Free IBEW Aptitude Test Applicant Guide

What to expect, what to study, and how to prepare

Prepared by iPREP as a free, non-promotional applicant resource.

69	97	No	2
questions	timed minutes	calculator	sections

How to use this guide

Review the test structure, study the math and reading examples, then use the final page to plan timed practice before test day.

What the test measures

The exam measures algebra/functions and reading comprehension. You are not expected to know wiring, electrical code, tools, or jobsite procedures.

Where this fits in the application process

1. Choose local/track
2. Meet prerequisites
3. Apply + docs
4. Aptitude test
5. Interview
6. Ranking/list

Test structure

Section	What it measures	Questions	Time
Algebra and Functions	Equations, patterns, functions, algebraic reasoning	**33**	**46 min**
Reading Comprehension	Understanding and using information from written passages	**36**	**51 min**

Scoring and results

Many local programs describe a 1 to 9 score scale, and 4 or higher is often used as a qualifying result for the interview stage. Local requirements and score reporting can vary. Some applicants are simply told whether they qualified.

If you qualify, the interview and a review of your qualifications usually help determine your ranking on the eligibility list.

Test-day basics

Bring a valid photo ID. Pencils and testing materials are typically provided. Calculators are not permitted. There is no penalty for guessing, so make an educated guess instead of leaving a question blank.

The full appointment may take longer than the 97 timed minutes because of check-in, instructions, and the short break.

Algebra and Functions

Expect algebra, functions, and pattern reasoning - without a calculator.

What to study

- Operations, signs, fractions, ratios
- Exponents and roots
- No-calculator arithmetic
- Linear equations
- Algebraic expressions
- Quadratics and factoring
- Function notation
- Tables and graphs
- Variable relationships
- Number sequences

Practice watch-outs

- Write each step; do not solve everything mentally.
- For factoring, multiply choices back if stuck.
- For functions, plug x-values into each rule.
- For sequences, test differences and operations.

Sample 1 - Number Series

What is the next number? 8, 13, 21, 32, 46, ___

A. 60
B. 63
C. 64
D. 68

Correct: B

The differences are +5, +8, +11, +14. The change increases by 3 each time, so the next difference is +17. 46 + 17 = 63.

Sample 2 - Quadratic Factoring

Solve: x^2 - 7x + 12 = 0

A. 2 and 6
B. 3 and 4
C. -3 and -4
D. 0 and 12

Correct: B

Factor x^2 - 7x + 12 as (x - 3)(x - 4). The product is zero when x = 3 or x = 4.

Sample 3 - Function Table

A table has points (-1,5), (0,2), (1,-1), (2,-4). Which rule fits?

A. y = x + 2
B. y = -3x + 2
C. y = 3x - 1
D. y = -x + 4

Correct: B

As x increases by 1, y decreases by 3. The rule has slope -3 and y-intercept 2, so y = -3x + 2.

Sample 4 - Polynomial Simplifying

Which expression is equivalent to (x + 2)(x - 5) + 3x?

A. x^2 - 10
B. x^2 - 6x - 10
C. x^2 + 10
D. x^2 - 3x + 10

Correct: A

Expand: x^2 - 3x - 10. Add 3x, so the x-terms cancel. Result: x^2 - 10.

Math strategy

Study IBEW-style algebra, not general math only. Use a repeatable workflow: write steps; for quadratics, look for factors that multiply to the constant and add to the middle coefficient; for function tables, check whether y changes at a constant rate; for sequences, write the differences first. After topic drills, complete timed sets. At least once before test day, practice the full math timing: 33 Algebra and Functions questions in 46 minutes. Review mistakes by type: setup, factoring, functions, sequences, timing, or careless errors.

Reading Comprehension

Choose answers that are supported by the passage - not outside knowledge.

Reading strategy

First, identify the question type. Then return to the passage and find evidence before choosing an answer.

Answer watch-outs

Avoid choices that sound reasonable but are unsupported, too extreme, based on one small detail, or opposite to the passage.

Sample reading passage

Electrical apprenticeships combine classroom instruction with on-the-job training. In class, apprentices learn concepts such as safety practices, electrical theory, blueprint reading, and code requirements. On the job, they see how those concepts are applied under the supervision of experienced workers.

Success in an apprenticeship depends on more than learning quickly. Apprentices are expected to arrive on time, follow instructions, ask questions when unsure, and take safety seriously. A person who is dependable, careful, and willing to improve is more likely to succeed over time.

Main Idea

What is the main idea of the passage?

A. Classroom lessons are enough.

B. Applicants need electrical experience.

C. Learning, training, and work habits.

D. Safety matters only later.

Correct: C Choice C covers the whole passage. It includes classroom learning, supervised job training, safety, dependability, and improvement.

Inference

Which trait would most likely help someone succeed as an apprentice?

A. Avoiding questions

B. Ignoring safety if fast

C. Depending only on class

D. Dependable and open to improvement

Correct: D The passage supports arriving on time, following instructions, asking questions, taking safety seriously, and improving over time.

Best habit

For every answer, ask: Where is the evidence? If you cannot point to support in the passage, eliminate the choice.

Study Plan and Test-Day Checklist

Turn the guide into a simple, timed preparation plan.

If you have 14 days to prepare

1-2 Diagnose

Try a small mixed set and note what slows you down.

3-5 Core algebra

Review signed numbers, fractions, equations, exponents, and roots.

6-8 Quadratics & functions

Practice factoring, function notation, tables, graphs, and sequences.

9-10 Reading

Use the passage as evidence; practice main ideas, details, and inferences.

11-13 Timed practice

Do timed mixed sets and one full simulation before test day.

14 Light review

Review missed questions. Do not overload the night before.

Full timed simulation

At least once, simulate the real timing: 33 Algebra and Functions questions in 46 minutes, short break, then 36 Reading Comprehension questions in 51 minutes. Afterward, review mistakes by type - algebra setup, factoring, functions, reading details, timing, or careless errors.

Before the test

- [ ] Confirm date, time, and location.
- [ ] Bring a valid photo ID.
- [ ] Arrive early.
- [ ] Do not bring a calculator.
- [ ] Eat beforehand and get enough sleep.
- [ ] Arrange accommodations in advance if needed.

During the test

- [ ] Read each question carefully.
- [ ] Watch for negative signs and parentheses.
- [ ] Do not spend too long on one problem.
- [ ] Eliminate wrong answers when possible.
- [ ] Guess if you are unsure.
- [ ] Keep moving steadily.

After the test

Your local JATC or training center usually receives the results and notifies you about next steps. If you qualify, you may be invited to an oral interview. The interview, application materials, education, work history, and other qualifications may affect your ranking on the eligibility list. Retake rules vary by program, so verify current rules with your local program.

Source notes and independent resource disclosure

Source notes: Fact-checked against publicly available applicant information from the electrical training ALLIANCE and local IBEW/JATC aptitude-test guidance. Local requirements may vary.

Independent resource disclosure: This guide was prepared by iPREP as a free educational resource. iPREP is an independent test-preparation company and is not affiliated with, endorsed by, or sponsored by IBEW, NECA, the electrical training ALLIANCE, NJATC, any local JATC, or any local union/training center. Always verify requirements with your local apprenticeship program.