

Specific Competencies and Skills Tested in this Assessment:

Hand and Power Tools

- Identify and use hand tools
- Identify and use power tools
- Handle and care for tools safely

Scaffolds and Ladders

- Erect and use scaffolds safely
- Display understanding of ladder safety

Materials

- Identify and select materials
- Mix and apply materials
- Contrast mortar strengths
- Calculate materials and measurements
- Identify and construct walls and wall materials

Blueprints and Specifications

- Read and interpret written specifications
- Identify and interpret lines and symbols
- Read and interpret drawings and plans

Project Layout

- Layout material properly
- Square a building, use of 3-4-5/Pythagorean theory
- Install a corner pole and determine heights

Masonry Structure Maintenance

- Remove and replace mortar/masonry units (tuck-pointing)
- Select and use masonry cleaning agents
- Troubleshoot and fill-in masonry structure defects



Specific Competencies and Skills continued:

Flashing, Weeps, Insulation

- Install flashing correctly
- Install weep holes correctly
- Install insulation correctly

Professionalism

- Exhibit understanding of communication/leadership skills
- Display understanding of professional ethics and behavior

Craft Knowledge

- Explain the history of the craft

Installation of Lintels

- Identify and position various types of lintels
- Identify types of arches
- Exhibit understanding of arch applications

Door and Window Frames

- Identify swing and size of door

Control Joints and Anchor Bolts

- Construct control joints
- Identify and install anchor bolts

Fireplaces and Chimneys

- Identify parts of fireplace/chimney
- Install fireplace/chimney components
- Display familiarity with building codes



Specific Competencies and Skills continued:

Math and Measurements

- Exhibit comprehension of construction masonry related mathematics
- Exhibit understanding of measurements and conversions

Safety

- Identify and use PPEs (personal protection equipment)
- Demonstrate knowledge of workplace/jobsite safety procedures
- Exhibit understanding of OSHA safety standards

Brick

- Job site set-up
- Lay brick to the line
- Tool off masonry units
- Identify and construct steps and components
- Install masonry pavers
- Build brick leads and corners
- Identify types of brick bonds
- Identify and install masonry materials and accessories
- Estimate/calculate materials needed

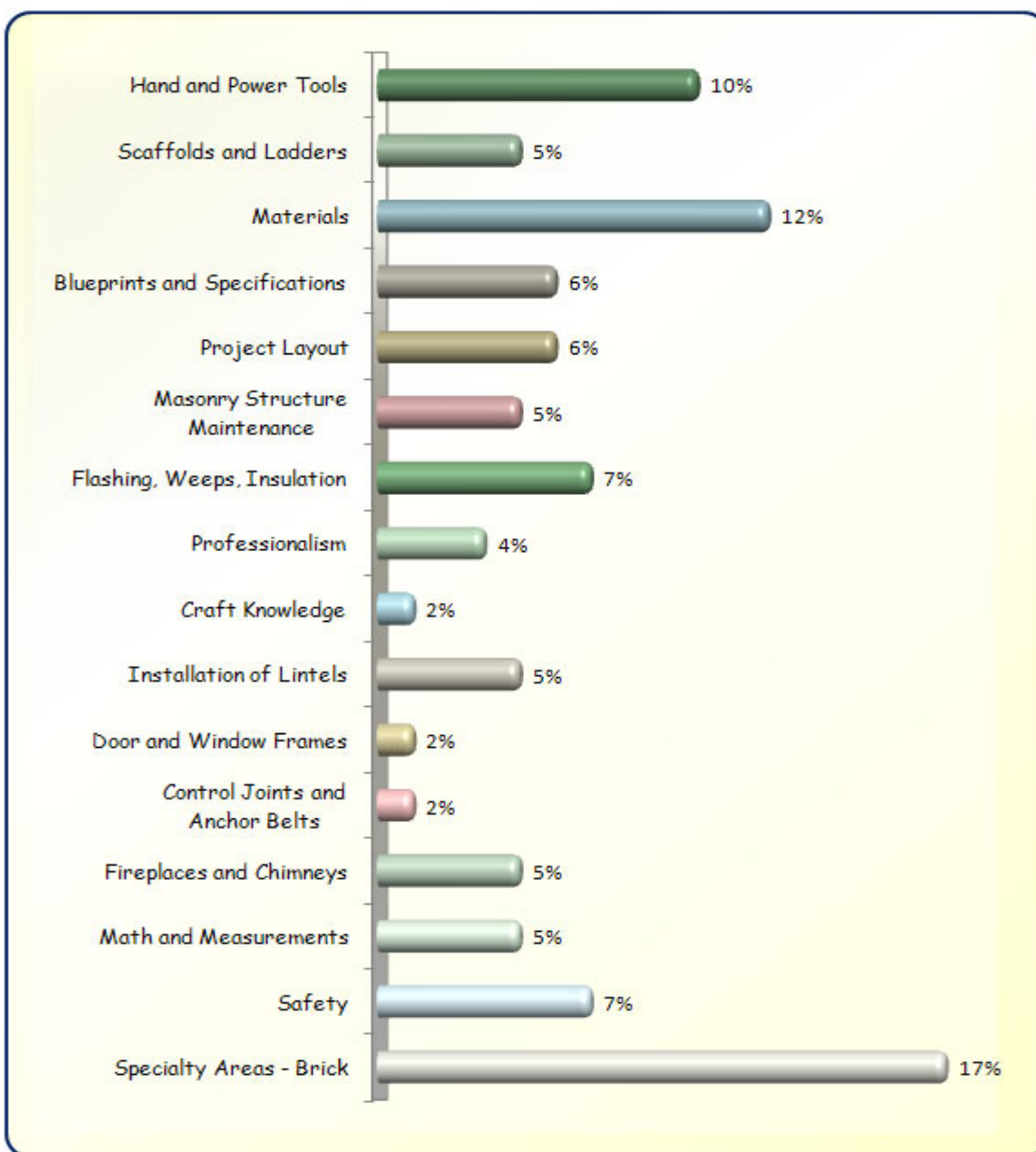


Written Assessment:

Administration Time: 4 hours

Number of Questions: 166

Areas Covered:



Sample Questions:

How should a level be checked for accuracy?

- A. Hold it up against a straight edge.
- B. Reverse the level on a straight edge.
- C. Sight it with the eye.
- D. Send it back to the factory.

Which combination of numbers would be used to layout a square corner on a batter board?

- A. 2, 3, 4
- B. 3, 4, 6
- C. 5, 8, 6
- D. 6, 8, 10

When working in a trade, an apprentice must have

- A. speed and skills
- B. speed and coordination
- C. an attentive ear and a watchful eye
- D. an attentive ear and creativity

What is the volume of a Portland bag of cement?

- A. 1 cubic yard
- B. .75 cubic feet
- C. 1 cubic foot
- D. 97 pounds

What is the actual size (dimension) of a modular face brick?

- A. $3\frac{1}{2}$ inches x $2\frac{1}{2}$ inches x 8 inches
- B. $2\frac{1}{2}$ inches x $3\frac{1}{2}$ inches x $7\frac{1}{2}$ inches
- C. $3\frac{5}{8}$ inches x $2\frac{5}{8}$ inches x $7\frac{1}{2}$ inches
- D. $2\frac{1}{4}$ inches x $3\frac{5}{8}$ inches x $7\frac{5}{8}$ inches



Performance Assessment:

Administration Time: 2 hours and 50 minutes, allow an extra 10 minutes for pre-test preparation

Number of Jobs: 3

Areas Covered:

27% Job Layout

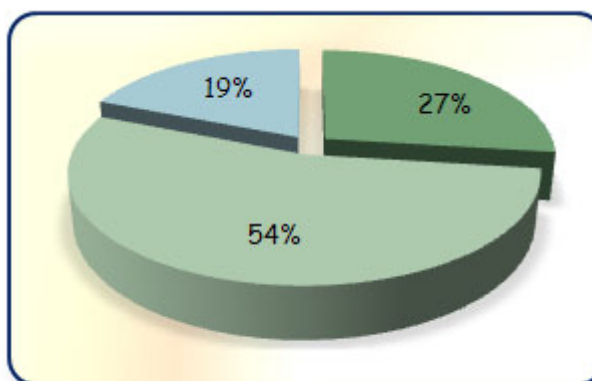
Selection and safe use of tools, project length measured according to drawing specifications, squared the project, and timeliness of job.

54% Build a Brick Wall/Pier

Tempering mortar to proper consistency, bricklaying technique, corners are plumb, pier and wall are square and in range, stayed on coursing dimensions, fullness of joints, maintained proper half-bond, and timeliness of job.

19% Project Jointing

Jointing, overall project appearance, and timeliness of job.



Sample Job: Construct a Brick Wall/Pier in Stretch Bond

Maximum Time: 2 hours

Participant Activity: The participant will lay out appropriate masonry units according to drawing specifications. Re-square the corners on the 1st course. Check the course height (with each course). Level, plumb, and range each course. Tie the front wall to the pier on the 2nd and 4th courses with metal ties.



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.