

Seattle City Light Lineworker Written Exam Preparation Guide

The written exam contains multiple-choice test items from which you must choose the correct answer from four choices. Various sections of the test are designed to measure different attributes required of people who work in the Lineworker positions. Test sections included are: (1) Word Problems, (2) Math and Algebra, and (3) Mechanical Problem Solving.

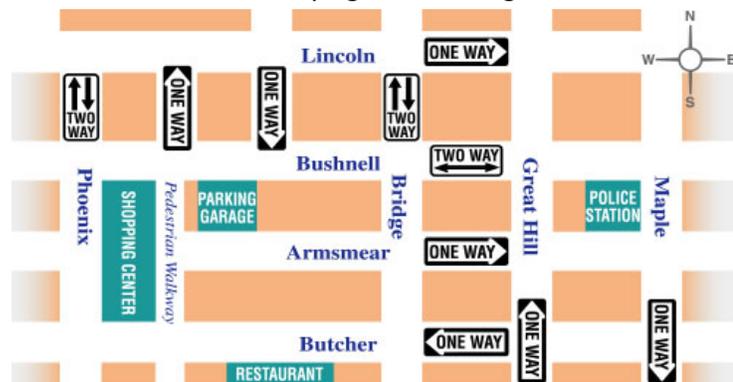
The following samples indicate some of the abilities that are needed of Lineworker employees and examples of how those abilities are measured during testing:

(1) Word Problems (Samples):

Ability to read, understand, and use basic written English (e.g., apprenticeship training materials).

Ability to read, understand, and use maps and/or directions to find specific locations and navigate to those locations with minimal loss of travel time. Also includes the ability to determine alternative routes (such as when there is traffic or obstructions) and to choose the most appropriate route based on a variety of factors (e.g., distance, time, travel limitations) and to direct others to that same location.

- The two-way radio shall be used by Company personnel only for short, essential messages. Comments added as an expression of courtesy, such as thank you, you're welcome, and please shall not be used. Personal radio messages are prohibited. According to this passage, which of the following four options is true? (As previously mentioned, you would choose one of four options during testing).
- A truck is located at the north entrance of the restaurant on Butcher and must reach the entrance to the police station on Maple. According to the map below, what is the most direct route the truck can take while obeying all traffic signs?



(2) Math and Algebra (Samples):

Ability to perform calculations involving basic math (e.g., adding, subtracting, multiplying, and dividing; working with fractions, decimals, and percentages; taking averages; solving word problems that can be represented as arithmetic problems).

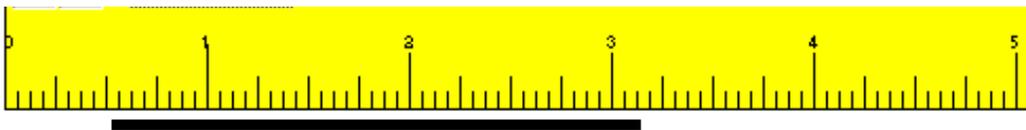
Knowledge of basic electrical theory and applied math, such as Ohm's law, loading, and series/parallel circuits.

Ability to solve algebraic equations (equations with one or more unknown variables), systems of algebraic equations (more than one equation with more than one unknown variable), and word problems that can be represented as algebraic equations.

Ability to perform acceptably in academically-oriented environment (e.g., attending and successfully completing training/educational classes, such as, but not limited to, algebra and trigonometry, as part of the apprenticeship program).

Ability to use simple measuring devices and/or gauges; including, but not limited to, measuring, recording, and using distances using a tape measure and/or other mechanical devices; to understand and accurately apply information obtained from those devices (e.g., rulers, gauges, meters).

- A piece of wood is three-and-a-half feet long. How many total inches long is it?
- $X + 2 = 10$. What is the value of "X"?
- What number is 50% less than 200?
- What is the average of the following four numbers? 22, 47, 56, 25
- According to the ruler shown here, how long is the black line just below the ruler?

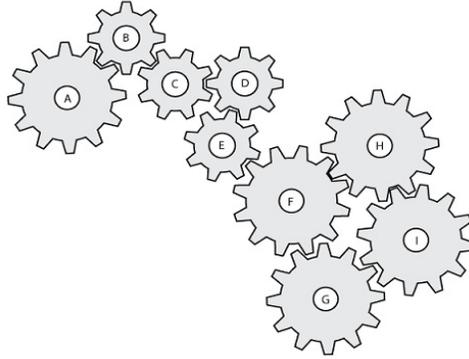


(3) Mechanical Problem Solving (Samples):

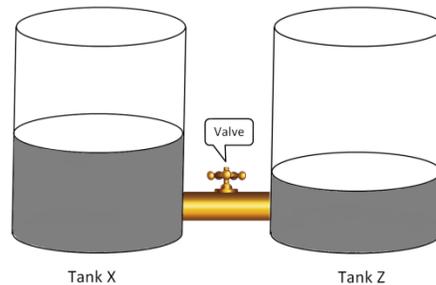
Ability to solve practical problems (troubleshoot) based upon knowledge of mechanical, physical, and electrical principles. Can include concepts such as, but not limited to, momentum, leverage, pulleys, fluid dynamics, gears, and balancing.

Ability to learn, understand, and interpret mechanical/electrical engineering data necessary to effectively implement predictive, preventive, corrective, and improvement activities.

- What will happen to Gear C in the figure below if Gear F is rotated to the right?



- Each of the two identical tanks in the diagram below contain water. There is a pipe that allows the water to flow freely when the valve between the tanks is opened. The valve is currently closed. What would occur if the valve was opened?



- You are directed to paint a floor in a room that is five feet wide and ten feet long. How many square feet of the flooring will you be painting?
- You are sitting in a house and both of the light bulbs in the living room suddenly go out. You also notice that none of the other lights in the house are on and the refrigerator in the kitchen is not running. What is the most appropriate next troubleshooting step in order to figure out how to turn your lights back on?

General Testing Hints

Get sufficient rest the night before you take the test. Studies show that lack of sleep can result in reduced test performance.

Carefully read and/or listen to the test instructions before you begin answering the test items.

Answer items that are easier to you first, and then go back to answer the more difficult items. That being said, please make certain the answer you indicate for each question is in the correct place on the answer sheet.

Read the entire question carefully and try to answer it before you read the answer choices. This way, you may be less confused than if you read the possible answer choices first.

Read all of the alternatives offered before you choose the correct alternative. If you are not sure of the correct answer, try eliminating those alternatives you believe are truly incorrect and then choose from the remaining alternatives.

At the end of the test go back to make sure you did not fail to answer any of the items on the test. If in doubt about which is the correct answer, it is better to guess than to leave the answer blank! You will not receive credit for any test item for which you fail to provide an answer.

Good Luck!