



Remodeling Done Right.™

CERTIFIED
NARI PROFESSIONAL
CR

NARI

Certified Remodeler

Program Manual

Use to prepare for the CR, CRS, or CRA Certifications

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NATIONAL ASSOCIATION OF THE REMODELING INDUSTRY

NARI Certified Remodeler Program Guide

Welcome, and congratulations on taking the first step toward earning the Certified Remodeler (CR) designation [Certified Remodeler Associate (CRA) or Certified Remodeler Specialist (CRS)]. The National Association of the Remodeling Industry (NARI) has established the Certified Remodeler (CR) designation to promote the highest standards of remodeling through credentialing of remodeling professionals. By choosing to review this handbook, you have taken the first step toward joining those who will distinguish themselves by earning the CR designation.

This handbook summarizes key aspects of the CR program, and is intended to help you understand the process of certification and recertification. The handbook is a useful reference as you:

- Make your decision whether to pursue the CR
- Develop your course of study to meet the eligibility requirements of the CR
- Complete the CR application
- Seek to maintain (or provide yourself another opportunity to earn) the CR

The Certified Remodeler program reflects the current state of the industry and strives to be current with the existing Building Code (IRC and IBC), accepted business practices, and standard building practices. No single printed document can address every potential question, process, policy detail, or future change. You are encouraged to use this handbook as a supplement to the program information provided in the CR Study Guide as well as information provided by NARI's certification staff, who may be contacted at (847) 298-9200 or certification@nari.org.

The NARI Certification Board

The NARI Certification Board, the certifying agency of the National Association of the Remodeling Industry, is responsible for the governance of the CR program, and all policy and standards related to the CR designation. This program is administered by the NARI staff, which implements the policies. This structure allows the NARI Certification Board to maintain integrity concerning policy matters related to certification.

The NARI Certification Board issues certifications to individuals who successfully meet its standards. These individuals may present themselves to the public as Certified Remodelers.

What is the purpose of the CR designation?

The purpose of the CR certification program is to:

- Establish the body of knowledge for Certified Remodelers
- Assess the level of knowledge demonstrated by Certified Remodelers in a valid and reliable manner
- Encourage professional growth in the field of remodeling
- Formally recognize individuals who meet the requirements set by the NARI Certification Board
- Serve the public by encouraging quality remodeling practices

The NARI Certification Board, with assistance and advice from professionals in relevant fields, has developed a credential that will recognize an accepted level of expertise in the profession with the goal of improving professional standards in remodeling; however, no certification program can guarantee professional competence. In addition, given the frequent changes in recommended practice and technology, the NARI Certification Board cannot warrant that the test materials will at all times reflect the most current state of the art. The NARI Certification Board welcomes constructive comments and suggestions from the public and profession.

Who is a Certified Remodeler?

A survey of NARI members found that the nature of the remodeling business and the remodelers that run them are as varied as they are individualistic. Some examples of remodelers follow:

- the owner of a general contracting firm
- the project manager at a kitchen and bath remodeling firm
- the sales staff and estimator at a design build company
- the owner operator of an handyman business
- the project manager at a roofing and siding installation company
- the owner of a window and door installation company
- the owner operator of a single person boutique remodeling firm
- a partner in a general remodeling firm

In addition the annual sales volume that remodeling businesses generate ranges from \$100,000 to over \$100 million in sales. Remodelers are owners, supervisors, superintendents, carpenters, designers, sales staff, and estimators at all levels of these companies. Based on our study the one thing that can be said is that there is not a typical remodeler.

What are the benefits of certification?

<p>The benefits of certification for certified remodelers include:</p> <ul style="list-style-type: none">• Verification of your knowledge by an independent organization – a way to prove that you have the knowledge needed for the job• Professional growth and development• Enhanced job opportunities	<p>The benefits of certification for employers include:</p> <ul style="list-style-type: none">• Increased productivity• Less training time needed to bring employees “up to speed”• Competitive advantage in promoting services to clients
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PREPARING FOR THE TEST

Who can take the test?

You are eligible to sit for the CR exam if you meet the following requirements:

- Are employed by or own a firm primarily engaged in remodeling
- Adhere to NARI’s Standards of Practice and Code of Ethics

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- Have a minimum of five years continuous experience in the remodeling industry
- Completed 16 hours of continuing education
- Successfully completed a comprehensive application that details your background and experience
- Submit all required application materials and fees

*All experience and coursework must be completed at the time the application is submitted.

How much does it cost?

The certification fee of \$450 for NARI members and \$650 non-members must accompany the application. The CR application documents your qualifying experience, technical competence, professional development activities, and attestation to uphold NARI's Standards of Practice and Code of Ethics. All experience and coursework must be completed prior to the exam.

A nonrefundable fee of \$125 is included in the application fee. This \$125 charge is incurred upon receipt of your application by NARI. If for some reason you fail to meet the eligibility requirements at the time of application, your application and documentation will be returned to you. Your fee will be refunded, less the \$125 nonrefundable portion. Once your application has been accepted no part of the certification fee may be refunded.

How do I apply?

You must complete the current Certified Remodeler application for the CR program. You should allow at least ten (10) days for delivery if using first class mail. Applications received less than 30 days before your scheduled exam will be rejected and your fee will be refunded less the \$125 nonrefundable portion.

When your application has been reviewed and accepted, you will receive an acknowledgement and your name will be entered on the roster of eligible candidates. Successful applicants are qualified to take the exam during the next 24 months. If unsuccessful on the first attempt, subsequent examinations taken within this 24-month window are subject to a retest fee of \$50 per test. You may take the exam a total of two more times in the same 24-month window if you are not successful on your first attempt. If you are not successful at passing the exam within 24 months of your application date and wish to sit for the exam, you will be required to resubmit a new application and required certification fee at the time of reapplication.

When and where is the test given?

Exams are typically conducted at participating NARI Chapters. Chapters may charge an additional proctor fee to administer the exam. Please note that examination locations are subject to the availability of facilities and minimum enrollment numbers. If you are not able to take a scheduled examination, contact NARI for additional guidance on arranging an individual proctor.

The NARI Certification Board has established fixed exam dates for all NARI Certifications. These dates apply regardless of where the prep (study group) class was conducted. NARI National uses these dates as a planning tool when establishing certification study groups and advises chapter to do the same in their planning. NARI National encourages members to pursue certifications as appropriate to the member's role in the industry.

Visit www.nari.org/certify for the most current list of test dates.

How are special testing arrangements made?

The NARI Certification Board will make reasonable efforts to accommodate eligible candidates who require special arrangements to take the exam. Candidates who request special accommodations must make their request in writing at least 60 days in advance of the test date. Documentation should be in the form of a letter on the official letterhead of a licensed or certified professional qualified to diagnose and treat special conditions. A description of the special accommodation(s) requested should be included. Your request, with the supporting documentation, will be reviewed to determine if the accommodation will be granted. If approved, you and your exam proctor will be notified. The special accommodations and auxiliary aids and services must not present an undue burden to the NARI Certification Board and must not fundamentally alter the measurement of the knowledge the exam is intended to test.

What is the format for the test?

The exam is offered in a single, 4-hour session. The test will have 200 multiple-choice questions. The test is closed book. Calculators are allowed but programmable devices, cell phones, and laptops are not permitted. Each question will have four options or choices, only **one** of which is the correct or best answer. You will be asked to select the correct or best answer from these options. You will take the exam in one 4-hour period.

What do I need to know for the test?

Research conducted via survey and peer review guided the composition of the CR exam which focuses on job tasks performed and knowledge needed by remodelers.

Our survey indicated that a solid understanding in the following knowledge areas could be an indicator for success:

- Business Operations and Procedures
- Building Codes and Construction Law
- Project Existing Conditions and Jobsite Site Evaluation
- Remodeling Plans and Construction Specifications
- Remodeling Tools and Jobsite Safety
- Kitchen and Bath Remodeling
- Trade Contractors and Trade Related Building Systems

In addition to the above list, an area noted in this survey as an emerging requirement is the need for knowledge in the areas of green remodeling and building science processes.

The CR exam content outline

Preparing for the exam will evaluate your level of knowledge in the eight knowledge/skill domains listed. The following pages list the exam domains and the approximate percentage of the exam devoted to each one. They will also indicate the domain's applicability to the CRS and CRA certifications.

Listed with each domain is the recommended reference from the CR Authoritative Literature. The list is intended for use as a study aid only. The NARI Certification Board does not intend the list to imply endorsement of these specific references, nor are the test questions necessarily limited to these sources. The NARI Certification Board reviews the Authoritative Literature on a biannual basis. This list was updated in December 2018.

1. Smart Business for Contractors, by Jim Kramon, Taunton Press, Inc., Newtown, CT, 2001.
2. Managing and Making Money, By Linda W. Case, Remodelers Advantage, Fulton, MD
3. The Elements of Building, By Mark Q. Kerson, From The Ground Up Publishing, Santa Monica, CA 2014
4. International Residential Code for One- and Two- Family Dwellings (IRC) Current edition
5. Modern Carpentry, the current edition by Willis Wagner, Goodheart-Willcox, Tinley Park, IL
6. Residential Energy by John Krigger and Chris Dorsi, Saturn Resource Management Inc. Helena, Montana
7. Certified Remodeler Study Guide by NARI, Des Plaines, IL (The Certified Remodeler Study Guide is provided electronically upon approval of the certification application.)

Domain 1 (All)

35 to 40%

Business Operations

A. General Business Operations and Procedures

1. Describe the sales process to include:
 - a. Prequalifying the prospective client

- b. Writing proposals for client approval
- c. Presenting proposals to clients
- d. Estimating project costs for inclusion in a contract
- e. Creating contracts based on an accepted proposal
- f. Presenting contract to client for signature
- 2. Define lead and sales tracking processes
- 3. Describe the agreements required to be implemented when working with specialty trade partners
- 4. Describe the process used to supervise project design and construction with a focus on monitoring costs
- 5. Describe the components of construction procedures
- 6. Describe the components of a business plan
- 7. Describe the process to review and purchase the required insurance for the remodeling company
- 8. Describe the components of a personnel manual including:
 - a. standards of jobsite behavior and dress
 - b. an organizational chart
 - c. job descriptions
- 9. Describe the purpose and process of conducting employee performance reviews
- 10. Describe the proper procedures used to hire/fire employees
- 11. Describe the benefit and typical contents of a remodeling company's standard operating procedures.
- 12. Describe the procedures and processes used to address warrantee call backs.
- 13. Describe the use of technology to support business functions including:
 - a. time cards
 - b. project management
 - c. client communications
 - d. accounting
 - e. design
 - f. marketing and social media

References:

General Business Operations and Procedures	
The Elements of Building	All
Smart Business for Contractors	Chapters 2, 3, 4

B. Financial Systems and Procedures

- 1. Describe and interpret a financial plan
- 2. Describe the components and interpret a company's annual budget
- 3. Describe and interpret a remodeling project's budget
- 4. Demonstrate a working knowledge of accounting reports to include
 - a. profit and loss statement
 - b. balance sheet
 - c. job-cost reports
- 8. Describe a typical payment schedule for a remodeling project
- 9. Describe the components of a cash flow report and conduct a cash flow analysis

10. Describe the following accounting methods and when each is appropriate.
 - a. Cash
 - b. Accrual
 - c. Percent Complete

References:

Financial Systems and Procedures	
Managing and Making Money	All
Smart Business for Contractors	Chapters 1, 5, 6, 7, 8, 12
The Elements of Building	Pages 238 - 250

C. Marketing Systems and Plans

1. Describe the components and benefits of a marketing plan
2. Describe various types of advertising media
3. Evaluate effectiveness of marketing tactics

References:

Marketing Systems and Plans	
Certified Remodeler Study Guide	Module 1, chapter 1

D. Project Management and Operations

1. Describe the process for creating a remodeling project schedule
2. Discuss the importance of periodic monitoring and reporting on project progress compared to schedule and budget
3. Locate the critical path to project completion on a project schedule
4. Describe the components of a preconstruction conference
5. Identify the requirements to schedule the appropriate inspections for a remodeling project
6. Identify the impact of change orders on the project
7. Identify how contingency plans are used to address unforeseen problems
8. Describe the process of working with a homeowner to ensure material selections are made in a timely manner in support of the schedule
9. Describe the purpose of a final walk-through of a remodeling project
10. Develop a plan that addresses the preferred communications methods of all stakeholders

References:

Project Management and Operations	

E. Business Ethics and Standards of Practice

1. Understand and apply the NARI Code of Ethics and Standards of Practice in regards to the following:
 - a. Respond to and conduct corrective actions for customer complaints

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- b. Develop and supervise sales procedures
- c. Sell projects in your client's home
- d. Review contracts for compliance with local, state, and federal regulations
- e. Develop ads for use in print and other media.
- f. Market warranties or guarantees as part of product promotion
- g. Promote sales of merchandise or projects at your business
- h. Provide owner's manual to client upon completion of project
- i. Supervise point-of-sale operations

References:

Business Ethics and Standards of Practice	
NARI Code of Ethics and Standards of Practice	All

Domain 2 (All)

3 to 6%

Building Codes and Construction Law

- 1. Describe the basic components required in a contract
- 2. Determine the license and permits as required in your project's location
- 3. Ensure compliance with local, state and federal licensing requirements
- 4. Develop conflict resolution language for use in contracts
- 5. Describe the process used to apply for building permits
- 6. Describe the process to apply lien waivers
- 7. Understand state and local codes that are in effect in the jurisdictions in which you work.

References:

Building Codes and Construction Law	
IRC	Chapters 1-11

Domain 3 (CR and CRS)

6 to 10%

Project Existing Conditions and Jobsite Evaluation

- 1. Evaluate buildings for hazardous building products (asbestos, mold, and lead)
- 2. Identify load-bearing walls
- 3. Identify signs of insect infestation
- 4. Identify the indications of moisture damage to structural and non-structural members
- 5. Identify previous structural changes that have been applied to the building
- 6. Identify the indications of stress in structural members and analyze the causative factors
- 7. Identify substandard electrical, mechanical, and plumbing systems
- 8. Identify types of roofing system construction
- 9. Evaluate the condition of existing floor finishes
- 10. Evaluate types of wall and floor framing structures in preparation for remodeling
- 11. Identify the requirements associated with foundation or retaining wall drainage piping installation and modification
- 12. Identify lot lines, setbacks, and zoning restrictions on a project site

13. Verify the required depth of footing or foundations for a project
14. Describe the impact of various soil types may have when designing a remodeling project.
15. Identify existing concrete pads and walkways installation and modification
16. Identify existing above and below-ground utilities (septic tank, gas piping, underground electric, oil tanks)
17. Identify the requirements associated with shoring, underpinning, excavation support and protection, erosion and sedimentation control
18. Identify the requirements associated with site demolition and site clearing
19. Describe the purpose and benefits of using a check-list when reviewing a site as a prospective project
20. Describe how to verify ownership of the project site

References:

Project Existing Conditions and Jobsite Evaluation	
Modern Carpentry	Unit 25
IRC	Appendix J

Domain 4 (CR and CRS)

3 to 6%

Remodeling Plans and Construction Specifications

1. Identify types of plans, drawings, and specifications that are required to support a remodeling project including
 - a. demolition plan
 - b. floor plan
 - c. elevation plan
 - d. mechanical
 - e. specifications
 - f. foundation
 - g. finish schedule
 - h. site or plot plan
 - i. cross/wall sections
2. Describe the purpose of plans, drawings, and specifications while working on a remodeling project including
 - a. as-built (existing)/demolition plan
 - b. floor plan
 - c. elevation plan
 - d. mechanical
 - e. specifications
 - f. foundation
 - g. finish schedule
 - h. site/plot plan
 - i. cross/wall sections

References:

Remodeling Plans and Construction Specifications	
Modern Carpentry	Unit 6

IRC	Chapter 3
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Domain 5 (All)

12 to 14%

Remodeling Tools and Jobsite Safety

1. Discuss a plan for the purchase, inspection, and identification of tools that require replacement and repair
2. Discuss your options for purchasing or renting power tools appropriate to the task at hand
3. Recognize an unsafe work environment
4. List the components of a project specific safety and emergency information plan
5. Describe the requirements for compliance to OSHA safety regulations to include:
 - a. hand and power tools
 - b. safety inspections of all power tools
 - c. fall protection
 - d. setup and use of scaffolding and ladders
 - e. excavations deeper than 2 feet
 - f. conducting regular safety meetings
 - g. conducting safety training for employees
 - h. fire extinguishers
 - i. unsafe materials
 - j. safety data sheets
 - k. respirable silica
6. Manage or maintain an Injury and Illness Prevention Plan (IIPP)
7. Verify and assure compliance with EPA or state lead (RRP) and asbestos regulations

References:

Remodeling Tools and Jobsite Safety	
Modern Carpentry	Unit 2, 3, 4, and 29

Domain 6 (All)

3 to 6%

Building Science Processes

1. Define Building Science
2. Describe the effects of building placement and orientation on the performance of the building to include sun angle and heat gain/loss when specifying windows
3. Describe the dynamics of the building envelope
4. Describe the cause and effect of building practices that do not comply with accepted building science guidelines.
5. Determine a building's heat loss/gain and make recommendations to improve efficiency
6. Determine the impact of various landscape components on the buildings heat signature

References:

Green Remodeling and Building Science Processes	
Modern Carpentry	Units 24, 25

IRC	Chapters 11, 23
Residential Energy	Chapters 1, 2, and 10

Domain 7: (CR)

3 to 6%

Kitchen and Bath Remodeling

1. Specify materials and products to be used in a kitchen and bathroom remodel
2. Describe the process of managing kitchen and bathroom remodels
3. Describe the process of inspecting the installation of all materials in a kitchen and bathroom
4. Discuss accessibility standards used in the design of kitchens and bathrooms
5. Describe NKBA design guidelines to help in kitchen and bathroom design

References:

Kitchen and Bath Remodeling	
NKBA Kitchen and Bathroom Design Guidelines	All
IRC	Chapter 3

Domain 8: (CR and CRS as appropriate to specialty)

23 to 25%

Trade Contractors and Trade Related Building Systems

A. Carpentry Techniques and Processes

1. Rough Carpentry

- a. Identify materials used in remodeling and their appropriate uses
- b. Estimate the lumber requirements of a remodeling project
- c. Identify defects in lumber and their impact on use.
- d. Describe the methods used to frame wall and floor systems
- e. Specify the sheathing materials used to cover a roof or exterior wall
- f. Describe the advantages of engineered lumber in the remodeling process
- g. Use span tables in the code to determine appropriate sized joists and other components used in remodeling projects
- h. Describe the requirements and methods used to set up an onsite lumber storage area
- i. Describe the methods used to construct a roof and ceiling system
- j. Describe the special considerations when framing a floor system over a basement or crawl space

References:

Rough Carpentry	
Modern Carpentry	Units 1, 8, 9, 15, and 25
IRC	Chapter 5, 6

2. Finish Carpentry

- a. Specify the type and estimate the amount of materials required to trim a remodeling project
- b. Evaluate space for cabinet installation, walls plumb and square and floor level

- c. Describe cabinet installation inspection procedures
- d. Evaluate stairways for meeting the building code requirements for dimensions for such components as stair width, riser height, tread length, and handrails and guardrails
- e. Describe the installation of trim around doors and windows
- f. Specify materials required for a stairway project
- g. Describe the installation of baseboard, base shoe, crown, and other moldings

References:

Finish Carpentry	
Modern Carpentry	Units 17, 18

3. Window and Door Installation

- a. Specify exterior and interior doors
- b. Specify windows for a remodeling project
- c. Describe the advantage/disadvantage of various window coatings
- d. Describe the various types of window construction
- e. Describe the proper techniques to install windows and exterior doors.

References:

Window and Door Installation	
Residential Energy	Chapter 5
Modern Carpentry	Unit 12

B. Interior Finishing Procedures and Processes

- 1. Specify the appropriate drywall thickness and types for different applications
- 2. Estimate the required number of drywall sheets for a remodeling project
- 3. Describe the requirements associated with installation of drywall
- 4. Specify and estimate the amount of flooring product required for a remodeling project
- 5. Describe the methods used to inspect plaster walls and/or ceilings for signs of failure
- 6. Specify and estimate the amount of paint appropriate for a remodeling project
- 7. Describe the processes required to prepare surfaces to accept a painted finish
- 8. Describe the requirements associated with installing finished flooring

References:

Interior Finishing Procedures and Processes	
IRC	Chapter 7
Modern Carpentry	Units 15, 20

C. Roofing and Siding Procedures and Processes

- 1. Identify various roofing and siding materials
- 2. Describe the process to inspect for proper attic ventilation
- 3. Describe the process to inspect the roofing and siding to ensure proper application of materials

4. Describe the process of applying flashing to the building envelope to prevent moisture leaks
5. Identify the cause and prevention of ice dams

References:

Roofing and Siding Procedures and Processes	
IRC	Chapters 8, 9
Modern Carpentry	Units 10, 11

D. Insulation Requirements

1. Identify potential points or areas of heat loss or gain in a building structure
2. Identify the insulating properties of building products
3. Identify the different types of insulation and describe the benefits, limitations, and drawbacks of each of the insulation types
4. Describe the process of evaluating insulation products to ensure compliance with local codes
5. Determine the type and amount of insulation required in an attic and an exterior wall
6. Identify processes required to properly air seal a building structure

References:

Insulation Requirements	
Residential Energy	Chapters 3, 4
Modern Carpentry	Unit 14

E. Electrical Systems

1. Identify an electrical service that does not meet current code
2. Identify aluminum wiring systems and specify corrective actions
3. Identify the various types of electrical cable used in remodeling and construction projects and where and how it is used
4. Inspect for proper clearance around electrical service and panels per code
5. Inspect or test GFCI breakers and outlets for proper installation
6. Specify AFCI's as required by code
7. Identify the components of a photovoltaic system
8. Identify the components of a back-up generator

References:

Electrical Systems	
IRC	Chapters 33 - 40
Residential Energy	Chapter 7
Modern Carpentry	Unit 26

F. Heating, Ventilation and Air Conditioning Systems (HVAC)

1. Describe backdrafting and its associated hazards
2. Identify the corrective actions to prevent backdrafting
3. Identify mold and mildew, locate the cause, and describe corrective actions required

4. Analyze the results of a blower door test
5. Describe the purpose and operation of static and powered ventilators in the attic
6. Describe the following heating/cooling systems
 - a. forced air system
 - b. hydronic heating system
 - c. mini-splits
 - d. high velocity ducted
 - e. geothermal

References:

Heating, Ventilation and Air Conditioning Systems (HVAC)	
IRC	Chapters 12-21
Residential Energy	Chapters 6, 8
Modern Carpentry	Unit 28

G. Plumbing Systems

1. Describe existing water supply system and identify required modifications to support a remodeling project
2. Describe the process of inspecting the installation of plumbing fixtures to ensure compliance with code and manufacturer's instructions
3. Describe standard plumbing rough-ins to comply with codes
4. Describe the standards used to inspect an existing DWV system and identify required modifications to support a remodeling project
5. Describe the standards used to inspect the installation of a plumbing system to ensure compliance with design and local codes
6. Describe the characteristics of the following:
 - a. water heaters
 - b. tankless water heaters
 - c. combi water heaters
7. Describe the characteristics of natural gas and propane supply systems
8. Describe the demand requirements and sizing characteristics of common gas appliances
9. Describe the requirements and considerations of remodeling a home with an existing septic system

References:

Plumbing Systems	
IRC	Chapters 25-32
Residential Energy	Chapter 9
Modern Carpentry	Unit 27

H. Masonry and Concrete

1. Describe the precautions that must be taken when working with old bricks
2. Describe the signs of moisture damage in masonry and concrete
3. Describe the requirements for properly finishing concrete

4. Describe the requirements for proper base preparation for the installation of concrete slabs or pavers
5. Describe the requirements and processes required for the installation of concrete footings and foundations

References:

Masonry and Concrete	
IRC	Chapters 4,10
Modern Carpentry	Unit 7

How do I prepare for the test?

You may choose to study on your own or you may decide to join a study group at your local chapter to gain a better understanding of one or more content areas. To find a study group, contact your chapter representative or visit <http://www.nari.org/certify/index.asp> for a current list of virtual study group/course information.

When planning your studying, you should also think about what percentage of the test questions will cover each major content area. Decide which resources will better help you prepare for the test from the reference lists.

TAKING THE TEST

What are the requirements during the test?

You should arrive at the testing site approximately thirty (30) minutes to one (1) hour prior to the test to allow sufficient time for you to check-in and locate your seat. Late arrivals cannot be admitted to the test. Be prepared to provide a photo ID to the test administrator as part of the registration process.

You may not use devices with memory capabilities. Audible beepers, cellular phones, books, and papers will not be allowed in the testing room. The only book allowed in the test room will be an official IRC code manual. Note taking is prohibited during the test. Paper for conducting calculations will be provided by the test administrator and will be collected at the completion of the exam period.

Unauthorized visitors will not be allowed at the test site. Observers approved by the NARI Certification Board may, however, be present during the testing session. Only water will be allowed in the testing room. All other materials, food, and beverages are prohibited.

Before you take the exam, you will be asked to sign the following statement: "Due to the confidential nature of this test, I agree that I will not copy or retain test questions or transmit them in any form to any other person or organization." If you do not sign this statement, you will be dismissed from the testing center or your test results may be invalidated. The theft or attempted theft of the test or copying or disclosure of test questions is punishable by law.

Sample Examination Questions

The following questions have been selected for inclusion in candidate materials as sample questions. While these sample questions are intended to give candidates a better sense of the CR questions, the actual examination may include similar types of questions in varying proportions. The answers to these sample questions are given on the last page of this handbook.

1. Overhead is the _____.
 - A. entire cost of doing business
 - B. cost of doing business over and above the Cost of Labor
 - C. cost of doing business over and above the Cost of Materials
 - D. cost of doing business over and above the Cost of Sales

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2. Accumulated earnings that a business keeps are best described by which term?
 - A. Net earnings
 - B. Profit
 - C. Return on investment
 - D. Retained earnings

3. The building code becomes effective when _____.
 - A. it is published by the code developer
 - B. more than 50% of builders agree to use it
 - C. the federal government accepts it
 - D. the governing body in your jurisdiction adopts the code

4. In residential construction, separate plumbing plans:
 - A. Are seldom included because residential plumbing is fairly simple, and the plumber does not need a separate plan to know what to do.
 - B. Are seldom included because plumbing must be installed according to local code, therefore most of the required detailed information is found in the local plumbing code.
 - C. Are usually included in order to explain how all of the various branches are to be connected together.
 - D. Are usually included only if there is something unusual about the layout.

5. In balloon framing, the floor joists for the second floor rest on:
 - A. the top plate of the first floor walls.
 - B. the double top plate of the first floor walls.
 - C. a horizontal ledger strip let into the studs.
 - D. 4 x 4 posts, spaced 48" on center.

6. The circular saw blade that produces the smoothest cuts is called a _____.
 - A. ripping blade
 - B. combination blade
 - C. paneling blade
 - D. crosscut blade

7. What is the minimum length portable ladder that can be used to provide safe access to a flat roof whose edge is 20 feet above the ground?
 - A. 20 feet
 - B. 24 feet
 - C. 28 feet
 - D. 30 feet

8. The determination of use and density of a site is called _____.
 - A. zoning
 - B. easements
 - C. setback
 - D. floor area ratio

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9. Which soil type is very poor as a foundation material?
- A. gravel-sand
 - B. silt
 - C. silty clay
 - D. organic soil
10. A survey of the owner's property will help determine:
- A. Type of soil
 - B. Municipal sewer or septic location
 - C. Location of electric power lines
 - D. Size of lot
11. Which of the following flashing materials may NOT be suitable for use in brick walls?
- A. Copper
 - B. Bituminous
 - C. Zinc
 - D. Aluminum
12. The blower door test is used to determine which of the following?
- A. Air exchange rate
 - B. Potential moisture damage
 - C. Concentration of air pollutants
 - D. Wind resistance
13. When using sheathing panels to cover a roof, the panels should be laid with the long dimension _____.
- A. at right angles to the roof frame
 - B. parallel to the framing
 - C. at a slight angle to the framing
 - D. suiting the spacing of the framing
14. What is the minimum allowed headroom for a finished main staircase?
- A. 6'-0"
 - B. 6'-8"
 - C. 6'-10"
 - D. 7'-0"
15. Upper cabinets should always be _____ to the wall.
- A. nailed
 - B. screwed
 - C. glued
 - D. nailed and glued

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16. Sawn wood shingles should not be used on slopes below _____.
- A. 2/12
 - B. 3/12
 - C. 4/12
 - D. 5/12
17. Which siding material moves the most with changes in temperature?
- A. Wood
 - B. Steel
 - C. Aluminum
 - D. Vinyl
18. Which of the following is the greatest benefit of using motion sensing switches in low use areas?
- A. They are handy if your hands are full
 - B. They enable the use of brighter light bulbs
 - C. They are very inexpensive to install
 - D. They save electricity
19. The amount of heat in a BTU is about equal to _____.
- A. the heat given off by burning a wood kitchen match
 - B. one calorie
 - C. one horsepower
 - D. the amount of heat required to raise one pound of water 1 degree F (1°F)
20. Which of the following will produce the largest reduction of fiberglass insulation's R-Value?
- A. Installing a vapor barrier
 - B. Installing electrical outlets
 - C. Installing cladding on the exterior wall
 - D. Compressing the fiberglass batt by 1 inch
21. The gas valve for an appliance must be located in the same room and not more than ____ from the appliance.
- A. 2'
 - B. 3'
 - C. 4'
 - D. 6'
22. Which of the following is a component of your company's general liability insurance coverage?
- A. Exclusions
 - B. Deductible
 - C. Workers comp
 - D. Coverage of tools

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23. The total of the three legs of the primary work triangle should not exceed ____.
- A. 20'
 - B. 24'
 - C. 26'
 - D. 28'
24. A landing space of at least ____ is desired on the latch side of a refrigerator.
- A. 12"
 - B. 15"
 - C. 18"
 - D. 21"
25. Insurance is the most common way to _____.
- A. control risk
 - B. assume risk
 - C. avoid risk
 - D. transfer risk
26. Which of the following is the best way to respond to a customer complaint concerning the conduct of a trade contractor?
- A. Wait a few days to allow client to cool off then follow up to determine the cause.
 - B. Call the trade contractor and direct them to meet with the client and correct the problem.
 - C. Wait until a supervisor is available and send the supervisor and the trade contractor to the client to resolve the problem.
 - D. Respond quickly to understand the client's issue, then follow up with the trade contractor to determine the corrective action.
27. Homes built as recently as _____ may contain lead paint.
- A. 1960
 - B. 1975
 - C. 1977
 - D. 1985
28. The term "bearing wall" refers to a wall:
- A. supported by a steel beam
 - B. supporting an earth backfill
 - C. supported by a trimmer arch
 - D. supporting loads above it
29. Citations for sloppy housekeeping are among the _____ violations issued against building contractors.
- A. most agitating
 - B. most serious
 - C. most common
 - D. least common

What information will I receive about my score?

The test is designed to distinguish those who have the basic level of knowledge from those who do not. There is no evidence that someone who receives a very high score on the test will perform significantly better on the job than someone whose score falls exactly at the passing point. Therefore, if you pass the test, you will be informed only that you have successfully completed the credentialing process. You will NOT be notified of your actual score. Your completed exam will not be returned to you for review or comment.

If you do not achieve a passing score, you will be notified of that fact and will receive a report showing your pass/fail performance in each content area. This information is provided to assist you in deciding whether to retake the test and how to plan your study efforts for future tests.

When will I receive my test results?

CR test results will be emailed approximately four (4) weeks after the exam. You may elect to have others receive notification via e-mail by completing the appropriate form at the time you take the exam. To protect the confidentiality of your test score, no results will be given over the telephone. Results will not be released to any third party without your specific written permission. Forms will be available on the day of the exam.

Request for hand scoring

If you do not achieve a passing score on the exam, you may ask that your test be rescored to verify the reported score. Your request must be in writing within 30 days of distribution of results and must be accompanied by a payment in the amount of \$50, made payable to NARI.

Retaking the test

There is a limit of two times that you may apply for and re-take the test and the final retake must be within two years of your initial application date. If you do not succeed in passing the test by the second anniversary of your application date you will be required to submit a new application form, full certification fees, and meet all eligibility requirements in effect at the time of the application. There is a \$50 fee each time you retake the CR exam.

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Answers to sample questions

- | | | | |
|-----|---|-----|---|
| 1. | D | 16. | B |
| 2. | D | 17. | D |
| 3. | D | 18. | D |
| 4. | D | 19. | D |
| 5. | C | 20. | D |
| 6. | C | 21. | D |
| 7. | C | 22. | A |
| 8. | A | 23. | C |
| 9. | D | 24. | B |
| 10. | D | 25. | D |
| 11. | D | 26. | D |
| 12. | A | 27. | C |
| 13. | A | 28. | D |
| 14. | B | 29. | C |
| 15. | B | | |