



Job Ready Assessment Blueprint

Carpentry



Test Code: 4015 / Version: 01

“Measuring What Matters”

Specific Competencies and Skills Tested in this Assessment:

Safety

- Demonstrate safe material handling practices
- Display comprehension of workplace/job-site safety procedures
- Exhibit knowledge of MSDS and personal protective equipment (PPE)

Tools and Accessories

- Use and maintain hand tools
- Use and maintain power tools
- Use and maintain measuring, layout, and marking tools
- Display understanding of tool safety issues

Blueprint Reading and Estimation

- Demonstrate awareness of 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



Foundations, Forms, and Concrete

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

Specific Competencies and Skills continued:**Rough Framing**

- Layout and install floor systems
- Calculate rough openings; layout and construct wall systems
- Calculate, layout, and install roof systems
- Calculate, layout and install stairs and other specialty components

Exterior Finish

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

**Interior Systems Installation**

- Install insulation
- Install and finish interior walls

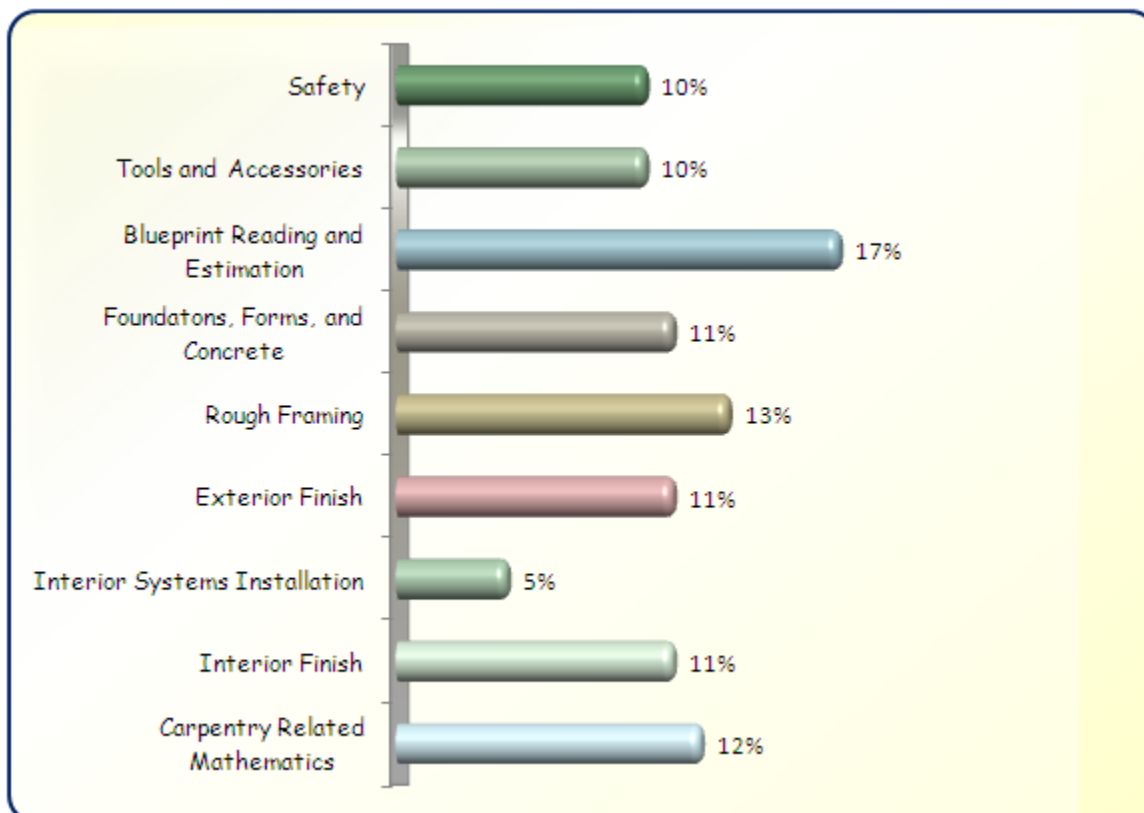
Interior Finish

- Install interior doors
- Install standing and running trim
- Install hardware

Carpentry Related Mathematics

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



Written Assessment:**Administration Time:** 3 hours**Number of Questions:** 150**Areas Covered**

Sample Questions:

OSHA regulations require that a trench be sloped, shored, or protected by a trench box when it exceeds

- A. 2 feet
- B. 5 feet
- C. 10 feet
- D. 20 feet

Sill plates setting on concrete should be

- A. air-dried to 15 percent m.c. softwood
- B. quarter sawn hardwood
- C. kiln-dried southern yellow pine
- D. pressure or chemically treated lumber

Concrete walls are generally anchored to footings by means of

- A. epoxy and bonding agents
- B. keyways or steel dowels
- C. rich grout and aggregate
- D. structural steel

The framing member that supports the tail joists is called a

- A. cripple
- B. header
- C. joist
- D. trimmer

The standard exposure of an asphalt or fiberglass three-tab shingle is

- A. 3 inches
- B. 4 inches
- C. 5 inches
- D. 6 inches



Performance Assessment:

Administration Time: 2 hours and 40 minutes

Number of Jobs: 7

Areas Covered:

17% Tool and Material Identification

Accuracy of identification of saws, bits, saw blades, wrenches, nails, fasteners, lumber, finishing tools, layout tools, marking tools, and timeliness.

9% Square Layout

Handling of equipment, project layout techniques used, accuracy of side length and diagonals, and timeliness.

8% Builder's Level

Set up and handling of instrument, techniques used to determine top of foundation, accuracy of level marks, and timeliness.

21% Blueprint Reading/Sole Plate Layout

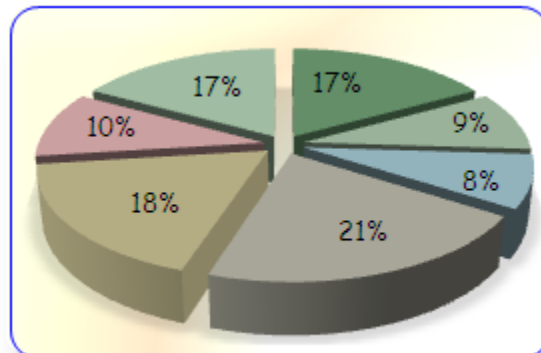
Layout of plate, interpretation of plans, length of plate, door centerline, door rough opening, bi-fold door centerline, bi-fold door rough opening, closet partition intersection, stud spacing, used standard markings, hall closet depth, and timeliness.

18% Rafter Layout

Layout of rafter, use of tools, interpretation of plans, placement of rafter crown, ridge plumb cut, rafter line length, plate line plumb cut, overhang length, tail plumb cut mark, fascia plumb cut deduction mark, ridge plumb cut deduction mark, bird's mouth location and layout, and timeliness.

10% Stairway Stringer

Layout of 3-tread stringer, use of tools, interpretation of plans, riser height, tread run, stringer marking at floor level, tread thickness, and timeliness.



Areas Covered continued:

17% Interior Frame

Procedures for installing, shimming, and nailing frame, procedures for installing trim, operation of miter saw, use of hand tools, safety, window plumb and level, window shims, quality of trim cuts, tightness of joints, quality of nailing, reveal allowance, and timeliness.



Sample Job: Builder's Level

Maximum Time: 20 minutes

Participant Activity: The test participant will set up and use the builder's level to establish the height of the instrument. Based on calculations, the participant will establish an elevation height of 100'-8".



The Association for Career and Technical Education (ACTE), the leading professional organization

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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 Builders 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.