



Assessment Blueprint

Carpentry Advanced



8328- Online Version
8329- Paper/Pencil Version
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General Assessment Information

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Test Type: This Residential Construction Academy certification assessment is a customized assessment for the Home Builders Institute. This assessment measures technical skills at the occupational level and includes items which gauge factual and theoretical knowledge. This assessment offers both a written and performance component and can be used at the secondary level and post-secondary level. This assessment can be delivered in an online or paper/pencil format.

Revision Team: The assessment content is based on input from secondary, post-secondary, and business/industry representatives from the state of California, Connecticut, Idaho, Illinois, Maine, and New York.



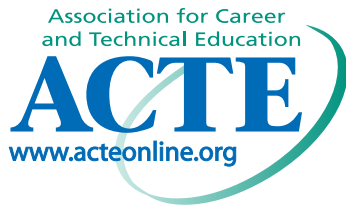
46.0201 – Carpentry/Carpenter



Career Cluster 1 - Architecture
and Construction



47-2031.01 – Construction
Carpenters



The Association for Career and Technical Education (ACTE), the leading professional organization for career and technical educators, commends all students who participate in career and technical education programs and choose to validate their educational attainment through rigorous technical assessments. In taking this assessment you demonstrate to your school, your parents and guardians, your future employers and yourself that you understand the concepts and knowledge needed to succeed in the workplace. Good Luck!



Home Builders Institute (HBI), an affiliate of the National Association of Home Builders (NAHB), is a national leader for career training in the building industry. HBI's educational materials are designed to be relevant in today's rapidly changing environment, bringing increased professionalism, competency and effectiveness to those entering the residential construction workforce.

HBI/NAHB assessments are based on national skill standards set by NAHB industry professionals and educators as are the materials contained in the Residential Construction Academy Series. Participants passing the assessments are eligible for certification through HBI/NAHB at the entry, semi-skilled or skilled levels.

Written Assessment

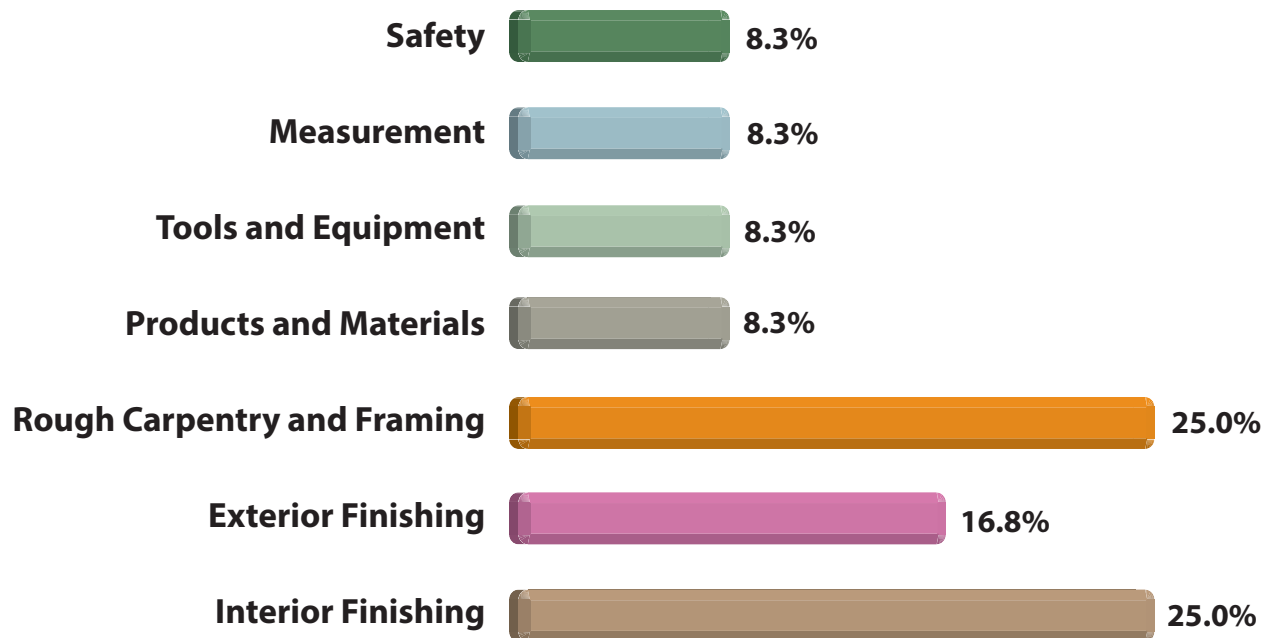
This written assessment consists of questions to measure an individual's factual theoretical knowledge.

Administration Time: 120 minutes

Number of Questions: 120

Number of Sessions: This assessment may be administered in three sessions.

Areas Covered



Specific Competencies and Skills Tested in This Assessment

Safety

- OSHA, Fire Safety, Job Site Safety, Tool Safety, Safety Data Sheets (SDS), Safety-Related Injuries, Power Cords, Gasoline, and First Aid

Measurement

- Feet/Inches, Addition and Subtraction, Area, Perimeter, Linear Feet, Triangles, and Rulers

Tools and Equipment

- Saws, Levels, Screwdrivers, Power Tools, Table Saws, Circular Saws, Marking, Plane, Power Saw, Power, and Power Drills

Products and Materials

- Lumber and Fasteners

Rough Carpentry and Framing

- Blueprints, Concrete Forms, Wood Floors, Wall Frames, Steel Framing, Trusses, Roofs, and Work Platforms

Exterior Finishing

- Roofing, Cornices, Decks, Siding, Insulation, Windows, and Doors

Interior Finishing

- Drywall, Ventilation, Ceilings, Trim, Flooring, Cabinets, and Stairs



Sample Questions

OSHA requires that first aid kits be:

- A. kept in each work vehicle.
- B. kept in locked storage at each job site.
- C. easily accessible in the event of injury.
- D. issued to each employee.

Which of these tools are used for fastening gypsum board to walls?

- A. Powder-actuated driver
- B. 3/8 inch portable drill
- C. Hammer drills
- D. Screwguns

The term "penny" is used to describe what characteristic about nails?

- A. Length
- B. Gauge
- C. Hardness
- D. Grade

How many rafters are needed for a complete gable roof on a building 64 feet long with rafters 16 inches on center?

- A. 49 rafters
- B. 48 rafters
- C. 98 rafters
- D. 96 rafters

A square of roofing materials covers how many square feet?

- A. 50 square feet
- B. 75 square feet
- C. 100 square feet
- D. 125 square feet



Performance Assessment

NOCTI performance assessments allow individuals to demonstrate their acquired skills by completing actual jobs using the tools, materials, machines, and equipment related to the technical area.

Administration Time: 2 hours and 45 minutes

Number of Jobs: 7

Areas Covered:

18% Tool and Material Identification

Participants will accurately identify a variety of tools and materials, including saws, bits, saw blades, wrenches, nails, fasteners, lumber, finishing, layout, and marking tools.

9% Square Layout

Participants will use the appropriate equipment and techniques to lay out and chalk a square.

8% Establish a Starting Course for Vinyl Siding using a Builder's Level

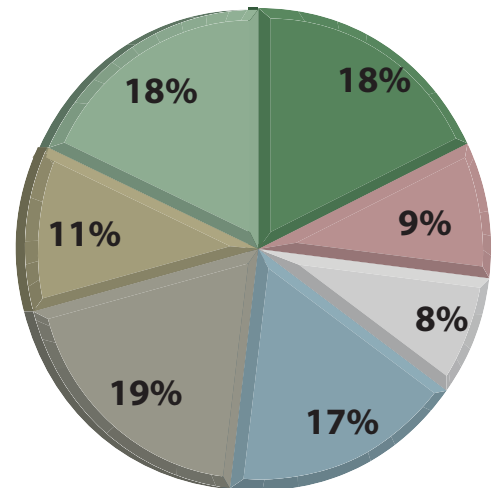
Participants will properly set up and use a builder's level to establish a level chalk line for the starting course of vinyl siding on a wall.

17% Blueprint Reading and Exterior Sole Plate Layout

Participants will lay out a sole plate according to instructions and include all necessary markings.

19% Rafter Layout

Participants will lay out one common rafter using provided plans and materials showing all necessary corrections and adjustments.



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Areas Covered (continued)

11% Stairway Stringer

Participants will layout a 3-tread stringer through interpreting the plan. Participant will use the appropriate tools and providing the correct riser height, tread run, stringer markings, and tread thickness.

18% Interior Frame

Participants will install an interior frame in a given opening using appropriate procedures, tools, and equipment.

Sample Job

Square Layout

Maximum Time: 20 minutes

Participant Activity: The test participant will chalk out a 12-foot by 12-foot square using blue chalk and placing blocks at the corners, as shown in the drawing provided.

