

Job Ready Assessment Blueprint

Carpentry



General Assessment Information

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Test Type: The Carpentry industry-based credential is included in NOCTI's Job Ready assessment battery. Job Ready assessments measure technical skills at the occupational level and include items which gauge factual and theoretical knowledge. Job Ready assessments typically offer both a written and performance component and can be used at the secondary and post-secondary levels. Job Ready assessments 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 states of Maine, Massachusetts, Michigan, Montana, Pennsylvania, and Texas.



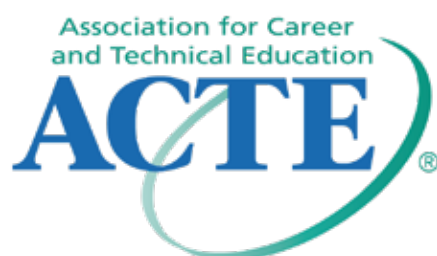
46.0201- Carpentry/Carpenter



Career Cluster 2- 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!



The Pennsylvania Builder's Association utilizes this assessment to assist in determining competencies for granting skill certificates to students graduating from Pennsylvania secondary trade programs that have been endorsed by the Pennsylvania Builder's Association (PBA)

PBA's services include support to workforce training and education by linking industry employers with educators to grow the workforce of tomorrow. PBA serves Pennsylvania communities and consumers through its steadfast efforts to protect homeownership rights and advocate for affordable housing options. PBA is affiliated with the National Association of Home Builders.

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General Assessment Information (continued)



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.



In the lower division
baccalaureate/associate degree
category, 3 semester hours in
Carpentry or Residential Carpentry.

Written Assessment

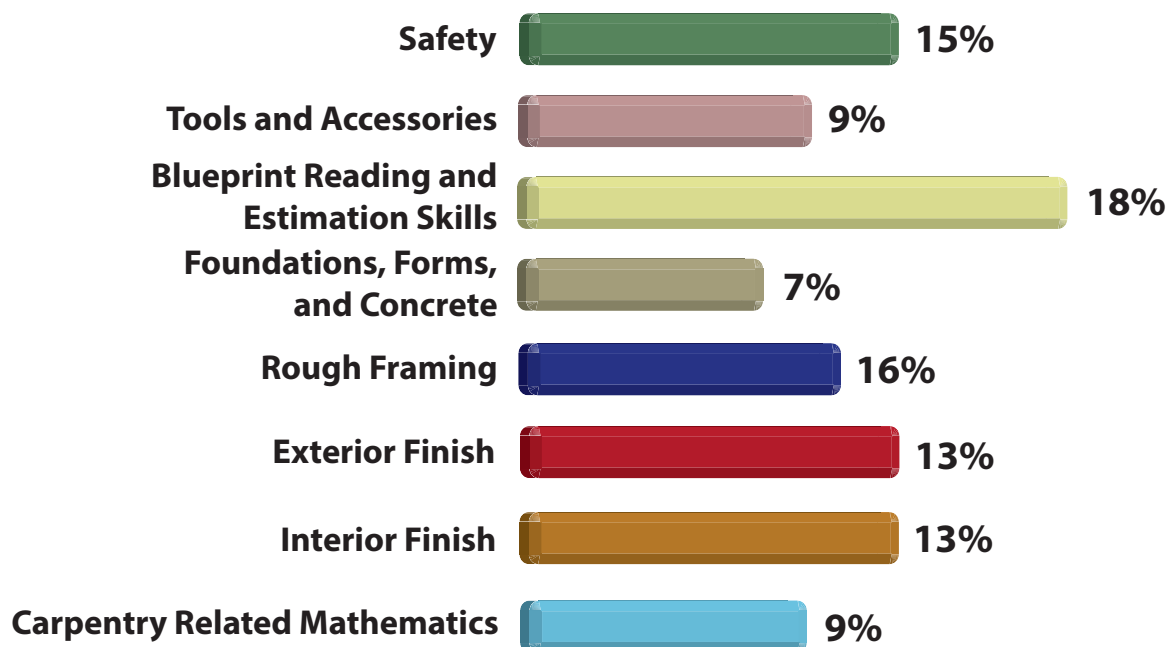
NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours

Number of Questions: 170

Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included in this Assessment

Safety

- Demonstrate safe material handling practices
- Display comprehension of workplace/job-site safety procedures (OSHA)
- Exhibit knowledge of SDS and personal protective equipment (PPE)
- Display understanding of hand tool safety issues
- Display understanding of power tool safety issues

Tools and Accessories

- Use and maintain hand tools
- Use and maintain power tools
- Use and maintain measuring, layout, and marking tools

Blueprint Reading and Estimation Skills

- Demonstrate awareness of general building codes
- Display comprehension of dimensions and scales
- Read and understand various views and elevations
- Display understanding of symbols, lines, and details
- Extrapolate information from a set of plans
- Estimate materials quantities
- Demonstrate awareness of green building practices

Foundations, Forms, and Concrete

- Lay out foundation
- Construct and align footing and foundation forms
- Install, brace, align, and remove formwork
- Understand concrete characteristics

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Specific Standards and Competencies (continued)

Rough Framing

- Demonstrate understanding of floor systems
- Demonstrate understanding of wall systems
- Demonstrate understanding of roof systems
- Calculate, lay out, and install stairs

Exterior Finish

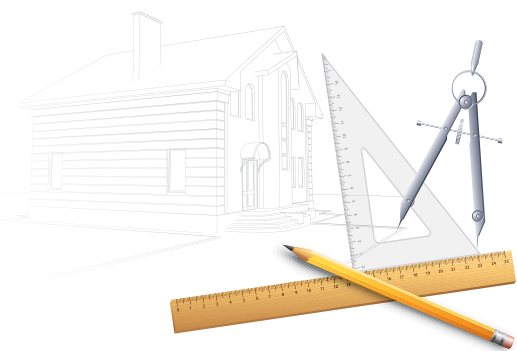
- Identify and install cornice and trim
- Calculate and install roofing
- Identify, prepare, and install windows and doors
- Calculate, lay out, and install siding

Interior Finish

- Install insulation
- Install and finish interior walls and ceilings
- Install interior doors
- Install standing and running trim
- Install cabinets and associated hardware

Carpentry-Related Mathematics

- Perform basic mathematical operations: whole numbers, fractions, and decimals
- Perform linear, square, and cubic computations
- Perform algebraic and geometric functions



Sample Questions

Trimmer studs strengthen the sides of an opening and bear the direct weight of the

- A. wall
- B. header
- C. window
- D. sill

Hinges and a track are used in what type of door system?

- A. pocket
- B. swinging
- C. bifold
- D. bypass

Which saw is used to cut an inside corner using base molding?

- A. compass saw
- B. coping saw
- C. hack saw
- D. zip saw

If pine boards are sold for \$800.00 per 1,000 board feet, what is the cost to purchase 550 board feet?

- A.\$440.00
- B.\$460.00
- C.\$480.00
- D.\$500.00

Three types of valley shingle installation are

- A. open, woven, and closed-cut
- B. Dutch cut, French cut, and English cut
- C. half-lap, side-lap, and top-lap
- D. cal-fil, wainscoat, and overlap

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Sample Questions (continued)

With vinyl siding, which of the following is normally installed last?

- A. J-channel
- B. corner pieces
- C. siding panels
- D. starter strip

Use _____ nails when installing exterior trim to prevent corrosion.

- A. sinker
- B. galvanized
- C. steel
- D. resin-coated box

Riser dimension plus tread dimension should fall between

- A. 16 to 17 inches
- B. 17 to 18 inches
- C. 18 to 19 inches
- D. 16 to 19 inches

The top and bottom metal framing members are referred to as

- A. conduit
- B. ducts
- C. jambs
- D. track

The chemical reaction that occurs between water and cement is called

- A. evaporation
- B. aging
- C. hydration
- D. drying

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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:

9% Tool and Material Identification

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

13% Square Layout

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

12% Establish a Starting Course for Vinyl Siding Using a Builder's Level

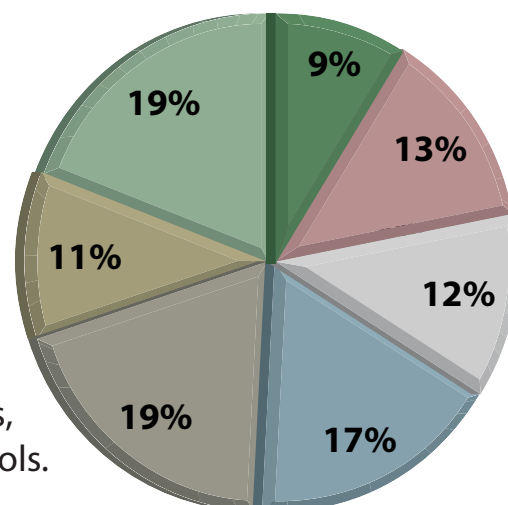
Participant will properly set up and use a builder's level to establish a level chalk line for the starting course of vinyl siding on a wall.

17% Blueprint Reading and Exterior Sole Plate Layout

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

19% Rafter Layout

Participant 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

Participant will layout a 3-tread stringer according to instructions and record correct number of risers, treads, and measurements.

19% Interior Frame

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

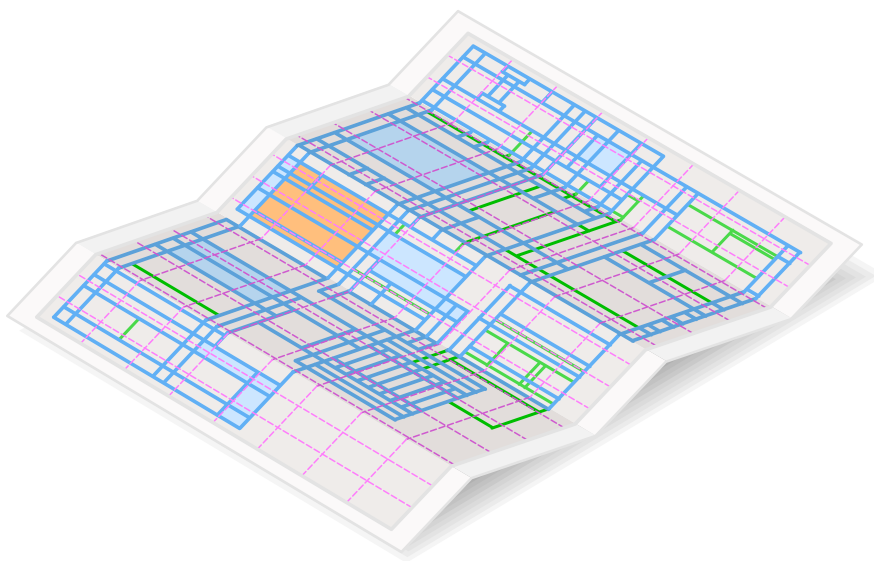


Sample Job

Square Layout

Maximum Time: 20 minutes

Participant Activity: The 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.



Notes