AGE AND LIFE RELATIONSHIPS

- Actual age or chronological age is the number of years that have elapsed since completion of construction whereas effective Age is based on the property’s present condition and general overall maintenance. Effective age can be lesser than or greater than its actual age at the date of the appraisal. It is the responsibility of the appraiser, based on the inspection of the building, to estimate the effective age of the subject property.

- Total Economic Life and Useful Life is the length of time that the improvements contribute to the value of the property and ends when the use for which it was originally intended, is no longer its highest and best use. At this point, the options to the owner are to renovate or convert to a new use, rehabilitation, remodelling or demolition and redevelopment. Economic life is normally shorter than the physical life.

- Remaining Economic Life (REL) AND Remaining Useful Life is the difference between Economic Life and Effective Age. The REL is the remaining expected economically productive life span of the structure. It changes due to market conditions and the building’s overall maintenance.

- The physical life of a property can be well over 60 years depending upon the type of construction and its overall maintenance. In some parts of Canada, many buildings are hundreds of years old.

- Short-lived items are usually building components or equipment such as furnaces, hot water tanks, carpets, roofing, kitchen cupboards, electrical fixtures, and windows and doors; i.e., those items whose life expectancy is less than the original structure. For instance, a hot water tank will usually last for 5-10 years. During the life time of a home it will probably be replaced 5 or 6 times. Therefore, the tank is depreciated over a 10 year period. The same is true for other building components as each will have their own unique lifespan.

- Gross Income Multiplier is calculated by dividing the selling price of a property by its estimated or actual monthly rent. So if a property sells for $200,000 and it rents for $2,000 per month, the multiplier is 100 based on a monthly rent. If the annual rent is used instead, the multiplier is $200,000 divided by $24,000 or 8.3.

DEPRECIATION METHODS

MARKET EXTRACTION METHOD

- Depreciation can be estimated using the direct comparison approach if adequate comparables can be located and analysed. The depreciation rate found from these comparables can then be compared to the rate found for the subject using the breakdown method to see if the final figure is “in the ballpark”. If it isn’t, then the appraiser must re-check his or her calculations for possible errors or incorrect assumptions.

- Refer to the textbook, pages 9.10-11, tables 19.1 and 19.2 for examples of this method which can be applied to any type of property from single family homes to industrial/commercial properties. Students should also know the limitations of this approach.

ECONOMIC AGE-LIFE METHOD

- The economic age-life method is a quick and easy method to apply and may be used in form reports to give an estimate of the building’s depreciated value. It is based on the application of the ratio, the building’s effective age divided by its economic life multiplied by the property’s total cost. However,
this method does not consider individual short-term items like the furnace, hot water tank, etc. The appraiser can account for newer short lived items by adjusting the effective age, thereby reducing the amount of the depreciation charged against the property. See examples on pages 19.12 and 19.13.

- **Variations of the Economic Age-Life Method**
  In this method certain items of depreciation can be easily and accurately estimated. This depreciation is then deducted from the total cost before applying the age-life ratio. See page 19.14 for an example.

**BREAKDOWN METHOD**

This is the most comprehensive and detailed method to measure depreciation because it segregates the total depreciation into individual components parts such as Physical Deterioration, Functional Obsolescence and External Obsolescence. The method attempts to depreciate each individual item based on the assumption that each item has their individual effective age and economic life.

See page 19.16, figure 19.3, Components of Depreciation, for a visual interpretation of this concept. In understanding this concept, the appraiser is better able to estimate the Effective Age of a building. Remember the Effective Age is a judgement call by the appraiser based on observation and inspection of the property.

**Physical Deterioration**

All physical building deterioration falls under one of three categories:
- Deferred maintenance - curable and applies to items in need of immediate repair on the effective date of appraisal. Test to cure is based on return of value equal or greater than cost to “cure” or if the increment return is not equal or greater than cost, the expense will allow another item to maintain value.
- Short-lived physical depreciation - not curable physically or economically feasible and requires replacement in the short term.
- Long-lived physical depreciation – not curable and include those items that were not considered under the previous two categories. Assumption is they all have the same life and age expectancy and are all treated similarly.
- Refer to page 19.22, figure 19.4: Age-life Procedure for estimating all items of Physical Deterioration and explanation and worked example of method on pages 19.23-25.

**Functional Obsolescence (F.O.)**
- Caused by flaw in the structure, materials or design of improvement when compared with the highest and best use and most functional design requirements as at the effective date of appraisal.
- Caused by functional defects in the structure, curable or incurable, deficient or superadequate.
- Five types of functional obsolescence (F.O.):
  - Curable F.O. caused by a deficiency requiring an addition
  - Curable F.O. caused by a deficiency requiring a substitution
  - Curable F.O. caused by a superadequacy that economically feasible to cure
  - Incurable F.O. caused by a deficiency
  - Incurable F.O. caused by a superadequacy
- Refer to page 19.26, table 19.4: Types of F.O. with examples of each on pages 19.27-33.
**External Obsolescence**

- Loss in value caused by factors outside a property and may be temporary or permanent.
- May be localised or market wide affecting a single property or class of properties.
- Frequently affects both land and buildings and important to isolate and allocate the effects to either the land or the building or both.
- Three primary methods of measuring external obsolescence are:
  - Allocation of market - extracted depreciation
  - Analysis of market data
  - Capitalization of an income loss
- Refer to pages 19.34-36 on examples of each.