties.

To get a feel for where we should be looking for these similarly behaving comps lets discuss the following terms:

1. Subdivision
2. Neighborhood
3. Subject Property's competition as defined by what a single potential purchaser would select
4. Subject Property's Sub-market
5. Subject Property's Overall market

1. Subdivision: "A tract of land that has been divided into lots or blocks..." (The Dictionary of Real Estate Appraisal 5th Edition, page 188, Appraisal Institute)

A subdivision is not a useful term for describing markets. Subdivisions tend to contain very similar properties, especially those properties in the same phase. This may explain why a specific class of purchasers will tend to shop in specific area where the properties contain the characteristics they desire. Other than the fact that properties in the same phase of a subdivision are "typically" very similar to one another and likely in the same market it is too narrow of a description for comp selection.

2. Neighborhood: A group of complementary land uses; a congruous grouping of inhabitants, buildings, or business enterprises. (The Dictionary of Real Estate Appraisal 5th Edition, page 133, Appraisal Institute)

A neighborhood focuses on a "grouping" which leans towards geographical location. Its boundaries are often exaggerated in appraisals. This exaggeration is very common when the client requires that all sales be in the subject's neighborhood. It is useful in describing the immediate area around the subject property, but not very useful when

describing requirements for comp selection. It is of little use in the study of real property markets.

3. What a single potential purchaser would select

In the past few years a definitional term for a specific and narrow part of the overall market has emerged. It is defined as the properties a single potential purchaser would select in addition to the subject property.

Consider the following statement from FANNIE MAE regarding the 1004MC form:

“When completing this section, the appraiser must include the comparable data that reflects the total pool of comparable properties from **which a buyer may select** [bold added for emphasis] a property in order to analyze the sales activity and the local housing supply.” (Announcement 08-30, pages 2 and 3, 11/14/08, FannieMae)

The interesting twist here is that the pool of properties is defined as properties which “a buyer” may select. This statement infers a submarket of the subject property’s overall market. Appraisers understand that most markets vary in values that are too wide for only one class of purchasers to participate in. Fannie’s intentions to promote comparable selection based on where purchasers shop is fundamentally correct, their wording (“a buyer”) was too restrictive. This good idea was ill fated partially because it served to confuse everyone (appraisers, reviewers, underwriters, etc.); but primarily because it often left the appraiser with an insufficient number of comps to analyze. We will use the same idea, but replace “a buyer” with “sets of purchasers” so it is not quite as restrictive.

In general a sub-market is a partial group of the *overall market* based on some defined differential. Examples of sub-market differentials are; all houses with over 3,000 square feet of gross living area, or all properties with less than one acre of land within a specific market.

4. The subject Property's sub-market is a sub-market of the *subject's overall market*. It is best defined as a specific collection of properties within the *subject's overall market* that the same *sets* of potential purchasers would consider and have the ability to purchase, as well as the subject property. The subject Property's sub-market is not as narrow as a "single purchaser's" sub-market because it considers that there is some overlap that similar but different purchasers have in the properties they shop. The properties that potential purchaser's shop is largely determined by the potential purchaser's price point range. Historically, this price range has been determined by the loan amount that the purchaser qualifies for plus equity and the lowest price property he/she will settle for. For an example let's assume that values in the *subject's overall market* vary from \$200,000 to \$500,000, and the purchaser will only consider properties in the range of \$325,000 to \$400,000 with some specific requirements for location and the property characteristics. This value range goes a long way to defining the "subject property's sub-market".



This illustration shows that each individual property is really shopped by multiple individual buyers. This means that the *subject property's sub-market* is made of many individual buyers with the same and different *price point ranges*. The phrase "that a buyer would select" is a misnomer.

These individual purchasers who would shop the same property are called a set of potential purchasers.

The *subject property's sub-market* like the term *neighborhood* is fairly restrictive and can result in very few comps. If the client wants a comparison analysis with three to six sales then a narrow criteria such as the subject property's sub-market area may be prudent. However, if the analysis is paired-sales, regression, or market value trending, these search criteria may result in an insufficient number of sales to produce credible or reliable opinions.

Real Estate Market: Buyers and sellers of particular real estate and the transactions that occur among them. (The Dictionary of Real Estate Appraisal 5th Edition, page 160, Appraisal Institute)

This definition gives a clue that a market is not the bricks and block, but rather buyers and sellers. A market then is not really defined as a geographical location, but by which properties a particular class of buyers shop. **The important concept is that markets are more about people than buildings.** Where markets are concerned think of who will be purchasing, what properties they desire based on property characteristics and location, and the least consideration is the geographical boundaries they tend to shop in.

Who → What & Location → Geographical Boundaries

5. The Subject Property's Overall market is the overall market the subject property is a part of.

The goal here is to improve our current understanding of markets to aid in developing sound methods of comp selection. To do so we need to include some required conditions of a market that can be objectively tested for. The study of market modeling and the application of regression analysis allows for new testing methods to be applied in this endeavor.

An overall market is a collection of properties with two requirements:

1. That specific sets of potential purchasers shop these properties.
2. That the properties tend to conform to a single “market model”.

The conditions of both 1 and 2 above must be met to prove that a property is a part of a specific market. The first requirement means the same *sets* of potential purchasers (based on the varying price point ranges) shop these properties. Properties which sets of purchasers do not consider or shop are by definition a separate market.

The second means that the same property characteristics have a relationship to the sales price or value, and each characteristic has about the same impact (as measured by the coefficients) from one property to the next. For example all properties must reasonably fit the following market model to be in the same *overall market*.

$$\text{Value} = (\$50,000 * \text{Acres}) + (\$75.00 * \text{GLA}) + (\$10,000 * \text{BRs}) + (\$7,500 * \# \text{Gar Parking}) + (-\$3,000 * \text{Age})$$

In this case Property (A) with 1.0 acres, 2,000 SF, 3 Bedrooms, Double Garage, that is 20 years old is valued at:

$$\$185,000 = (1 * \$50,000) + (\$75 * 2,000) + (\$10,000 * 3) + (\$7,500 * 2) + (-3,000 * 20)$$

Consider Property (B) that is across town from Property (A). While Property (B) is near several industrial plants, Property (B) is near some technology Parks. The houses around Properties (A) and (B) are very similar to each other. The buyers that shop properties near the technology parks are typically younger, better educated, and have higher incomes. They prefer larger homes with more bedrooms, large lot size is not an issue, and they tend to desire garages. They do not shop across town where Property (A) is located, and employees of the industrial plants do not tend to shop for homes across town near property (B). Property (B) is almost identical to Property (A). It has a

different market model based on the different desires of the type of people who shop in this subdivision.

Value = (\$40,000 * acres) + (\$100.00 * GLA) + (\$15,000 * BRs) + (\$10,000 * # Gar Parking) + (-\$3,000 * Age)

\$245,000 = (1 * \$40,000) + (\$100 * 2,000) + (\$15,000 * 3) + (\$10,000 * 2) + (-3,000 * 20)

These two properties are very similar, but the coefficients (value of each unit of property characteristic) are very different. This would be an indication that Property (B) is not in the same market as Property (A); and Property (B) should not be used as comparable for Property (A) and vice versa. The cause of this difference is that the potential purchasers do not shop both markets. It is important to consider that location is treated as an independent variable and that it all starts with “Who” not “where”.

DISCUSSION TOPIC 1

When appraising Property (A) why would it not be proper to use Property (B) as a comp and simply make a minus adjustment for location?

** All discussion topics must be discussed on the Member’s forum at www.AVTtools.com. If a discussion is already started then jump in and add your comments.

There is no new theory here except that residual analysis (a study of the errors between what the market predicts and a property actually sold for) is a quantifiable test to identify properties that are not in the same overall market. When applying the market model used for Property (A) to Property (B) there is an error between the predicted value and actual sales price of 24%.

$$24\% = (\$245,000 - \$185,000) / \$245,000$$

This error is called a residual in statistics. A residual greater than 15% is a clue that something might be amiss. **In this case the properties were not in the same overall market because the buyers from the two areas behave very differently and because potential purchasers do not shop in both areas. This results in different value relationships between the property characteristics and the value of the property.**

At this point there is a looming riddle that must be addressed before this all makes sense. The riddle is;

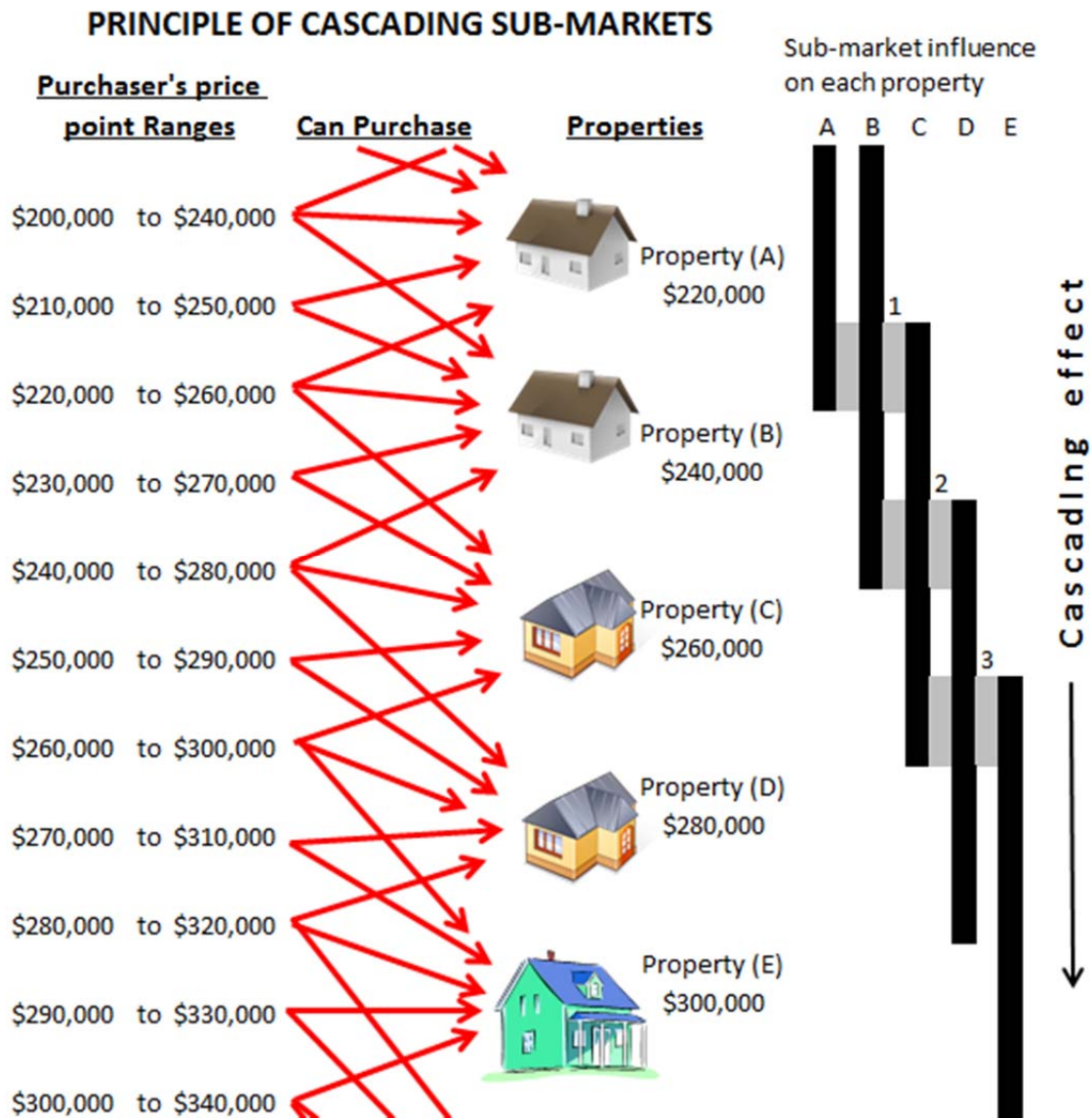
Overall markets are differentiated based on distinct sets of potential purchasers, which constitute a subject property's sub-market. How can two subject sub-markets be in the same overall market if they are made up of distinct sets of buyers? Asked another way: If an overall market is influenced by many sets of purchasers with different price points how do all of the properties tend to conform to a single market model?

This is where appraisers get stumped, throw up their hands, and just agree that all comps should either be in the subject's neighborhood or should be in the subject property's sub-market, possibly resulting in enough sales for a comparison grid, but not

enough to trend values over time, perform a paired sales analysis, or regression analysis.

The answer to this riddle is presented in the “Principle of Cascading Sub-markets”. It is not a requirement that legitimate comps can only be the ones that are a part of the subject property’s sub-market. Consider that an overall market that ranges in value from say \$200,000 to \$500,000 has many of sets of sub-markets for the different subject properties. This is because there are many purchasers’ price point ranges within the \$200,000 to \$500,000. While one buyer has a range of \$300,000 to \$375,000 another may be \$310,000 to \$400,000, or \$330,000 to \$430,000, and so on. This would be a lot of sub-markets beginning at \$200,000 and going to \$500,000.

In the illustration below the price points for individual potential purchasers are presented in hypothetical ranges. The arrows identify the properties that each of individual purchasers can shop based on the price points.



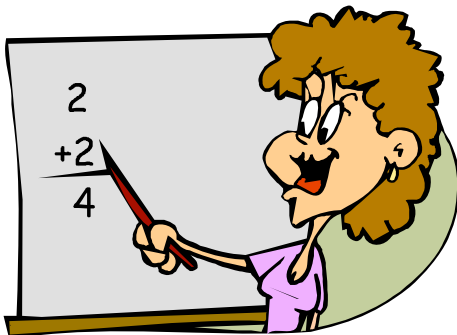
Each of the individual properties has a subject property's sub-market that consists of the overlapping price points for the individual purchasers (see the cascading lines for properties (A) through (E) above). These submarkets tend to cascade throughout the overall market. This illustration shows that each individual property is simultaneously influenced by multiple cascading subject sub-markets. Notice the convergent points

(labeled 1-3) in the illustration that identify where at least three different subject submarkets influence the same properties all at one time. The principle of *cascading sub-markets* holds that because each individual property is acted upon simultaneously by many sub-markets, it is influenced by competitive market forces which result in a consistency in the behavior of the *overall market* by a market pricing mechanism. This prevents a property from being priced below an inferior one, and vice versa. This governing market behavior is based on economic theory including; the principle of supply and demand, the concept of competition, the principle of substitution, and the principle of anticipation. This explains why different sub-markets that are a part of the overall market tend to conform to a single market model. The cascading set of sub-markets explains why properties tend to be consistently valued to one another, but also why individual property components tend to affect the overall value the same way. This means that properties that are a part of the same market will tend to conform to a single market model. The principle of Cascading Sub-markets explains why any comparable that is a part of the same overall market as the subject property is a comparable that will lead to a credible value opinion. Some comps will be better than others based on the type of analysis they will be used in, and their specific property characteristics including location and date of sale.

There will be places where the cascading stops (buyers do not shop) which delineates a market's boundary. This is often based on a geographical boundary such as a river, valley, or mountain range, but could be highways and roads. Sometimes there is no tangible boundary at all, the properties just change. An example would be where there is a 40 year old subdivision of small bungalow type homes which merges with a 25 year old subdivision of brick ranchers, tri-levels, and split foyers. In addition, almost in the center of these subdivisions there is a small subdivision of new to five year old \$500,000 to \$800,000 properties. While these three subdivisions are congruous and share many of the same streets, they represent three different markets. It would not be proper to use the sales from one these areas as comparables for one of the other subdivisions even though they are very close in proximity.

While a market is a specific collection of properties, these properties are often not congruent to each other. In fact, some residential properties may be miles apart and some commercial properties may be scattered across an entire region of the country and still be a part of the same overall market. The test is that the same group of potential purchasers tends to shop those properties. While residential dwellings tend to be clustered, it is not unusual for commercial properties to be isolated from the other properties within the same *overall market*. A market is not really a place; it is a “collection of individual properties” whose value relationships are defined by the same sets of potential purchasers which “cascade” throughout a market. The key word here is a “part of” as opposed to being “in” a market.

Markets are dynamic as there is a constant surging and ebbing of how the different sets of purchasers behave resulting in changes in regard to property values and value relationships. This change is influenced by the four factors of value; social forces, economic circumstances, government controls and regulations, and environmental conditions.



ASSIGNMENT: Study the four factors above in your appraisal principle books.

Now that we have some definitions and an understanding of markets let's talk about the differences in the comparables desired for a comparison method versus paired-sales and regression analysis.

Regression analysis is akin to a paired-sales analysis. So it needs comps just like we have described for a paired sales analysis. Regression analysis can benefit from sales that occurred two or more years ago as long as the analysis has been set up to address all types of value change curves. This will be covered in "Workbook 3; Trending Values over Time".

Comparable Selection

Type:	Sales Approach	Sales Approach
Technique:	Sales grid	Regression and Paired sales Analysis
Location:	As close to subject as possible, preferably in the subject property's sub-market, but must be a part of the subject's overall market.	Anywhere in the subject's "overall market area"
Property Characteristics:	As similar to subject as possible	Similar and different from one property to the next, but still must be a part of the same "overall market" as the subject property.

Regression analysis can help the valuator identify properties that are not a part of the market in question. This is done by developing a market model based on sales from the two different areas and then comparing them for similarity. Or, apply the subject's market model to the a potential comparable and consider the residual (difference between the actual sales price and the model's predicted value). We will be discussing regression throughout this series of workbooks. The best source for which properties individual sets of potential purchasers shop is the local sales agent. Hopefully, this discussion overflows to the topic of what makes an appraiser geographically competent. Any time you have the chance to talk to the sales agent or purchaser(s) of a property you are appraising be sure to ask; what other properties were considered before settling on the subject property?

Q&A 13: I am appraising a property in the lower value range of a particular overall market that has historically ranged in value from \$200,000 to \$500,000. The marketing time and the change in value over time were about the same for all of the properties in this market. After the housing market crisis came into play the larger and better houses with the higher values are selling much slower and their values tend to be falling faster than the rest of the overall market. How do I adjust these higher priced homes for these differences on my sales grid?

Answer Q&A 13 Markets are dynamic, meaning they change from time to time. In this case the original overall market has split into two distinct markets based on the fact that these two groups are behaving very differently from one another.

B. Summary of Choosing Comparables

Choosing the proper comps for an analysis is a daunting, hands-on process that makes or breaks the credibility of the appraisal. Understanding what a market is and how it behaves is essential to determining what properties are and are not comparable to the subject property.

1. Using comparables from the subject property's overall market will lead to credible opinions and conclusions for either a comparison method, paired sales, trending values over time, or regression analysis.
2. The property across the street is not necessarily in the same market because it is about who is shopping, not where a property is located.
3. Comps should not be searched by sales price, as this could tend to prejudice the query results in such a way that an artificially high value opinion will be formed, especially when values are falling.
4. For a comparison method it is desirable to use properties:
 - a. that are in the subject property's sub-market.
 - b. whose characteristics are very similar to the subject.
 - c. That sold very recently.
5. For analysis like paired-sales, trending values over time, and regression analysis it is desirable to use properties:
 - a. that include every sale anywhere in the subject's property's overall market area.
 - b. whose characteristics are similar and not similar (to a point) to the subject.
 - c. that sold as long ago as 2-3 years if the analysis has a value trending module that will recognize all of the possible trends (straight line, curvilinear, and directional changes).
6. For a comparative analysis it is typically acceptable to search for sales by subdivision or neighborhood because developers historically built similar properties in those areas. However:

- a. what defines a market is what collection of properties the same classes of buyers tend to shop.
 - b. this means a market may include properties in two or three separate subdivisions or neighborhoods that are miles apart.
 - c. it is not a good idea to limit the search for sales for paired-sales, trending value over time, or regression analysis to a single subdivision, neighborhood.
7. In establishing the subject property's sub-market, "what a single purchaser would select" is a misnomer and should not be confused with "the actions of several purchasers that have price point ranges that include the subject property's value".
8. The price point ranges of individual purchasers are primarily based on social and economic forces. It is likely that one impact the housing crisis had was to lower these price points across the board. This represents shift in the demand curve, affecting the higher priced homes more than the lower priced homes. This downward shift in demand has resulted in the redefinition of many markets in terms of both boundaries and value relationships.
9. The subject property's sub-market is delineated by the properties specific sets of purchasers tend to shop. The overall market is delineated by the properties that these sets (sub-markets) cascade across. This cascading results in similar economic forces being exerted on these properties.
10. The cascading does not continue upwards and downwards forever. Breaks in the market occur for various reasons resulting in a market boundary.
11. The two tests for a property's inclusion in a specific market are:
 - a. that specific sets of potential purchasers shop these properties.
 - b. that the properties tend to conform to a single "market model".
12. The goal of comp selection is to gather comps that are appropriate for the analysis they will be used in.
13. Local sale agents are perhaps the best source for market information because they know which areas specific sets of buyers shop and don't shop.

14. Regression analysis can help the appraiser identify properties which do not conform to the market model.

C. Questions:

Problem 16: The valuator is utilizing a comparison method. Assume the subject property's overall market for age ranged from 15-30 years and the subject property is 18 years old. In this case the valuator would try to gather comps whose ages are:

- A. As close to 18 years old as possible
- B. In a range of 15-21 years
- C. In a range of 15-30 years
- D. None of the above

Problem 17: The valuator is utilizing regression analysis. Assume the overall market ranged in ages from 5 to 30, the subject property's sub-market for age ranged from 15-25 years, and the subject property is 18 years old. In this case the valuator would try to gather comps whose ages are:

- A. All 18 years old
- B. In a range of 5 to 30 years
- C. In a range of 15 to 25 years
- D. None of the above

Problem 18: If I am searching for comparable sales for regression analysis I would expect to find the number of comps to be _____ I would for a comparative approach.

- A. about the same as
- B. less than
- C. a little more than
- D. several times more than

Problem 19: (Y/N) Would it be repetitive to include both methods (comparative and regression) for the sales approach in an appraisal?

Problem 20: What would determine when you should or should not use both methods?

- A. It depends on the fee
- B. If applicable data exists and the value opinion is critical to the intended user.
- C. If you have a regression program
- D. All of the above

Problem 21: What type of results would you expect the different methods to yield?

- A. Exactly the same value
- B. Very similar values
- C. Very different values
- D. None of the above

Problem 22: Which method will yield the more reliable value opinion?

- A. Always the regression
- B. Always the comparison method
- C. It depends on a lot of things, but the data composition is critical to both approaches.
- D. (A) and (C)

Problem 23: Determining which overall market the comps should be selected from for regression analysis depends on:

- A. What data sources you have access to.
- B. If the client wants the value high or low.
- C. Which sub-market the subject property is in.
- D. Which overall market the subject is in.

Problem 24: (T/F) When selecting comps for regression analysis no comps that are a part of subject property's sub-market should be used.

Problem 25: (T/F) When selecting comps for regression analysis it is appropriate to use comps that are not a part of the subject's market as long as these properties conform to the market model of the subject's over-all market.

Problem 26: (T/F) By definition the subject property's submarket will conform to the subject property's overall market model.

Problem 27: (T/F) No matter how similar two collections of properties are, they can by definition never be a part of the same market unless specific sets of potential purchasers shop among both collections.

Problem 28: The Principle of Cascading Sub-markets explains why:

- A. Price point ranges exist.
- B. Different property's sub-markets tend to conform to one market model.
- C. The difference between a neighborhood and an overall market
- D. All of the above

Problems 29 & 30 are based on the Illustration of the Principle of Cascading Sub-markets.

Problem 29: Of the Purchaser's price points presented, how many individuals would shop for Property (C)?

- A. 2
- B. 3
- C. 4
- D. 5

Problem 30: How many subject property sub-markets are presented?

- A. 2
- B. 3
- C. 4
- D. 5

Problem 31: In a market and sub-market it is all about:

- A. Who is shopping
- B. What is being shopped for
- C. Where the boundaries are for the houses being shopped
- D. All of the above are important, but a market is mostly about "who" is shopping.

Problem 32: The term “collection” is used to describe the properties in a market rather than “pool” because:

- A. Many properties do not even have swimming pools.
- B. Collection does not imply that all properties that are a part of the same market must be located in the same area.
- C. A pool implies that properties that are a part of a market will tend to be in the same area.
- D. Both (B) and (C).