

Pilot Assessment

Content is Subject To Change Prior to Full Implementation



HBI Pre-Apprenticeship Certificate Training (PACT) Residential Construction Principles

NOCTI

CUSTOMIZED ASSESSMENT BLUEPRINT

PACT Residential Construction Principles - PILOT

Test Code: 9982

Version: 01

Specific Competencies and Skills Tested in this Assessment:

Blueprints Measurements Math

- 2.2.1 Identify dimensions, lines, scales, symbols, the title block on a blueprint, and notes.
- 2.4.1 Read a rule to the nearest 16th of an inch.
- 2.5.1 Add and subtract measurements.
- 2.5.4 Calculate square foot and linear foot measurements.
- 2.6.2 Calculate decimals using addition and subtraction.
- 2.7.4 Calculate fractions using multiplication and division.
- 2.7.7 Calculate mixed numbers by using addition, subtraction, multiplication, and division.
- 2.8.2 Calculate whole numbers using multiplication and division.
- 2.8.3 Use whole number to determine material dimensions needed for difficult or unusually shaped areas.
- 2.9.2 Calculate a percentage of a given number.
- 2.10.4 Use the Pythagorean Theorem to calculate hypotenuse (right angle or square) of a triangle.
- 2.11.1 Solve job-related problems by adding, subtracting, multiplying, and dividing numbers, using fractions, decimals, and whole numbers.

Construction Materials

- 9.1.2 Select appropriate tools and determine appropriate types of materials needed.
- 9.1.3 Demonstrate the ability to recognize proper fasteners/brackets.
- 9.2.2 Select appropriate tools and determine appropriate types of materials needed.
- 9.3.2 Select appropriate tools and determine appropriate types of materials needed.
- 9.5.3 Demonstrate the ability to recognize and troubleshoot soil and erosion problems.
- 9.7.2 Select appropriate tools and determine appropriate types of materials needed.

PACT Residential Construction Principles - PILOT (continued)

Employability

- 1.4.9 Create a resumé.
- 1.4.11 Practice and interview for a job.
- 1.5.5 Utilize critical thinking to make sense of problems and persevere in solving them.
- 1.5.7 Use technology to enhance creativity and productivity.
- 1.5.10 Arrive for work on time.
- 1.5.13 Describe the characteristics of a qualified person.
- 1.6.1 Identify the traits of an effective team.

Fast Adhesive Sealant

- 7.1.1 Differentiate types of nails, screws, anchors, and bolts.
- 7.2.1 Identify and describe uses for types of common construction adhesives.

Job Site Safety

- 5.1.3 Identify safe work practices.
- 5.2.3 Identify safety hazards and immediately inform a supervisor.
- 5.2.12 Comply with all applicable OSHA rules and regulations.
- 5.3.1 Select and wear proper safety attire on the job site including personal protective equipment (PPE).
- 5.3.2 Wear ANSI Z-87-approved safety glasses at all times while working.
- 5.3.7 Wear fall protection and connect to correct anchor points.
- 5.3.10 Describe the proper use and limitations of personal respiratory protection.
- 5.5.4 Recognize fire class labels.
- 5.5.7 Perform a fire drill.
- 5.6.1 Identify hazardous conditions associated with chemicals/supplies.
- 5.6.5 Describe safe handling of chemicals and hazardous materials.
- 5.6.6 Identify and locate the Safety Data Sheets (SDS) and follow the procedures as necessary.
- 5.6.7 Identify pictograms used on SDS forms.
- 5.7.2 Identify and describe the use of Ground Fault Circuit Interrupters (GFCIs).
- 5.8.2 Identify the safety hazards for internal combustion (gas) engines.
- 5.9.2 Identify and use first aid equipment.
- 5.9.3 Demonstrate how to control bleeding.
- 5.10.3 Follow all safety regulations for job site vehicles.

Temporary Platform Safety

- 6.1.2 Describe the methods to safely erect and dismantle scaffolds and platforms.
- 6.1.4 Identify and explain types of fall protection for scaffolds elevated above 6 feet.
- 6.2.1 Describes OSHA rule for proper ladder set up.
- 6.2.9 Inspect ladders before each use.
- 6.2.13 Describes OSHA rule for proper ladder set up.

PACT Residential Construction Principles - PILOT (continued)

Tool Selection, Use, Care

- 8.1.1 Identify and select the correct hand tool for a task.
- 8.1.4 Identify the various types of layout tools and procedures.
- 8.2.2 Identify types of pliers and wrenches and demonstrate proper use.
- 8.2.8 Demonstrate use of gauges and squares.
- 8.3.1 Identify and select the correct power tool for a task.
- 8.3.4 Identify proper grounding and insulation in power tools.
- 8.4.1 Demonstrate proper use of power saws.
- 8.4.2 Demonstrate proper use of drills.
- 8.4.11 Demonstrate proper use of impact tools.

Written Assessment:

Administration Time: 1 hour and 15 minutes

Number of Questions: 60

Areas Covered:

- 20% Blueprints Measurements Math
- 10% Construction Materials
- 12% Employability
- 3% Fast Adhesive Sealant
- 30% Job Site Safety
- 8% Temporary Platform Safety
- 17% Tool Selection, Use, Care

Sample Questions:

On a construction drawing, which type of line is typically used to indicate the extent of a dimension without touching the object itself?

- A. Dimension line
- B. Leader line
- C. Break line
- D. Grid line

A rectangular deck measures 15 feet by 10 feet. What is its area in square feet?

- A. 125
- B. 150
- C. 170
- D. 180

PACT Residential Construction Principles - PILOT (continued)

A project lists material cost of \$1,200. If the overhead is 15% and profit is 10%, what is the total contract amount?

- A. \$1,200
- B. \$1,380
- C. \$1,500
- D. \$1,620

Which fastener is generally best for exterior plywood seams to resist moisture and provide a strong hold?

- A. Roofing nails
- B. Wood screws
- C. Staples
- D. Glue

On a teamwork-focused job site, which soft skill most directly contributes to a reliable project schedule?

- A. Advanced math speed
- B. Clear communication
- C. Solo problem solving
- D. Fluency in a second language

Which PPE is specifically used to protect the eyes from flying debris during drilling or grinding?

- A. Hard hat
- B. Safety glasses
- C. Ear plugs
- D. Steel-toe boots

A tape measure shows 7 feet 3 1/2 inches. What is the length in inches only?

- A. 75 inches
- B. 87.5 inches
- C. 91.5 inches
- D. 93 inches

Which material is commonly used as the primary framing lumber in standard residential construction?

- A. 2x4 studs (actual 1.5 x 3.5 inches)
- B. 2x6 rafters
- C. 4x6 beams
- D. 6x6 posts

Which practice most improves accuracy before cutting or assembling components?

- A. Cutting first, then measuring
- B. Verifying measurements twice and marking clearly
- C. Asking another person to guess
- D. Skipping measurements if time is short

PACT Residential Construction Principles - PILOT (continued)

What is the primary purpose of a lockout/tagout procedure on equipment?

- A. To speed up maintenance
- B. To ensure machines are properly powered down to prevent accidental startup
- C. To label tools for inventory
- D. To organize workspaces