

Comprehensive Examination

GUIDEBOOK

Effective February 24, 2017

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Policies and Procedures (applies to all exams)

The Comprehensive Examination Guidebook provides details regarding policies and procedures relating to the Comprehensive Examination requirement for admission to MAI, SRA, AI-GRS and AI-RRS Designated membership. It is a companion document to Regulation No. 1, 2 and 3. Definitions of terms used in this guidebook are provided in Regulation No. 1, 2 and 3. Wherever this guidebook grants permission to a Chair or Vice Chair of a body to appoint a person or persons to perform a task, the same appointive permission is extended to any person who is designated by the Chair or Vice Chair to make such appointments.

Testing Windows, Times and Application

This guidebook will give you a detailed overview of what each Comprehensive Examination covers on each designation path and how to best prepare for these examinations. Sample questions, taken from previous examination versions, are provided at the end.

All Comprehensive Examinations are administered during a specified 30-day testing window through computerized testing at Pearson VUE Professional Testing Centers. Examinees are required to schedule and take ***all modules*** of the exam(s) that have not yet been passed, on dates of their choosing within the chosen testing window. Examinees may schedule and take one (1) or two (2) modules per day, and have the flexibility to schedule the modules in any order and in any fashion that they choose, subject to hours and availability at Pearson VUE testing centers. Modules may not be taken outside the dates specified for each 30-day testing window.

The following times are allotted for each module:

General Comprehensive Examination (requirement for MAI membership)

- Module I: General Concepts.....3.5 hours (210 minutes)
- Module II: Cost Approach / HBU.3.5 hours (210 minutes)
- Module III: Income Approach.....4 hours (240 minutes)
- Module IV: Sales Comparison Approach.....4 hours (240 minutes)

General Review Comprehensive Examination (requirement for AI-GRS membership)

- Module I: General Appraisal Concepts..... 3.5 hours (210 minutes)
- Module II: General Review Theory.....3.5 hours (210 minutes)

Residential Review Comprehensive Examination (requirement for AI-RRS membership)

- Module I: Residential Review Theory.....3.5 hours (210 minutes)

The first time a Candidate attempts the Comprehensive Exam, s/he must sit for ***all modules*** for the specified designation path. If a Candidate receives a passing grade on a module, that module is considered complete. If the Candidate receives a failing grade, s/he retake that module until a passing

grade is achieved. The Comprehensive Examination requirement is complete once a Candidate has received a passing grade on all modules required for the specified designation path.

Every time a Candidate sits for the Comprehensive Exam (initial exam and reexam), s/he must sit for **all modules** which still need passing credit. If the Candidate skips any module(s) or otherwise does not sit for **all** required modules during the 30-day testing window, **then all those modules will receive an incomplete for that window.**

Applications should be submitted to the national office no less than **six (6)** weeks prior to the examination window start date to aid examinees in securing appointments at the testing center(s) of their choice. **The general rule of thumb is that Pearson VUE testing centers start to have limited availability about four (4) to six (6) weeks prior to a given date.**

Seats at Pearson VUE testing centers are scheduled on a ***first-come, first-served*** basis; the Appraisal Institute cannot guarantee availability nor schedule exam appointments for Candidates. For this reason, we strongly encourage all examinees to submit their applications as soon as possible but no less than **six (6) weeks prior to the examination window start date.** Once an application is approved a Candidate should schedule his/her exam appointments with Pearson VUE **immediately.**

We can accept applications until the last business day before the testing window begins, however, a Candidate filing an application less than six (6) weeks prior to an examination window may have trouble finding a testing center to accommodate them. **Once the testing window is in session, the Appraisal Institute will not accept applications.**

If an examinee cannot find seating space at a testing center, then s/he will be held to the cancellation/transfer policies outlined in this document.

Eligibility Requirements

To be eligible to sit for the Comprehensive Exam, Candidates for Designation must have:

- a) attended all required courses;
- b) received a passing grade on all required course examinations;
- c) received credit for the college degree requirement; and
- d) complete the Standards & Ethics requirement: the completion of **both** *Business Practices & Ethics* and their respective Standards (i.e. USPAP, IVS).

Any required course examinations must be taken **at least six (6) weeks prior** to the start date of the Candidate's desired 30-day testing window, to allow time for grading and notifying the Candidate of the results. **If you have taken all required exams but are still waiting for results, you cannot register for the Comprehensive Exam until all requirements are complete.**

Before applying for a Comprehensive Exam, please login to your My AI Account and click on the My Candidate Status Report link. If you see any requirements listed there (*except for Experience Credit, Demonstration of Knowledge, Comprehensive Exam, and Final Designation Application*) you may not be eligible to sit for a Comprehensive Exam. If you have questions regarding these requirements, please contact (312) 335-4111 or comp@appraisalinstitute.org.

Registration and Scheduling

Candidates may submit the online Comprehensive Exam application by clicking the [Submit Your Comp Exam Application](#) link on the [Comp Exam webpage](#).

After the application is submitted, the Admissions staff will verify the Candidate's eligibility and process the application. About 24 hours after the application is processed, the Candidate will receive a set of exam authorization emails, containing Pearson VUE scheduling instructions and other important exam-day information (there will be one (1) email per module). The Candidate must then contact Pearson VUE to schedule the exam location, date, and time. Once you receive your authorization email(s), we encourage you to schedule your exam appointment(s) *as soon as possible*.

Pearson VUE testing center information and locations can be found at: <http://www.Pearson VUE.com/ai/>

Examination Cancellation, Transfer, and Re-Scheduling Policy

- **Due to the logistics of the exam delivery format, transfers are NOT permitted and examination fees are non-refundable.**
- **Even if an examinee cancels, does not schedule, or does not complete all required modules during the 30-day testing window, no examination fees shall be refunded.**
- Should an examinee experience an emergency, s/he should contact Admissions at (312) 335-4111 at the very earliest opportunity to notify the staff of the situation.
- If an examinee misses a scheduled exam appointment, s/he can arrange "re-authorization" for that module and schedule it again for one of the remaining days of the exam window. It costs \$125 to re-authorize a module. Re-authorizations are not available on the last day of a testing window. For more information, please contact the Admissions staff.
- **PLEASE NOTE:** The cancellation policy that appears in Pearson VUE confirmation e-mails are their generic policy, and is **superseded** by this policy.

A Candidate may re-schedule any exam appointment(s) within the same testing window, but s/he **must** contact Pearson VUE **at least one (1) business day in advance**. If the Candidate gives adequate notice, there is no fee to re-schedule and the Candidate does not need permission from the Admissions Department.

Identification and Name Corrections

Pearson VUE requires that examinees bring **two (2)** forms of identification. One must be a government-issued ID with a photo. Both forms of ID must be valid (unexpired), and must contain the examinee's printed name and signature. Common forms of ID used at Pearson VUE: driver's license, state ID, passport, and credit cards. For more details on acceptable forms of ID, please contact Pearson VUE's online Customer Service or by phone at **(877) 894-3483**.

IMPORTANT! The name on your exam registration **must exactly match** your name on your forms of ID. If it does not, Pearson will **NOT** let you take your exam! **Please take a careful look at your exam authorization email(s) to make sure that your name appears exactly as it does on your IDs.** If your name needs to be corrected, please contact comp@appraisalinstitute.org as soon as possible.

If an examinee misses any module(s) due to name-matching issues, then s/he may need to pay an additional fee to re-authorize the missed module(s). The Appraisal Institute and Pearson VUE shall not be held responsible for problems and/or additional fees incurred from name correction issues.

Calculators

The following calculator models are recommended: Hewlett-Packard (HP) models **10B, 10Bii, 12C, 17Bii, 17Bii+, 19Bii**, and Texas Instruments (TI) model **BA II PLUS**. All calculator memories must be cleared before and after the exam. Calculator instruction manuals are not permitted in the testing room. An examinee may only use one (1) calculator in the testing room at a time.

Calculator maintenance and function are the examinee's responsibility! Appraisal Institute and Pearson VUE are not liable if an examinee's calculator malfunctions during the exam, and no extra time will be granted. Examinees are encouraged to change batteries before their exam, or bring backup batteries/calculator with them to the testing center. Extra calculator supplies must be stored with other personal belongings during the exam, and may not be accessed unless the original calculator malfunctions.

Equivalencies

General Candidates and General Review Candidates shall receive equivalency credit for passing Module I ("General Concepts" modules) of either the General Comprehensive Exam or the General Review Comprehensive Exam.

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What You May Bring with You to the Examination

- 1) You will **NOT** be allowed to access your personal belongings during the exam. The Pearson VUE testing center will provide you with a personal locker to store these items. All personal belongings, such as cell phones, watches, wallets, bags, purses, etc., must remain in the locker outside the testing room during the examination.
- 2) Only the following equipment is allowed in the exam room: **ONE (1)** noiseless financial calculator.
- 3) Books, scratch paper and other material is **NOT** permitted. In lieu of scratch paper, Pearson VUE will provide you with **TWO (2)** laminated, dry-erasable whiteboard booklets. Each booklet contains six (6) double-sided pages.
- 4) If you need to bring medical equipment and/or take medicine during your exam, please contact the Admissions Staff at comp@appraisalinstitute.org at least six (6) weeks before your exam. All medical arrangements must be cleared in advance with the Admissions Staff and Pearson VUE. For more information about disability accommodations, please refer to the “Americans with Disabilities Act (ADA)” section of this document.

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Misconduct

You may not engage in misconduct relating to the Comprehensive Examination. Misconduct includes, but is not limited to, the following:

- Unauthorized communication with another examinee or party while the examination is in progress;
- Copying or attempting to view another examinee's answers, worksheets, or work product or allowing another examinee to see your answers, worksheets, or work product;
- Improperly possessing or using any unauthorized reference materials, textbooks, notes, equipment or devices while the examination is in progress;
- Taking an examination for another person or arranging for another person to take an examination in your name;
- Disclosing, using, publishing, copying, reproducing or transmitting examination content, in whole or in part, by any means or for any purpose;
- Failing to comply with written or oral instructions related to the examination; and
- Failing to comply with the provisions of the Examination Certification.

To ensure the integrity of the Comprehensive Examination, the Appraisal Institute will investigate any misconduct or suspected misconduct relating to an examination. If an examinee is found to have engaged in misconduct relating to the Comprehensive Examination, the Appraisal Institute will not grade or will assign a failing grade to the examination. If possible conduct is observed while the examination is in progress, your exam may be confiscated.

Possible misconduct may also be referred to the Professional Practice department for review and possible disciplinary action under Regulation No. 6. In addition, the Appraisal Institute may initiate civil or criminal proceedings against the examinee as appropriate.

Report Exam Misconduct

Information regarding suspected or observed misconduct or other acts of unethical behavior relating to the examination should be reported to the Professional Practice department of the Appraisal Institute. Reports of suspected misconduct are treated confidentially and are fully investigated in accordance with the Appraisal Institute's commitment to ensuring the integrity of the Comprehensive Examination.

Other Information

Candidates may order Appraisal Institute course materials for Comprehensive Exam preparation by emailing comp@appraisalinstitute.org and making the request to order. We will reply with the cost of the materials.

Additional items recommended for exam preparation include the following:

General Comprehensive Examination (MAI Path)

- [*The Appraisal of Real Estate, 14th ed.*](#)
- [*Dictionary of Real Estate Appraisal, 6th ed.*](#)
- [*Market Analysis for Real Estate: 2nd ed.*](#)
- [*Capitalization Theory and Techniques Study Guide*](#)
- [*In Defense of the Cost Approach: A Journey Into Commercial Depreciation*](#)
- [*Rates and Ratios Used in the Income Capitalization Approach*](#)

Click here for [Additional supplemental study items for the General Comp Exam](#)

Note: Several books in the above list are available as a [Comp Exam Study Package](#).

Review Comprehensive Examinations (AI-GRS and AI-RRS Paths)

- [*The Appraisal of Real Estate, 14th ed.*](#)
- [*Dictionary of Real Estate Appraisal, 6th ed.*](#)
- [*Review Theory & Procedures: A Systematic Approach to Review in Real Property Valuation*](#)
- [*Market Analysis for Real Estate: 2nd ed.*](#)

Click here for [Additional supplemental study items for the Review Comp Exams](#)

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Americans with Disabilities Act (ADA)

The Appraisal Institute is committed to ensuring access to its examinations for all individuals with disabilities. The Appraisal Institute will provide reasonable and appropriate accommodations to individuals with documented disabilities who demonstrate a need for accommodations. Individuals should visit the [Comp Exam Accommodations page](#) and follow the steps for submitting documentation. Requests for accommodations are considered on a case-by-case basis. Reasonable efforts will be made to accommodate individuals whose requests are received **at least six (6) weeks prior** to the testing window. If approved, we cannot guarantee that your requested accommodation(s) will be available at your preferred Pearson VUE testing center and/or during your preferred testing window.

Exam Results

After the end of the testing window, exam results are collected by Pearson VUE and sent to the Admissions Department. We do **NOT** receive exam results for individual examinees as they take each module. Pearson VUE sends this information to us after the end of the testing window. In the interest of ensuring exam confidentiality and fairness for all examinees, exam results are issued after all testing is completed. Exam results are distributed to all examinees on the same day via email.

Exam results will be sent to examinees by email approximately 30 business days after the END of the testing window. Depending when an examinee took his/her module(s) within the window, this means exam results may be sent up to eight (8) to 10 weeks from the examinee's last date of testing.

If a passing grade is awarded on a module of the Comprehensive Examination taken by a Candidate, the credit shall be posted on the Candidate's record. If a module of the Comprehensive Examination fails, the Candidate will be notified in writing. At the Candidate's written request, made within sixty (60) days of the date the Candidate was notified that his or her examination failed, the failing examination will be reviewed. The Comprehensive Examination Panel may in its discretion choose to re-grade one or more Comprehensive Examinations.

Please do NOT call the National Office to inquire about your exam results. If you have not received your exam results within ten (10) weeks from the date you completed testing, please contact the Admissions Department at comp@appraisalinstitute.org.

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Comprehensive Examination Tips

The purpose of the Comprehensive Exam is to evaluate your ability to apply your appraisal knowledge and experience to solve real property valuation problems at a level expected of an Appraisal Institute Designated member. You will be tested on your appraisal knowledge and experience, together with your ability to use sound reasoning and judgment to solve appraisal problems.

Classic Exam Strategies

- There is no penalty for guessing, as only correct answers are counted in the final score. All questions left blank will be marked as incorrect.
- Time management is critical. It is suggested that you answer the easier questions first and flag the harder ones for later. There is a flag feature on the exam at Pearson VUE. You can review your answers before completing the exam.
- Be familiar with the allotted time given to complete a module, so you know how much time you have for each question. For example, Module II of the General Comp Exam is 210 minutes and contains 50 questions—which gives an examinee slightly more than four (4) minutes for each question.
- Read each question carefully to make sure you know exactly what it is asking ***before*** you start solving it.
If you skip ahead or try to anticipate where a question is going, you are more likely to answer it incorrectly. Don't assume or insert data into a question; you should rely solely on the information provided.
- Math skills, such as geometry, algebra, statistics, and an understanding of basic finance, are necessary to successfully complete ***all*** modules. Furthermore, you should understand how to interpret legal descriptions, understand degrees and angles (right angle vs. circle), volumes, and other topics as basic as direction (north, south, east and west).
- Distractors (incorrect answer choices) are often derived from common mistakes, including incorrect keystrokes.
- The exam questions mirror problems faced by appraisers in their daily lives and many questions were derived from real-life scenarios and applications.
- It may be possible to narrow down the correct answer with logic and reasoning.

Inquiries

If you have any questions, please contact us at comp@appraisalinstitute.org. To be fair to all Candidates, inquiries are answered in the order in which they were received. We thank you for your patience and look forward to speaking with you.

General Comprehensive Examination (MAI Path)

The General Comprehensive Examination is a four (4)-part, modular exam with multiple-choice questions based on the methods, techniques, information, and other content presented in the courses, exams, publications, and body of knowledge of the Appraisal Institute. Each module contains 50 questions. You should always select the best answer out of the possible choices.

These modules are designed so that a properly prepared Candidate will have adequate time to complete each question.

There is a specific passing score for each module; the exam is not graded on a curve. Examination statistics are confidential. The General Comprehensive Examination Panel may at its own discretion choose to re-grade one or more Comprehensive Examinations.

Purpose of the General Comprehensive Exam

The use of Comprehensive Examinations at the end of formalized training has a long tradition in both academic and professional circles in the fields of law, medicine, accounting, humanities, and the sciences. The objective of this examination is to evaluate both the examinee's appraisal knowledge and the examinee's ability to use that knowledge to solve appraisal problems in the real world.

As a future MAI Designated member, you must know current methods, techniques, information, and other content presented in the courses, exams, publications, and body of knowledge of the Appraisal Institute, and can utilize that knowledge to solve appraisal problems. The General Comprehensive Exam is a measure of your ability to perform in real-world situations.

How to Prepare

How do examinees prepare? Some study, some don't, some need to study, some don't. Some say that a good night's sleep is a prerequisite. Others say 100 hours of study is not enough. It's a matter of personal preference based on your ability to take exams, your background, and your judgment.

The initial thrust of preparation for the General Comprehensive Examination should be to polish your skills in applying appraisal knowledge from Appraisal Institute courses, exams, and publications to solving appraisal problems. To successfully complete this examination, you should have a mastery of appraisal concepts including market analysis, discounted cash flow, leasehold interest, cost approach, depreciation, adjustments, reconciliation, and other aspects of the valuation process. You must also have

the ability to determine the reasonableness of your answer considering circumstances stated in the problem.

Review the current edition of [The Appraisal of Real Estate](#) and the [Dictionary of Real Estate Appraisal](#). Knowledge of definitions, principles, and basic theory will be required to solve the exam problems. As you prepare for the exam, try developing some questions of your own that require judgment to reach solutions. Try anticipating your answers considering the exam outline included in this guidebook.

The modules of the General Comprehensive Exam are **not** designed as re-tests of the corresponding Appraisal Institute courses. That being said, your course materials, particularly the Designation Education, are important resources for proper exam preparation. We recommend that your review include, at the very minimum, the Designation Education courses. A review of the [Capitalization Theory and Techniques Study Guide](#) textbook could also be beneficial for income capitalization. For a full list of recommended study materials, please refer to the [Supplemental Study List](#) document available on the [Comp Exam webpage](#).

An analysis of examinees' performance who have taken the General Comprehensive Exam **has shown that the examinees with the most recent designation education courses perform much better overall than those that took them longer ago, or not at all. The Comprehensive Examination Panel strongly recommends that you attend, and take the examinations for the Designation Education courses if you are preparing for the Comprehensive Exam.**

Finally, become very familiar with your financial calculator. Know and understand how to use all its financial functions prior to the exam.

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What is covered in the General Comprehensive Exam (MAI Path)

The General Comprehensive Examinations are based on the Appraisal Institute body of knowledge for MAI Designated membership. The body of knowledge may include appraisal concepts and your professional experience; it may cover anything in the Appraisal Institute required coursework, current appraisal literature and textbooks. These Examinations are designed, in part, to measure your ability to integrate classroom knowledge with your professional experience and critical thinking.

The concepts tested within the modules may include, ***but are not limited to:***

Module I: General Concepts

- Principles of Real Estate Appraisal
 - Identification of the Problem
 - Terminology
 - Economics
- Nature of Real Estate & Market Analysis
 - Market Data & Analysis
 - Property Characteristics
 - Data Collection
- Analytical Skills
 - Statistics
 - Mathematics
 - Knowledge of Financing
 - Valuation Techniques
- Reconciliation
 - Analytics
 - Reasoning

Module II: Cost Approach, HBU, Feasibility

- Cost Approach
 - Obsolescence
 - Depreciation
 - Principles
- Land Valuation
 - Units of Comparison
 - Elements of Comparison
 - Characteristics
 - Analysis & Reconciliation
- Highest & Best Use
 - Reconcile Alternative Uses
 - Highest & Best Use Tests
- Market Analysis & Feasibility
 - Demand Analysis
 - Supply Analysis
 - Property Productivity

Module III: Income Capitalization Approach

- Direct Capitalization Concepts
 - Basic Capitalization Concepts
 - Projecting Cash Flows
- Yield Capitalization Concepts
 - Yield Capitalization
- Risk Concepts
 - Risk Analysis
 - Leverage
- Advanced Concepts
 - Applications of the Income Approach
 - Investment Analysis Concepts
 - Stabilizing Income & Equity Yield Capitalization
 - Supporting the Discount Rate

Module IV: Sales Comparison Approach

- Transactional Analysis
 - Principles & Introduction
 - Property Rights Conveyed, Financing Terms, Expenditures Immediately After Purchase, Market Conditions
- Property Characteristics Analysis
 - Location, Physical Characteristics, Economic Characteristics, Use/Zoning, Non-Realty Components
 - Adjustment Techniques & Qualitative Analysis
- Market Analysis
 - Highest & Best Use
 - Review, Applicability, Units of Comparison
- Applications & Reconciliation
 - Reconciliation
 - Applications of the Sales Comparison Approach

Sample Questions for the General Comprehensive Exam (MAI Path)

The following are sample questions intended only to show the format of questions on the exam.

- 1) Eleven years ago, the seller carried back a \$100,000-purchase-money mortgage, with 20 years' amortization, 8.5%, and monthly payments. The loan cannot be assumed by a subsequent buyer. Currently mortgages on similar real estate are yielding 12%. Market value of the real estate is \$150,000. Current net operating income is \$16,500.

What would happen to the market value of the real estate if the loan could be assumed?

- A) Increase significantly
- B) Decrease significantly
- C) Remain the same
- D) Decrease slightly

The correct answer is (C). Market value has not changed because of the financing. Market price, however, probably has. This question requires the candidate to apply knowledge of the differences between market price and market value to a specific set of circumstances. This is not a trick question, but rather involves the philosophy of the definition of market value.

- 2) How are the various indications of value analyzed in the reconciliation process?

- A) The three approaches are averaged
- B) The cost approach sets the upper limit of value
- C) The median of the various value indications is adopted
- D) Major emphasis is placed on the approach that appears to be the most reliable

The correct answer is (D). This question is a test of the Candidate's knowledge of procedure.

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The next questions [3-4] are based on the following information:

A small parcel of speculative land was purchased for \$60,000 with \$17,000 down and the balance of \$43,000 financed at 10% with monthly payments of \$300 and a balloon in five years.

- 3) What will the loan balance be (nearest \$100) after five years?
- A) \$47,300
 - B) \$47,500
 - C) \$67,400
 - D) \$94,000
- 4) If the interest rate is not 10%, causing the loan balance to be \$50,000 after five years, and the purchaser is to receive a 15% equity yield, what must the sale price (nearest \$100) be in five years?
- A) \$ 58,500
 - B) \$ 59,900
 - C) \$108,500
 - D) \$120,000

The correct answer to Question 3 is (B). Solution of this problem on a financial functions calculator is straightforward. Keystrokes for an HP12C are: f FIN 5 g n 10 g i 43,000 PV 300 CHS PMT FV. Note that the loan should be analyzed on a monthly basis and has a negative amortization.

Also, note that Answer (D) results from overlooking CHS, Answer (D) from mixing monthly and annual parameters, and Answer (A) from performing the calculations annually.

The Examination contains proposed answers, which result from logic errors or careless mistakes.

The correct answer to Question 4 is (C), and is calculated as follows:

FV of \$17,000 for 5 years @ 15% = \$34,193
FV of \$3600/year for 5 years @ 15% = \$24,273
Mortgage Balance @ end of 5 years = \$50,000

TOTAL \$108,466

Note: The \$300/month interest payment becomes a part of the investment in the property. Therefore, it must be included in the calculations. Keystrokes for an HP12C are: f FIN 5 n 15 i 17000 chs PV 3600 chs PMT FV 50,000 +. The correct answer to this question does **not** depend on choosing the correct answer to Question 3.

- 5) Properties comparable to the one being appraised have been selling for 6.0 to 6.5 times gross income. The typical expense ratio is 45%, what is the indicated range in overall rates?
- A) 0.069 to 0.075
 - B) 0.085 to 0.092
 - C) 0.109 to 0.118
 - D) 0.133 to 0.144

The correct answer is (B). Net income is 100% minus 45% expenses or 55% of gross, thus:

55% of gross divided by 6.0 = 0.092 Overall Rate

55% of gross divided by 6.5 = 0.085 Overall Rate

- 6) The following property is encumbered by a ten-year lease. Based on the following data, what is the present value of the leased fee interest?

Net operating income:	\$24,000 in Year 1; increasing \$1,000 per year
Projection period:	5 years
Property value change:	3% per year increase (compounded)
Yield rate:	10%

- A) \$258,100
- B) \$324,700
- C) \$342,900
- D) \$349,200

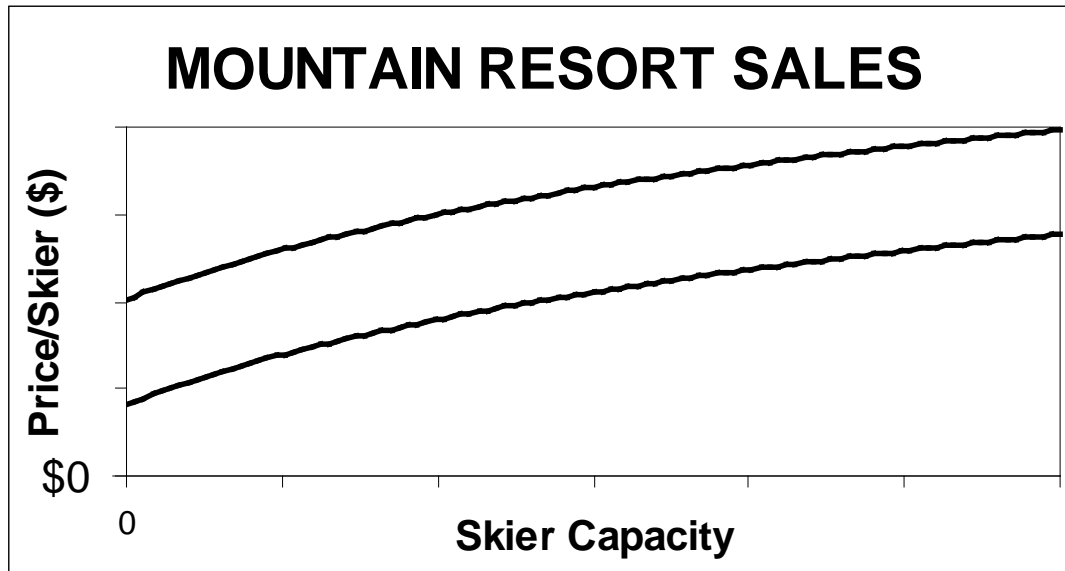
The correct answer is (D). Answer (A) forgets property value increase. Answer (B) forgets the rent increase. Answer (C) is if the first year's net income of \$24,000 is capitalized at 7% ($R=Y-CR$); this is not correct because the income and value are not rising at the same compound rate.

- 7) A \$250,000 loan can be obtained at 9.5% interest for 20 years with monthly payments. What will the lender's yield be if 4 points are charged and the loan is paid off in 3 years?

- A) 9.50%
- B) 10.09%
- C) 11.12%
- D) 13.50%

The correct answer is (C). Answer (A) ignores points. Answer (B) loan runs 20 yrs. Answer (C) is 9.5% + points.

- 8) The subject property is a mountain resort. Incremental value is based on skier visits. Sales in the subject's region form a consistent curvilinear pattern, as shown below (**lower line**). The trend for a more desirable region is also shown (**higher line**).



Based on this market information, what type of location adjustment is indicated for sales in the more desirable region?

- A) Downward dollar adjustment
- B) Upward dollar adjustment
- C) Downward percent adjustment
- D) Upward percent adjustment

The correct answer is (A).

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9) The following sales were verified:

	Sale 1	Sale 2	Sale 3	Sale 4
Location	Similar	Similar	Similar	Similar
Size (Sq. Ft.)	5,800	4,900	4,600	6,000
Bedrooms	12	11	10	13
Units	6	6	5	6
Gross Income	\$23,000	\$20,500	\$21,000	\$24,500
Sale Price	\$150,000	\$140,000	\$125,000	\$160,000

Based on these sales, what appears to be the most reliable unit of comparison?

- A) Gross Income Multiplier
- B) Price Per Unit
- C) Price Per Bedroom
- D) Price Per Square Foot

The correct answer is (C).

10) A city has seen a rapid building of apartments with about 500 units built per year for the last 5 years. The current total of units in the town is 7,292 with about 10% current vacancy. The rapid rise in apartment units is due to the rapid increase in job growth. The current number of jobs in town is 25,000 with a forecast to be 32,000 jobs in the next 5 years.

Based on this data, what is the best estimate of total demand for occupied units 5 years hence?

- A) 7,700
- B) 8,400
- C) 9,300
- D) 9,800

The correct answer is (B).

Answer (C) is 28% increase based on supply. Answer (D) is $500/\text{yr} \times 5 + \text{current supply}$. The current number of occupied apartments is $7,292 \times 90\%$, or 6,563 units. The forecast is that the number of jobs will increase by 28%. A 28% increase in occupied apartments would result in 8,400 occupied apartments.

- 11) An improved property sold for \$350,000. The purchaser assumed an existing mortgage that was issued 5 years prior to the sale. The original loan balance was \$250,000. The loan was for 30 years at 9% interest per annum, with monthly payments. This loan cannot be paid off. The current market interest rate for 25-year amortizing loans with monthly payments is 6%. If land value is \$100,000 and reproduction cost new of the improvements is \$400,000, what percent depreciation can be extracted?
- A) 19%
 - B) 22%
 - C) 38%
 - D) 56%

The correct answer is (A).

Answer (B) amortizes \$250,000 for 25 years, not \$239,000 loan balance. Answer (C) does not include the necessary adjustment for cash-equivalency. Answer (D) is from deducting, not adding, the cash equivalency adjustment.

The first step is to calculate the cash-equivalent sale price. The monthly loan payments on the original \$250,000 at the contract interest rate are \$2,011.56 per month, and the balance is \$239,700. The present value of the 25 years of remaining monthly payments at the market interest rate of 6% is \$312,207. The cash equivalency adjustment is a PLUS \$72,507, indicating a cash-equivalent sale price of \$422,507 (the adjustment is positive because the buyer assumed an onerous loan that cannot be paid off).

Deducting \$100,000 for the land value leaves \$322,507 for the contributory value of the improvements. When compared with the \$400,000 replacement cost new, the indicated depreciation is 19.37%.

These sample questions represent the general format to be expected on the exam. They do not reflect distribution of types of questions, styles of questions, or areas to be covered in the exam.

This guidebook is intended to be informative instead of a course on the examinations. The Comprehensive Exam Panel hopes these guidelines will enable you to prepare better and to anticipate the types of questions you will find on these exams. If you have any comments, please direct them to comp@appraisalinstitute.org.

—The Comprehensive Examination Panel

Review Comprehensive Examinations (AI-GRS and AI-RRS paths)

Purpose of the Review Comprehensive Exams (AI-GRS and AI-RRS paths)

The use of Comprehensive Examinations at the end of formalized training has a long tradition in both academic and professional circles in the fields of law, medicine, accounting, humanities, and the sciences. The objective of this examination is to evaluate both the examinee's appraisal knowledge and the examinee's ability to use that knowledge to solve appraisal problems in the real world.

Before advancing to AI-GRS and/or AI-RRS Designated membership, you must have knowledge of the methods, techniques, information, and other content presented in the courses, exams, publications and body of knowledge of the Appraisal Institute and you must be able to utilize that knowledge to solve real appraisal and appraisal review problems. The Review Comprehensive Examinations are a measure of your ability to perform in real-world situations.

How to Prepare

How do examinees prepare? Some study, some don't, some need to study, some don't. Some say that a good night's sleep is a prerequisite. It's a matter of personal preference based on your ability to take examinations, your background, and your judgment.

An initial thrust of preparation for Review Comprehensive Examinations may be to polish your skills in applying appraisal and appraisal review knowledge from Appraisal Institute courses, exams and publications to solving appraisal review problems.

As you prepare, remember that the exam will be testing not only appraisal review theory and practice, but also overall appraisal knowledge. Your problem solving and critical thinking skills will be crucial to success on the examination.

If you are taking the Review Comprehensive Examinations, your appraisal knowledge should include market analysis and highest and best use, the three approaches to value, and reconciliation. Your appraisal review knowledge should emphasize the six-step review process: identification of the problem, reviewer's scope of work, reviewer's research and analysis (the five (5) criteria), review of appraiser's analyses, opinions, and conclusions, review of the appraisal report, and reviewer's own opinion of value.

Review the current edition of [The Appraisal of Real Estate](#) and the [Dictionary of Real Estate Appraisal](#). We also recommend [Review Theory and Procedures: A Systematic Approach to Review in Real Property Valuation](#). Although the Review Comprehensive Examinations are not tests for definitions, principles, or

basic theory, your knowledge of them will be required to solve the examination problems. As you prepare for the exam, try developing some questions of your own that require judgment to reach solutions. Try anticipating your answers considering the exam outline included in this guidebook.

In addition to the textbooks above, your exam preparation should focus on the course materials from the Appraisal Institute review courses. **Because the exam will also be testing basic appraisal knowledge, we highly recommend that your preparations also include subject matter from the qualifying courses for state certification.**

Finally, become very familiar with your financial calculator. Know and understand how to use all its financial functions prior to the exam. An approved financial calculator is required for the exam.

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What is covered in the Review Comprehensive Exams (AI-GRS and AI-RRS Paths)

The Review Comprehensive Examinations are based on the Appraisal Institute body of knowledge for the Review Designations. The body of knowledge may include appraisal concepts, appraisal review theory, **and** applicable certification education (or equivalent), and your professional experience; it may cover anything in the Appraisal Institute required coursework, current appraisal literature and textbooks. These Examinations are designed to measure your ability to integrate classroom knowledge with your professional experience and critical thinking.

The concepts tested within the modules may include, ***but are not limited to:***

General Review Comprehensive Examination (AI-GRS Path)

Module I: General Appraisal Concepts

- Principles of Real Estate Appraisal
 - Identification of the Problem
 - Terminology
 - Economics
- Nature of Real Estate & Market Analysis
 - Market Data & Analysis
 - Property Characteristics
 - Data Collection
- Analytical Skills
 - Statistics
 - Mathematics
 - Knowledge of Financing
 - Valuation Techniques
- Reconciliation
 - Analytics
 - Reasoning

Module II: General Review Theory

- Identification of the Problem
- Reviewer's Scope of Work
- Reviewer's Research & Analysis
 - Completeness
 - Accuracy
 - Adequacy
 - Relevance
 - Reasonableness
- Review of Appraiser's Analyses, Opinions, Conclusions
- Review of Appraiser's Report
- Reviewer's Own Opinion of Value

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Residential Review Comprehensive Examination (AI-RRS Path)

Residential Appraisal Concepts

Market Analysis

Site Valuation

Cost Approach

 Highest and Best Use

 Depreciation

 Obsolescence

Sales Comparison Approach

 Sales Comparison Adjustments

Residential Review Theory

Identification of the Problem

Reviewer's Scope of Work

Reviewer's Research & Analysis

 Completeness

 Accuracy

 Adequacy

 Relevance

 Reasonableness

Review of Appraiser's Analyses, Opinions, Conclusions

Review of Appraiser's Report

Reviewer's Own Opinion of Value

For more information about applicable certification education (or equivalent), please see:

[Qualifying Education for Certified General Appraisers](#)

[Qualifying Education for Certified Residential Appraisers](#)

Sample Review Questions

COMING SOON!!

(In the meantime, try working on the Sample Questions in the MAI Comp Exam section)

These sample questions represent the general format to be expected on the exam. They do not reflect distribution of types of questions, styles of questions, or areas to be covered in the exam.

This guidebook is intended to be informative instead of a course on the examinations. The Comprehensive Exam Panel hopes these guidelines will enable you to prepare better and to anticipate the types of questions you will find on these exams. If you have any comments, please direct them to comp@appraisalinstitute.org.

—The Comprehensive Examination Panel