

Syllabus Class 1A
Connecticut Assessment Administration and Law
(Approved CCMA Committee February, 1997)

I. The Role of the Assessor in Government (HB Chapter 1)

- A. The assessment and collection of property taxes are an exclusive function of the town and city governments in CT.
- B. The budget process
 - 1. grand list
 - 2. grand levy
 - 3. tax rates
- C. Classes of property
 - 1. real
 - 2. personal
- D. Relationship of Assessors with State of CT
 - 1. must follow CT General Statutes
 - 2. Office of Policy and Management
 - a. prescribes forms
 - b. manuals
 - c. reporting
 - d. certification program (CCMA)
 - i. training and examination of assessment personnel

II. Assessors Administration Responsibilities

- A. Responsibility to insure that all assessments are properly and uniformly made
 - 1. revaluation overview
- B. Grand List is a true and accurate report of all taxable and non-taxable property
- C. All work completed on a timely basis
- D. Continuous maintenance and updating of records

III. Assessment Tools

- A. Assessment maps
- B. Field cards
- C. Street cards
- D. Owner cards
- E. Tax lists
 - 1. personal property
 - 2. motor vehicle lists from DMV
- F. Pricing manuals
- G. CAMA systems

IV. The Assessment Process

- A. Discover
- B. List
- C. Value

V. Assessment Administration

- A. The assessment year
 - 1. uniform annual assessment date (ss 12-62a)
 - 2. assessment calendar (HB Chapter 12)
 - a. monthly breakdown of mandated deadlines and reports
 - b. extensions for completion of duties
- B. Abstract coding (HB Chapter 11)
 - 1. property coding - numeric
 - 2. exemption coding - alphabetic
- C. Public record retention schedule (HB Chapter 12)
- D. Certificates of error/correction (ss 12-60) Chapter 1 (1-15)

VI. Land Titles and Deed Interpretation (PAV Chapter 2)(HB Chapter 2)

- A. Structure of deeds
- B. Types of deeds
 - 1. voluntary
 - a. warrantee
 - i. joint tenancy
 - ii. tenancy in common
 - b. quit claim
 - c. probate deeds
 - i. testate estate
 - ii. intestate estate
 - AA. executor's deed
 - BB. administrator's deed
 - CC. trustee's deed
 - DD. committee deed
 - iii. certificates of devise/descent
 - d. other
 - 2. involuntary
 - a. certificate of foreclosure
 - b. certificate of redemption
 - c. trustee in bankruptcy deed
 - d. transfer of title by eminent domain (condemnation)
 - 3. miscellaneous
- C. Transfer procedures

- D. Partial transfers (splits)
 - 1. detection of partial transfers
 - 2. separation of land
 - a. portion conveyed
 - b. plotting and mapping

VII. Common Interest Ownership (HB Chapter 3 pg 38)

- A. Definition
- B. Statutes pertaining to CIO's

VIII. Property Exemptions (HB Chapters 3 & 8)

- A. Personal (ss 12-81)
 - 1. veterans
 - a. regular
 - b. additional (M-59A)
 - c. reval adjustment
 - 2. disabled (M-42B)
 - 3. blind
 - 4. farm machinery & equipment
 - 5. motor vehicle of a service-person
 - 6. federal soldiers - sailors
 - 7. local options
- B. Public purpose
 - 1. federal, state, municipal property (M-37)
 - 2. scientific, educational, literary, historic, charitable
 - a. quadrennial reports (M-3)
 - 3. religious
 - 4. colleges, hospitals (M-37 C&H)
 - 5. other
- C. Proration

IX. Tax Relief Programs - State Question & Answer Booklets

- A. Elderly freeze (M-35P)
 - 1. requirements
 - 2. forms
- B. Elderly and disabled home owners program (M-35P)
 - 1. requirements
 - 2. forms
- C. Elderly renters program
 - 1. requirements
 - 2. forms

X. Selected Administrative Procedures (HB Chapter 1)

- A. New construction
 - 1. certificate of occupancy
 - 2. prorations
- B. Damaged buildings
- C. Sales-ratio computations

XI. Board of Assessment Appeal - Handbook for CT Board of Assessment Appeal

- A. Relationship with assessor
- B. Duties
- C. Freedom of Information (F.O.I.) regulations

XII. Review of State Statutes (HB Chapter 3)

Course 1A Objectives

At the conclusion of this class, the student should have the ability to:

1. Explain the budget process
2. Differentiate between classes of property
3. Explain the relationship between the assessor and the State (OPM)
4. Explain the division of municipal government
5. Calculate a mill rate
6. Define "ad valorem" taxes
7. Define the assessment year and the dates and deadlines involved
8. Define the classes of deeds
9. Differentiate between "joint tenancy" and "tenants in common"
10. Show a workable knowledge of types of deeds and transfers
11. Calculate acreage
12. Describe duties common to assessors
13. Calculate assessment levels, tax ratios, tax rates, and the amount of taxes
14. Plot land descriptions
15. Chart a land "split"
16. Prorate a mid-year assessment
17. Apply exemptions according to CT State Statutes
18. Calculate additional veterans exemptions
19. Complete a homeowners program application
20. Calculate the homeowners benefit
21. Complete a renters program application
22. Calculate the renter benefit
23. Differentiate among the classes of ownership covered by the Common Interest Ownership Act
24. Use and apply the laws governing assessment in the State of CT
25. Know the rules concerning the Freedom of Information Act
26. Explain the steps involved in the appeals process of the Board of Assessment Appeals
27. Differentiate between an "error of judgement" and a "clerical error" and explain how each is to be handled.

Syllabus Class 1B
Connecticut Assessment Administration and Law
Continued
(Approved CCMA Committee February, 1997)

I. Review (PAV Chapter 1)

- A. Uniform assessment date and rate
- B. Definitions
 - 1. grand list
 - 2. grand levy
 - 3. mill rate
- C. Calculations
 - 1. mill rate
 - 2. tax bill
 - 3. effective tax rate

II. Concept of Value (WB pg 3-6) (PAV Chapter 2)

- A. Value in use
- B. Value in exchange
- C. Market value
- D. Miscellaneous terms

III. Rule of Valuation (HB Chapter 6)

- A. Everything at market value except 490 (ss 12-63)
- B. Assessed valuation (ss 12-62a)

IV. Public Act 490 - Farm, Forest, Open Space (HB Chapter 7 pg 12-19) (WB p 7-16)

- A. General information
 - 1. purpose
 - 2. statutes (ss 12-107a thru ss 12-107e)
 - 3. where available
 - a. farm, forest all towns
 - b. open space by local option
 - i. plan of development
 - ii. ordinance
 - 4. application
 - 5. penalties
 - a. conveyance tax
 - b. assessor to file Certificate of Declassification (WB 7)
 - c. exempted transfers (ss 12-504c)
 - 6. annual filing with Town Clerk
 - 7. valuation of use property
 - a. recommended by OPM

- 8. 10 mill forest land (ss 12-96 thru ss 12-100)
 - a. application
 - b. requirements
 - c. valuation and taxation
 - d. removal
- B. Farm (ss 12-107c)
 - 1. requirements
 - 2. application
 - 3. assessment
 - 4. conveyance tax
- C. Forest (ss 12-107d)
 - 1. requirements
 - 2. application
 - a. state
 - b. town
 - 3. assessment and tax
 - 4. conveyance tax
- D. Open space
 - 1. requirements
 - 2. application
 - 3. assessment and tax
 - 4. conveyance tax

V. Revaluation (WB 16 - 20) (HB Chapter 5) (PAV Chapter 6 pg 2)

- A. Purpose
 - 1. statute
 - 2. principle of equity (HB Chapter 6 pg 2)
- B. OPM's role (ss 12-26)
 - 1. assist assessors
 - 2. certify reval companies
 - 3. regulate reval companies
 - 4. municipal cycle
- C. Preparation
 - 1. records
 - 2. bid specifications
 - 3. companies
 - 4. bid process
 - 5. alternatives to hiring a company
 - 6. contract
 - 7. I and E statement
- D. Public
 - 1. public relations
 - 2. reval notices
 - 3. hearings
- E. Other revaluation concerns

- F. CAMA revaluation
 - 1. explanation
 - 2. advantages
 - 3. making CAMA work for you
 - a. assessor responsibilities

VI. Sales Ratio Studies (PAV Chapter 13) (HB Chapter 4)

- A. Purpose
- B. Calculation
- C. Design
- D. Stratification of data
- E. Analysis
 - 1. array
 - 2. frequency distribution
 - 3. histogram
 - 4. scatter diagram

VII. Ratio Statistics (PAV Chapter 13) (HB Chapter 4)

- A. Equalized net grand list
- B. Measuring level of assessment (central tendency)
 - 1. mean
 - a. calculation
 - 2. median
 - a. calculation
 - 3. aggregate (or weighted) mean
 - a. calculation
 - 4. regressivity ratio
 - a. calculation
 - i. progressivity
 - ii. regressivity
- C. Measure of assessment uniformity
 - 1. uniformity between groups of properties
 - 2. uniformity within groups of properties
 - a. average absolute deviation
 - i. calculation
 - b. coefficient of dispersion
 - i. calculation
 - ii. standards

VIII. Proration of Assessments

- A. Prorated assessments for construction, that is unfinished as of Oct 1
- B. Assessment of new construction
 - 1. schedule (ss 12-53a)
 - a. building inspection to assessor at CO 10 days
 - b. assessed within 90 days of CO notification

- i. exception: time between Oct 1 and Feb 1: 90 days after BAA completes its duties
 - c. prorate assessment and notify tax collector
 - d. notify taxpayer within 5 days after adding to the grand list
 - 2. Calculations
 - C. Damaged buildings (ss 12-64)
 - 1. provisions of the law
 - 2. calculations
 - D. Transfer of tax exempt property (ss 12-80a)
 - 1. provisions of the law
 - 2. calculations
 - E. Transfer of elderly benefit property (ss 12-129b, ss 12-170aa(i))
 - 1. provisions of the law
 - 2. calculations

IX. Motor Vehicles (HB Chapter 9)

- A. Regular motor vehicle listing
 - 1. taxability (ss 12-71)
 - a. everything at 70% except code 25
 - 2. discovery (ss 14-163)
 - a. received from DMV
 - i. Oct 1 listing
 - ii. supplemental list
 - iii. transporter plates
 - iv. temporary registration
 - v. adds/deletes
 - vi. dealer plates
 - vii. two address list
 - 3. what the VIN can tell you
- B. Supplemental motor vehicle listing
 - 1. time covered
 - 2. codes
 - a. new vehicle
 - b. replacement vehicle
 - i. definition (ss 12-71b(b))
 - 3. temporary registration (ss 12-71b(c))
 - 4. when supplementals are taxed (ss 12-71b(d))
 - 5. out of state vehicles (ss 12-71b(g))
- C. Valuation
 - 1. schedule recommended by OPM (ss 12-71d)
 - 2. pricing manuals

- D. Prorates and credits
 - 1. credits (ss 12-71c)
 - a. when allowed
 - b. time limitations (12-71c(b))
 - 2. for supplemental lists
 - a. prorated for months owned
 - i. calculations
 - b. credit for replaced vehicle
 - i. calculation

X. Personal Property (HB Chapter 10) (PAV Chapter 14)

- A. Definition
 - 1. tangible
 - a. all taxable except what is specifically exempted (ss 12-71)
 - b. all property owned by anyone engaged in a business enterprise except as specifically exempted (ss 12-41)
 - 2. intangible
 - 3. motor vehicles are a specific type of taxable personal property
- B. Discovery
 - 1. field inspections
 - 2. business directories, telephone directories
 - 3. newspaper articles, advertisements
 - 4. Commercial Record
 - 5. trade names filed with Town Clerk
 - 6. building permits
- C. Declarations (Form M-15)
 - 1. required to be filed with assessor (ss 12-42, 12-43, 12-59) due on or before November 1
 - 2. form approved by OPM (12-41(g))
 - 3. must include (ss 12-41(e))
 - 4. are public record except for confidential cost statement (FOI)
 - 5. Assessor must publish annual return (ss 12-40)
 - 6. Assessor must mail to non-residents (ss 12-43)
- D. The "Three-Month Rule"
 - 1. used to determine situs of personal property (ss 12-43)
 - 2. property owned by corporations (ss 12-59)
- E. Penalties
 - 1. In event a person fails to file his declaration
 - a. Assessor shall estimate (ss 12-42)
 - b. add 25% assessment penalty (ss 12-42)
 - c. Board of Assessment Appeal action restricted (ss 12-114)
 - d. 25% added after audit (ss 12-53)

- F. Methods of Valuation
 - 1. cost minus depreciation
 - 2. market
- G. Leased property (ss 12-57a)
- H. Leasehold improvements
 - 1. definition
- I. Certificate of Correction
 - 1. clerical error or omission within 3 years following tax due date (ss 12-60) starting 10-1-90
 - a. prior to 1990 Grand List no limit
- J. Increase/decrease notices
 - 1. (ss 12-55)
 - 2. (ss 12-53(c))
- K. Auditing
- L. Exemption
 - 1. state mandated
 - a. aircraft (ss 12-245)
 - b. water/air pollution control equipment (ss 12-81(51)) (ss 12-81(52))
 - c. mechanics tools (\$500)
 - d. farm machinery (\$100,000) (ss 12-91)
 - i. form M-28
 - e. new manufacturing machinery & equipment (ss 12-81(72))
 - i. form M-65
 - f. enterprise zones, etc. (ss 12-81(60), 12-81(70))

Definitions of abbreviations:

ss - state statute
WB - Workbook
HB - Handbook
PAV - Text (green book)

Course 1B Objectives

At the conclusion of this class, the student should have the ability to:

1. Demonstrate an understanding of the concepts of value
2. Calculate a mill rate
3. Calculate a tax bill
4. Define and calculate an effective tax rate
5. Define and explain Connecticut's "rule of valuation"
6. Demonstrate an understanding of the purpose and intent of Public Act 490
7. Discuss what criteria may be used for classifying land as farmland
8. Explain the penalties associated with use land status
9. Explain the application procedure for farmland status
10. Explain the application procedure for open space status
11. Differentiate between the treatment of forest land and 10 mill forest land
12. Demonstrate an understanding of the principles of revaluation
13. Demonstrate an understanding of the role of OPM regarding revaluation
14. Discuss the variety of approaches used in the preparation for revaluation
15. Discuss the role of computers in revaluation
16. Define and calculate an equalized net grand list
17. Explain how the ENGL is used by the State
18. Calculate a sales assessment ratio
19. Calculate mean, aggregate mean, and median of a set of figures
20. Calculate and explain progressivity and regressivity
21. Calculate average absolute deviation
22. Calculate a coefficient of dispersion
23. Explain the provisions of the law regarding the proration of new construction
24. Prorate an assessment for new construction
25. Explain time limitations for proration of new construction
26. Explain the provisions of the law regarding the proration of a damaged building
27. Prorate a reduction for damaged buildings
28. Explain the provisions of the law regarding the proration of tax exempt property
29. Calculate the proration of a transfer of tax exempt property
30. Explain the provisions of the law regarding the proration of elderly benefits
31. Calculate the proration of an elderly benefit property
32. Explain the time factors regarding regular and supplemental motor vehicle lists
33. Demonstrate an understanding of code 25 motor vehicles
34. Demonstrate the ability to use a pricing manual
35. Calculate motor vehicle prorates and credits
36. Define personal property
37. List several sources of discovery of personal property
38. Demonstrate an understanding of the regulations regarding personal property declarations
39. Explain the "Three Month Rule"

40. Demonstrate an understanding of the penalties involved with personal property
41. Demonstrate methods of valuation
42. Define how and when a "certificate of correction" may be used
43. Define when and how increase/decrease notices are used
44. Demonstrate an understanding of the currently acceptable standards and methods of a personal property audit
45. Demonstrate an understanding and awareness of State mandated personal property exemptions

A.A.T. Module I
Introduction to the Valuation Process

I. Introduction

- A. Three Types of Taxes
 - 1. Income
 - 2. Sales
 - 3. Property
 - a. Ad valorem taxes
- B. The Assessor
 - 1. Definition
 - 2. Function
 - a. Discover
 - b. List
 - c. Value
 - i. Cost approach
 - ii. Market approach
 - iii. Income approach
 - 3. Tax Calculation
 - a. Mill rate x Assessment

II. Legal Concepts and Theory of Value

- A. Type
 - 1. Real
 - a. Real Estate
 - b. Real Property
 - 2. Personal
 - a. Fixtures
 - b. Chattel
- B. Rights in real property
 - 1. Bundle of rights
 - 2. Fee simple title
 - 3. Excluded rights

III. Value Concepts

- A. Assessors rule of valuation
 - 1. Value in use
 - 2. Value in exchange
- B. Nature of value
 - 1. Scarcity
 - 2. Purchasing Power
 - 3. Utility
 - 4. Desirability

C. Comparison of terms

1. Cost
2. Price
3. Value

IV. Economic Principles of Value

A. Principles

1. Anticipation
2. Supply and demand
3. Change
4. Progression and regression
5. Conformity
6. Balance
7. Substitution
8. Surplus productivity
9. Increasing and decreasing returns
10. Contribution
11. Competition
12. Consistent use

V. The Appraisal Process

A. Definition of appraisal

B. Appraisal Process

1. Define the problem
2. Preliminary survey and planing
3. Data collection and analysis
 - a. General data
 - i. Neighborhood and boundaries
 - aa. Political
 - bb. Natural
 - cc. Manmade
 - ii. Neighborhood factors
 - aa. P Physical
 - bb. E Economies
 - cc. G Governmental
 - dd. S Social
4. Select approach to value
5. Correlate
6. Final estimate of value
7. Put into report form
 - a. Form
 - b. Narrative

VI. Land Valuation

A. Steps

1. Identify Property
2. Units of Comparison
 - a. Square foot
 - b. Cubic foot
 - c. Adjustment
 - i. Depth factors
 - ii. 4-3-2-1 rule
 - iii. 65-35 rule
 - c. Acreage
 - d. Site
 - e. Units buildable
 - f. Variations
3. Valuation methods
 - a. Direct method comparison
 - b. Alternatives - when lacking comparables for direct method
 - i. Allocation
 - ii. Abstraction
 - iii. Land development/cost of development

VII. Building Styles and Features

A. Common Styles (story level)

1. Ranch
2. Cape
3. Colonial
4. Raised Ranch (bi-level)
5. Split Level
6. Contemporary

B. Roof Styles

1. Gable
2. Hip
3. Mansard
4. Gambrel
5. Flat

C. Other

VIII. Cost Approach

A. Definitions $MV=LV+(RCN-D)$

1. Cost approach to valuation
Present cost to construct all improvements less all accrued depreciation plus land value.

2. Replacement cost
 3. Reproduction cost
 4. Depreciation
 5. Depletion
- B. Methods of estimating costs
1. Quantity survey
 2. Unit in place
 3. Index (aka Factored Historical Cost)
 4. Comparative unit
- C. Depreciation
1. Definition
 - a. Accrued depreciation
 - b. Effective age
 - c. Remaining economic life
 - d. Total economic life
 2. Categories of depreciation
 - a. Physical deterioration
 - i. Curable
 - ii. Incurable
 - b. Functional obsolescence
 - i. Curable
 - ii. Incurable
 - c. Economic obsolescence
 3. Measurement of depreciation
 - a. Overall age - life method
 - b. Observed condition

Objectives A.A.T.- Module 1

At the conclusion of this course, the student should demonstrate the ability to:

1. Describe major types of taxes.
2. Describe the assessors duties.
3. List three approaches to value.
4. Calculate tax.
5. Define effective tax rate.
6. Distinguish among personal property, real property, and real estate.
7. Understand the bundle of rights (SLUGER).
8. Recognize the twelve principles of value.
9. Identify forces that affect value.
10. Understand boundaries and neighborhoods.
11. Outline steps in appraisal process.
12. Define the cost approach.
13. Give examples of units of comparison.
14. Identify the most common generally accepted methods of land valuation.
15. Identify housing styles and types.
16. Describe property factors that can effect the assessment.
17. Differentiate between replacement cost and reproductive cost.
18. Explain the generally accepted methods of valuing replacement cost new.
19. Define depreciation and accrued depreciation.
20. Identify and give examples of each of the three causes of depreciation.
21. Distinguish between curable and incurable depreciation.

A.A.T. Module II

I. Mass Appraisal v. Fee Appraisal

A. Mass appraisal definition: The process of valuing the worth of a universe of properties, as of a given date, in uniform order utilizing a common reference for data (sales), and allowing statistical testing.

1. This is what assessors do. *Keep Equity uniform*

B. Fee appraisal: The appraisal of properties one at a time usually for *3000* a fee.

II. Math and Statistics *Away to variety*

A. Equalized Net Grand Lists (s.s. 10-261a)

1. The total of the Grand List after adjustments to 100% from the sales-assessment ratio of various classes of property

In Connecticut usually:

1. Real Estate /?
2. Personal Property/ 0.7
3. Motor Vehicle/ 0.7

2. Used to formulate many State grants

B. Sales-ratio studies

1. sales-ratio = assessment / sales price

a. mean (average) - sum of the samples/number of samples

b. median - the middle observation when sample is arrayed

c. *whole # above 0* absolute deviation - the difference between the actual sample and the median or mean of the samples without regard to plus or minus signs

d. average absolute deviation - the sum of the absolute deviations in a sample divided by the number of samples

e. C.O.D. (coefficient of dispersion)
i. a measurement of relative dispersion; the lower the COD the greater the uniformity

ii. average absolute deviation / median (mean) * 100

C. Calculating Area

1. Rectangle- length x width

Full circle 2. Circle- pi x radius squared $\div 2$

foil Arch 3. Other formula- see handout sheet

III. Utilizing Cost Methods (Marshall-Swift Handouts)

- A. Measuring and listing - *most important*
1. determination of property use - *be consistent*
 2. exterior building data
 - a. naming of property characteristics/material ex: siding, roof styles, overall height, roof surfacing
 3. interior building data
 - a. description of interior components ex: elevator, sprinkler system, flooring, office areas, story height, interior finish
 - b. determination of overall quality of construction
 4. site improvements, ex: paving, fencing, curbing, signs, lighting - *Comm. property*
- CAMA System based on* → B. Calculator approach to value - *simplest - most commonly used.*
1. use of tables - *may modify*
 2. interpolation of table -
- C. Segregated cost approach to value - *unit in place - value of energy*
1. description of unit in place concepts
 2. determination of volume capacities
- D. Utilization of combined calculation - segregated approach
1. application
 2. examples
- E. Use of cost indexes (Trends) - *liberation cost of materials to figure the value in the 50 taxes. what it would cost to a today - Inc.*
1. uses: limited

land value come from the market

IV. Sales Comparison/Market Data Approach to Valuation

- A. Analysis of subject property
1. description
 2. highest and best use
 3. purpose
- B. Collection and analysis of sales data
1. source of data
 2. verification of data
 3. usable v. non-usable sales (hand out)
- C. Elements of comparison
1. comparison sources
 2. factors and trends
 3. units of comparison
- D. Adjustment methods
- E. Application of adjustment
1. lump sum
 2. percentages

Objectives A.A.T.- Module II

At the conclusion of this course, the student should demonstrate the ability to:

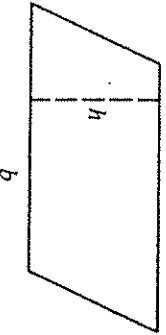
1. Differentiate between mass appraisal and fee appraisal.
2. Calculate area for various shapes.
3. Define and demonstrate an understanding of ratio studies.
4. Calculate a sales-assessment ratio.
5. Demonstrate an understanding of the meaning of a COD measurement.
6. Define and calculate an equalized net grand list.
7. Classify buildings by type.
8. Discriminate between sales that represent a fair market value and those that do not.
9. Demonstrate an understanding of the market approach to valuation.
10. Demonstrate a knowledge of items of market comparison.
11. Identify the principle improvement characteristics that influence cost.
12. Demonstrate an understanding of the use of cost manuals.

Marshall Valuation Service

COMPUTING IRREGULAR AREAS

PARALLELOGRAM

A quadrilateral having its opposite sides parallel.

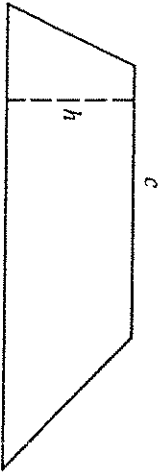


AREA = b x h

The altitude (h) of a parallelogram or trapezoid is the perpendicular distance between the parallel sides.

TRAPEZOID

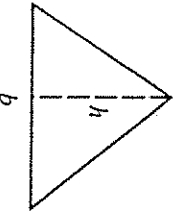
A quadrilateral having two and only two sides parallel.



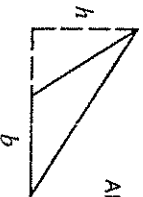
AREA = h x 1/2 (b+c)

TRIANGLE

A three-sided polygon.



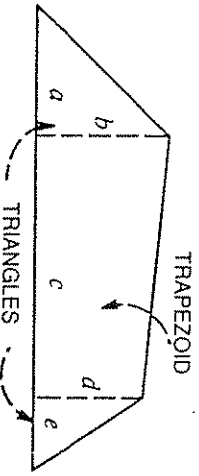
AREA = 1/2 b x h



The altitude (h) of a triangle is the perpendicular distance from any vertex to the opposite side or its extension.

IRREGULAR POLYGONS

The area of irregular polygons can be determined by dividing the area into the above shapes and adding the areas of the parts.



AREA = 1/2 a x b + c x 1/2 (b+d) + 1/2 e x d

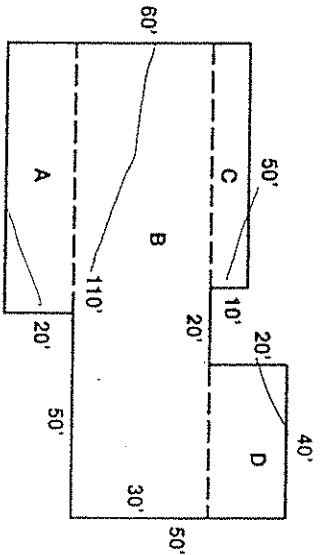


FIG. 1

AREA COMPUTATIONS

FIG. 1

A	60 x 20 = 1,200
B	110 x 30 = 3,300
C	50 x 10 = 500
D	40 x 20 = 800
Total Area	5,800 sq. ft.

Handwritten calculations:
 60 x 20 = 1200
 110 x 30 = 3300
 50 x 10 = 500
 40 x 20 = 800
 5800 sq. ft.

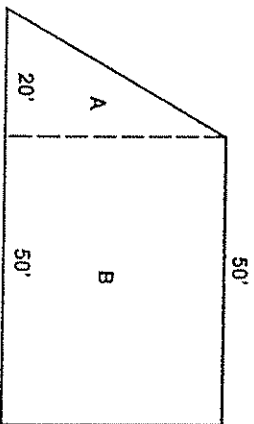


FIG. 2

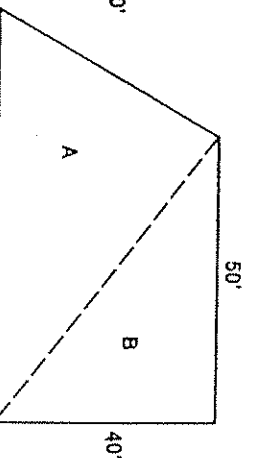


FIG. 3

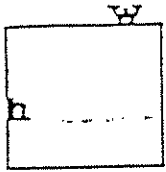
AREA COMPUTATIONS

FIG. 2

FIG. 3

A = 1/2 (20 x 40) =	400 sq. ft.
B = 50 x 40 =	2,000 sq. ft.
Total Area =	2,400 sq. ft.

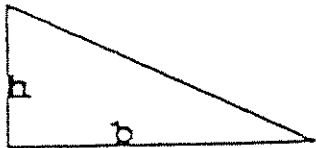
A = 1/2 (70 x 40) =	1,400 sq. ft.
B = 1/2 (50 x 40) =	1,000 sq. ft.
Total Area =	2,400 sq. ft.



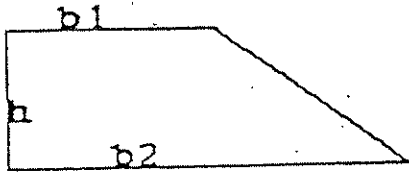
$$\text{AREA} = h \times w$$



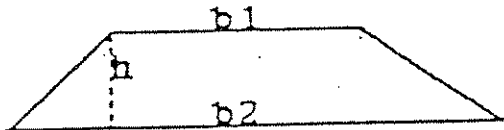
$$\text{AREA} = h \times w$$



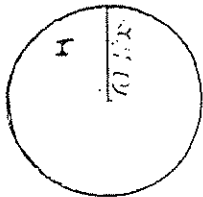
$$\text{AREA} = 1/2 h \times b$$



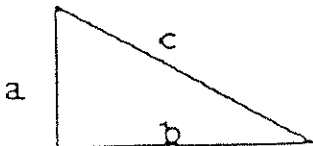
$$\text{AREA} = 1/2 h \times (b1 + b2)$$



$$\text{AREA} = 1/2 h \times (b1 + b2)$$



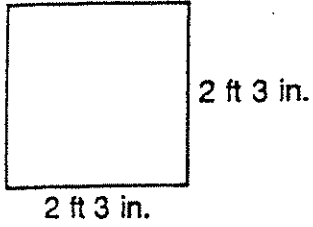
$$\text{AREA} = \pi r^2$$



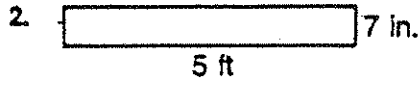
$$a^2 + b^2 = c^2$$

$$c = \sqrt{a^2 + b^2}$$

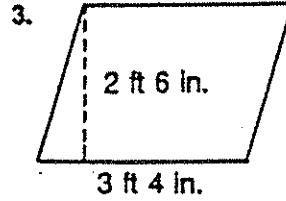
Find each area. Use 3.14 as an approximation for π .
 Round your answers to the nearest tenth.



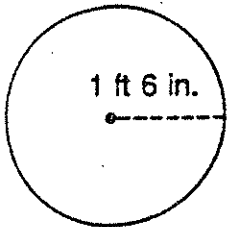
A = _____



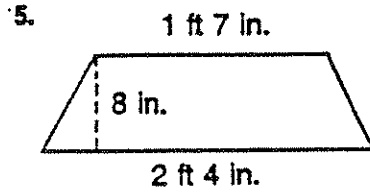
A = _____



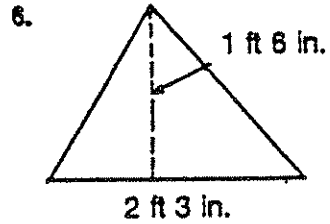
A = _____



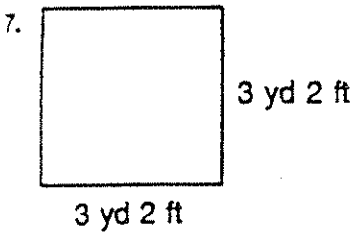
A = _____



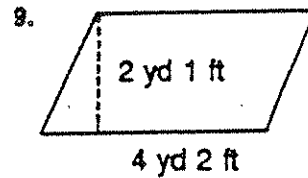
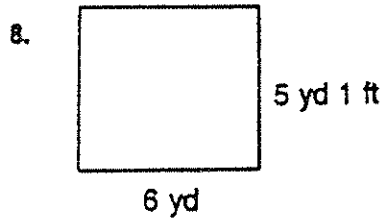
A = _____



A = _____

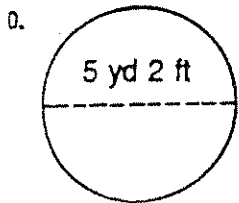


A = _____

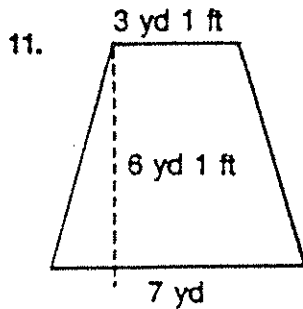


A = _____

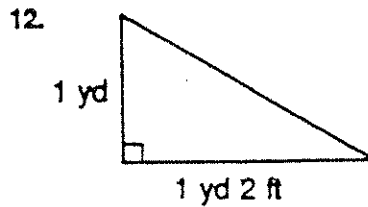
A = _____



A = _____



A = _____



A = _____

A = _____

A = _____

Objectives for Introduction to the Valuation Process

At the conclusion of this class, the student should have the ability to:

1. Describe the assessors duties
2. Calculate tax rates (mill rate, effective tax rate)
3. Outline the steps in the appraisal process
4. Describe major types of taxes
5. Distinguish between personal property, real property and real estate
6. Define and list the components in the "bundle of rights"
7. Differentiate between value in use and value in exchange
8. Differentiate between cost and price
9. Explain the twelve principles of value
10. Identify the forces that affect value
11. Understand boundaries and neighborhoods
12. Discriminate between uses of units of comparison
13. Use common rules and formulas to value land (4-3-2-1) (65-35) (depth tables)
14. Explain the generally accepted methods of land valuation
15. Estimate land value by these methods
16. Identify housing styles and types
17. Outline the approach to field work
18. Describe property factors that can effect the assessment
19. Explain the differences between replacement cost and reproduction cost
20. Explain the differences between direct and indirect costs
21. Explain the generally accepted methods of valuing replacement cost new
22. Estimate the replacement cost new of improvements using these methods
23. Define depreciation and accrued depreciation
24. Identify and give examples of each of the three causes of depreciation
25. Distinguish between curable and incurable depreciation
26. Estimate accrued depreciation using the overall (age-life) method
27. Explain how depreciation is calculated with the aobserved condition method.

$$I = R \times V$$

Syllabus Class 3
Income Approach to Valuation
(Approved CCMA Committee May, 1997)

I. Basis of Income Approach - Chapter 9 PAV

- A. Present value of future benefits
- B. Definitions of value
 - 1. ad valorem approach
 - 2. investment value
 - 3. value in use
- C. Economic and appraisal principles
 - 1. supply and demand
 - 2. anticipation
 - 3. substitution
 - 4. competition

II. Basic Math Review

- A. Use of...
 - 1. formulas
 - 2. decimals
 - 3. reciprocals
 - 4. fractions
 - 5. calculators
- B. Development of effective tax rate
- C. Development of assessment sales ratios
- D. Use of weighted averages

III. Real Estate Investment and Finance - Chapter 10 PAV pg 187-201

- A. Rationale for investing
 - 1. uses of real estate
 - 2. tax shelter
 - 3. return "on" and return "of" investment
 - 4. alternative investment
 - 5. holding periods
- B. Capitalization
 - 1. division of a present income by an appropriate rate of return to estimate the value of an income stream
 - 2. $I - R - V$
- C. Required rate of return (discount rate)
 - 1. components of discount rate
 - a. risk
 - b. liquidity
 - c. management
 - d. safe rate

IV. Income Expense and Lease Analysis - Chapter 10 PAV

- A. Income
 - 1. potential gross rent
 - a. market rent
 - b. contract rent
 - 2. vacancy and collection allowances
 - 3. effective gross income
- B. Development of rental units of comparison
 - 1. unit per unit
 - 2. net leasable area
 - 3. gross leasable area
- C. Expenses
 - 1. operating expenses
 - a. fixed expenses
 - b. variable expenses
- D. Net operating income
 - 1. income and expense statement
 - a. proper expenses
 - b. improper expenses
- E. Leasing and financing
 - 1. leases
 - 2. specialized financing and partial interests

V. Capitalization - Chapter 11 PAV pg 229-254

- A. Direct capitalization
 - 1. overall capitalization rate (market comparison)
 - 2. when operating expense data is unavailable
 - a. gross rent multiplier
 - b. gross income multiplier
- B. Capitalization rate
 - 1. overall capitalization rate (band of investment)
 - a. discount rate
 - b. recapture rate
 - c. effective tax rate

VI. Use of Financial Functions - Chapter 12 PAV pg 255-283

- A. Use of yield formula for problem solution
- B. Functions of a dollar
 - 1. use of annual compound interest tables
 - a. future worth of one
 - b. future worth of one per period
 - c. sinking fund factor
 - d. present worth of one (reversion factor)
 - e. present worth of one per period (annuity factor)
 - f. potential payment factor

VII. Income Capitalization / Yield Capitalization - Chapter 12 PAV pg 272-294

- A. Yield capitalization
 - 1. more complex than direct capitalization
 - 2. more variables included in overall capitalization rate
- B. Development of rates
 - 1. discount rate return on investment
 - a. build up method
 - b. band-of-investment method
 - c. market comparison method
 - 2. sinking-fund method
 - 3. annuity method (Inwood method)
 - 4. effective tax rate

VIII. Discount cash flow - Chapter 12 PAV

- A. Discounted cash flow analysis
 - 1. annuity capitalization
 - 2. split rates
- B. Net present value (NPV) - determines feasibility of investments
 - 1. negation
 - 2. positive
- C. Internal rate of return (IRR) - seeks the requested rate of return on a subject property
- D. Uses in real estate appraisal
- E. Development of projection periods
- F. Development of income streams
- G. The recognition of unreliable assumptions

IX. Mortgage - Equity -

- A. Real estate bought for investment is usually purchased with a mortgage; two investments involved
- B. Development of mortgage equity capitalization rate
 - 1. appreciation
 - 2. depreciation

X. Residual Capitalization Techniques - Chapter 12 PAV pg 265-270

- A. Land residual
 - 1. best when improvements are appropriate to highest and best use of property; observed depreciation of any type
 - 2. improvement values can be closely calculated
- B. Building residual
 - 1. assume value of land is known so that income attached to it can be estimated and subtracted from net operating income to obtain residual

C. Property residual

1. deals with the property as a whole
2. best used when income stream can be projected with reasonable certainty

X. Review

- A. Problem solving
- B. Correlation of theory with real life data and issues

Objectives For The Income Approach To Valuation

At the conclusion of this class, the student should have the ability to:

1. Identify various types of mortgages used in financing real estate investments
2. Identify factors influencing the behavior of investors
3. Demonstrate an understanding of economic principles
4. Demonstrate an understanding of the IRV equation
5. Analyze income and expense data
6. Reconstruct an income and expense statement including:
 - a. developing the potential gross income of a property
 - b. developing the vacancy and collection rate of a property
 - c. developing an effective gross income of a property
 - d. developing proper operating expenses of a property
 - e. developing proper reserves for replacement for a property
 - f. developing net income before discount, recapture and taxes for a property
7. Develop and use gross rent multiplier in the valuation of income-producing Property
8. Demonstrate an understanding of the functions of a dollar
9. Demonstrate an understanding of the structure and function of the six compound interest tables
10. Differentiate between direct capitalization and yield capitalization models
11. Develop a discount rate by the band of investment method
12. Develop a discount rate by the market comparison method
13. Develop a recapture rate by the economic life method
14. Develop an effective tax rate
15. Develop an overall rate
16. Appraise an income-producing property using the land residual method
17. Appraise an income-producing property using the building residual method
18. Appraise income-producing property using direct capitalization procedures
19. Demonstrate an understanding of the shapes and behaviors of the income stream.
20. Demonstrate an understanding of discounted cash flow analysis.
21. Demonstrate an understanding of mortgage equity analysis.