

Entry Level Assessment Blueprint

Architectural Drafting



Specific Competencies and Skills Tested in this Assessment:

Preparing to Draw

- Identify drafting tools and equipment (including CAD)
- Identify and select paper sizes/types, and determine scale and layout
- Identify various line types



Geometric Construction

- Construct and manipulate geometric elements
- Construct and manipulate lines, arcs, and angles

Applied Mathematics

- Demonstrate knowledge of basic mathematical operations
- Perform calculations involving fractions, decimals, and percents
- Demonstrate knowledge of geometry
- Demonstrate knowledge of trigonometry with respect to pitch, rise, and run
- Calculate measures, area, and volume
- Convert scales

Drawing Techniques - Supplementary Views

- Identify pictorial drawings (e.g., perspective)
- Demonstrate knowledge of schematic diagrams
- Demonstrate knowledge of orthographic drawings
- Place dimensions and notes

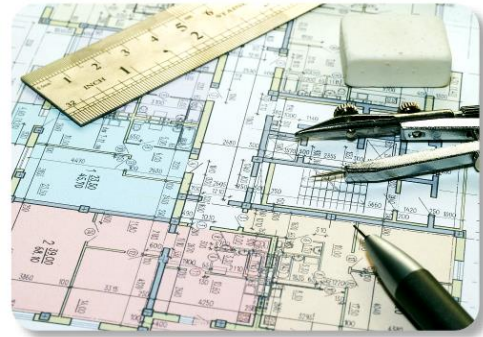
Planning

- Examine space relationships
- Identify types of house design (e.g., duplex, split level, ranch)
- Determine client needs
- Identify common construction material, properties, and use

Specific Competencies and Skills continued:

Architectural Drawing Types

- Identify architectural terms and symbols
- Identify and develop roof types
- Identify and develop floor plans
- Develop basement and foundation plans
- Identify kitchen and bath arrangements
- Develop interior and exterior elevations
- Develop a wall and a building section
- Draw architectural details



Site Plans

- Draw and dimension site plans
- Interpret landscape plans
- Interpret contours and topographical profiles
- Identify setbacks and easements
- Identify above- and below-ground utilities

Structural Drawings

- Draw structural details
- Identify framing and structural components

Mechanical and Electrical Systems

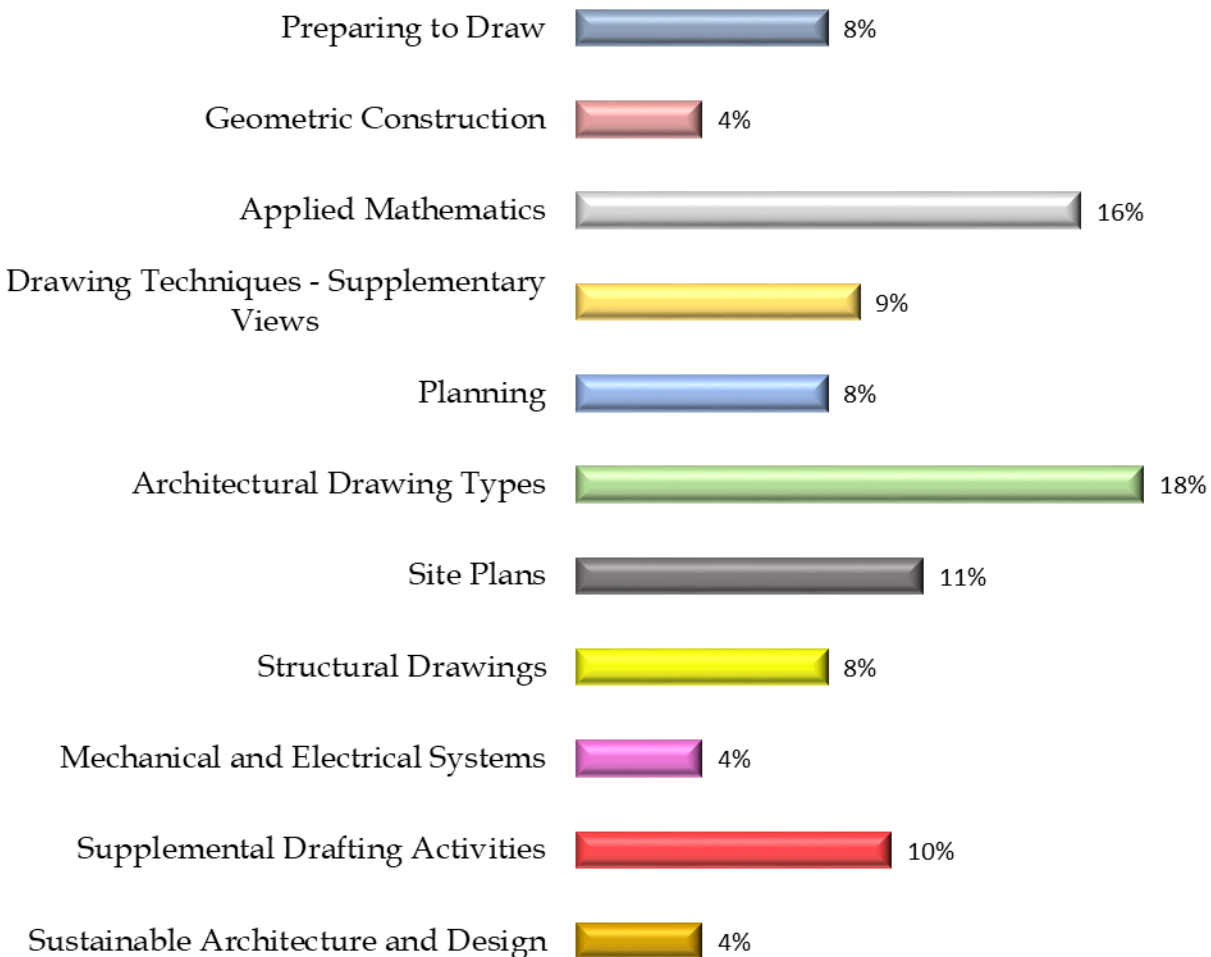
- Identify electrical terms, symbols, and components
- Identify plumbing terms, symbols, and components

Supplemental Drafting Activities

- Draw cover sheet and title block information
- Develop schedules
- Describe responsibilities of related parties (e.g., design professional, contractor)
- Identify basic ADA accessibility compliance regulations
- Recognize ordinances and local building codes

Sustainable Architecture and Design

- Identify various rating systems (i.e., LEED, R-Value)
- Recognize recyclable and “green” building materials and systems
- Identify various sustainable design systems
- Utilize site for solar/environmental considerations

Written Assessment:**Administration Time:** 3 hours**Number of Questions:** 152**Areas Covered:**

Sample Questions:

Bisecting a line creates a second line that is _____ to the original line.

- A. parallel
- B. tangent
- C. perpendicular
- D. horizontal

What is the minimum landing depth required for an entrance door to meet ADA regulations?

- A. 24 inches
- B. 36 inches
- C. 48 inches
- D. 60 inches

A landscape plan uses much of the same information as a _____ plan.

- A. structural
- B. plumbing
- C. plot
- D. floor

In a right triangle, the tangent of an acute angle is equal to the

- A. opposite side divided by the hypotenuse
- B. adjacent side divided by the hypotenuse
- C. adjacent side divided by the opposite side
- D. opposite side divided by the adjacent side

Where can detailed information for windows and doors be found?

- A. Bill of Material
- B. rendering
- C. schedules
- D. compass rose

Performance Assessment:

Administration Time: 4 hours and 15 minutes

Number of Jobs: 3

Areas Covered:

17% **Construction Components**

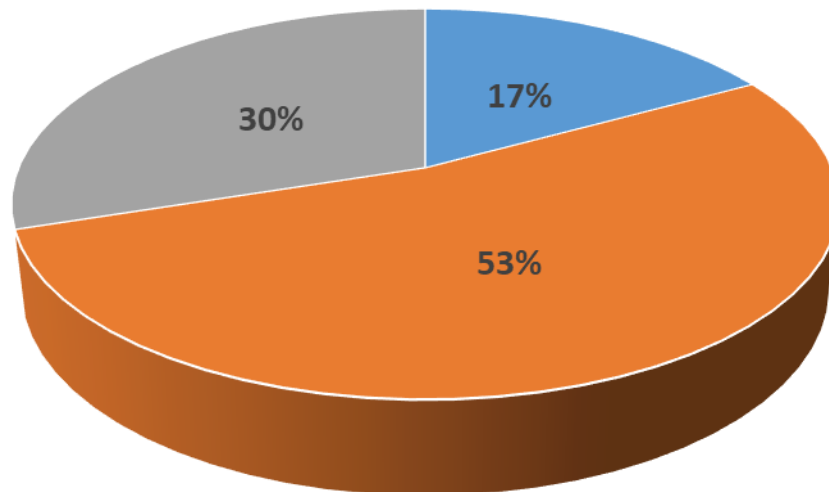
Participant will match the number in the diagram of construction components with corresponding term.

53% **Kitchen and Bathroom Floor Plan**

Participant will create the correct drawing of the kitchen and bath layout, sheet size, line work, dimensions, and notes.

30% **Front Elevation**

Participant will create a front elevation using a plan view and wall section to a correct scale and present final project in digital or hard copy format.



Sample Job: Kitchen and Bath Floor Plan

Maximum Time: 1 hour and 30 minutes

Participant Activity: Each participant will redraw the kitchen/bath plan according to specifications. The final project will be presented in digital or hard copy format.

