



# Study Guide

for

**CWH *Next Generation* Entry-Level  
Firefighter/EMT Aptitude Test**

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## Comments from Fire Service Professionals about the Job



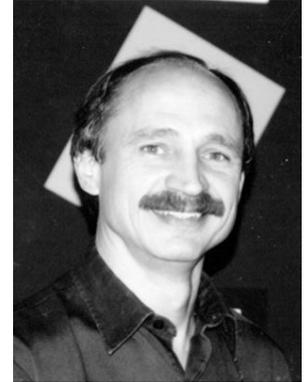
Dwayne Gibbs  
Equipment Operator / Paramedic



Naomi Nutler  
Firefighter/EMT



James Jiron  
Driver Engineer



Ken Holland  
Lieutenant

### What Are The Most Important Qualities Of Being in the Fire Service?

"Honesty, integrity, and a genuine desire to serve the community. When you are solving problems, people want you to be genuinely concerned. You have a public image, and your work must come from the heart." – Ken Holland

"Honesty, sincerity, compassion, trust, and a good sense of humor." – James Jiron

"Being team oriented is very important on the fire ground and in the station. Having compassion is important when dealing with the public. Also, being trustworthy, dependable, and a hard worker." – Naomi Nutler

"Being selfless and self-motivated and able to get along well with others." – Dwayne Gibbs

### What Can a Candidate Do to Prepare for a Career in the Fire Service?

#### *Physical Preparation*

"Run 3 – 5 miles daily with hills and stairs included, and do regular weight training." – Dwayne Gibbs

"Start a strength training and cardiovascular program to get in top shape." – Naomi Nutler

#### *Emotional Preparation*

"Enlist the support and prayers of family members and friends." – Dwayne Gibbs

"Live cleanly. Firefighters still wear a white hat." – Ken Holland

#### *Mental Preparation*

"Visit a fire station and talk with firefighters about the job. You can also take Firefighter I and II at a community college to get a feel for the job, and see what it entails." – Naomi Nutler

"Learn and become proficient at study techniques, get to know a firefighter and gather insight and information needed to help you prepare, and buy and study test preparation manuals." – Dwayne Gibbs

"Talk to firefighters about the job. Also, an education is fast becoming the standard for promotions on the job. A degree can be a 'leg-up' on the competition." – James Jiron

### What Do You Like About Being In The Fire Service?

#### *Serving the Community*

"You have the potential to help people and solve problems. Regardless of who they are and where they live, people's fears of losing their homes and belongings are the same, and you are helping them solve their problems." – Ken Holland

"The sense of fulfillment, the fact that the general public looks upon us very favorably. It is very interesting because we see things most people never see. I like the fact that my job is protecting citizens in the community. I enjoy fighting fires." – Dwayne Gibbs

#### *Being Part of the Firefighting Family*

"Being a firefighter is like having a second family. You work with people you truly enjoy being around." – James Jiron

#### *The Challenge*

"You are able to grow on a personal level. The job gives you direction. There are no limits placed on someone coming into the profession. The only limits you have are the ones you place on yourself." – James Jiron

"The job is a mental challenge – you must think on your feet. There is something different every day." – Ken Holland

"What I like about being a firefighter is the unique and various situations that we respond to on a day to day basis. This job is not boring! It is a pleasure to come to work and anticipate the events that may unfold." – Naomi Nutler

## Purpose of the Study Guide

This study guide is a tool to help you prepare for the written test. It does *not* contain information that you must memorize. The test measures your skills and aptitude *to become* a firefighter, which means that you do not have to know or memorize any particular job-related information to do well. In fact, you could take the test and do well without reading this study guide; however, you will be better prepared and likely be less nervous if you review the information provided in this study guide before you take the test.

## Skills and Abilities Measured on the Test

The test covers several critical areas that have been found to be important for firefighters. The list below defines these areas and provides examples of specific skills and abilities measured. It also provides examples of duties that firefighters perform that require or use the skills being measured within each area.

1. **Practical Skills** refer to the ability to handle everyday challenges and situations. Firefighters must be able to use good judgment and common sense, think clearly, quickly, and logically, and identify, analyze, and solve problems in complicated situations.

### Types of Skills

- Use of good judgment
- Common sense
- Problem-solving

### Related Firefighter Duties

- Classify unclear situations as either threatening or harmless.
- Screen available information for relevance when making judgments.
- Make quick and sound decisions under pressure, and in situations that are dynamic, tense, and rapidly evolving.

2. **Interpersonal Skills** refer to the various abilities required to relate well and get along with others. Firefighters should demonstrate empathy, courtesy, a customer service orientation, and an ability to interact effectively with supervisors, co-workers, and others in daily work and communal living situations. Firefighters must be able to work cooperatively with diverse groups of people within the department and in the area in which they serve.

### Types of Skills

- Compassion
- Teamwork
- Acceptance of diversity

### Related Firefighter Duties

- Show sympathy and support to victims of fires or other tragedies and to firefighters who are facing difficulties.
- Be able to get along with others in a community living situation.
- Work and interact with individuals from diverse cultural backgrounds.

3. **Emotional Outlook** refers to the ability to recognize and deal effectively with the emotions of one's self and others, handle problems and challenges with appropriate emotional responses, and act confidently and effectively in situations that are challenging, stressful, or dangerous. Firefighters must be committed to maintaining high standards of ethical conduct and be dependable in meeting commitments and work hard to complete assigned tasks.

### Types of Skills

- Respect for authority
- Work ethic
- Handling stressful situations
- Ethics

### Related Firefighter Duties

- Identify and follow the proper chain of command.
- Stick to tasks even when they are difficult, lengthy, or monotonous.
- Work effectively under stressful conditions.
- Maintain confidentiality in the performance of duties.

4. **Basic Educational Skills** refer to measures of acquired knowledge. Firefighters must have these abilities to succeed in an academy and on-the-job training, and must be able to comprehend, learn, retain, and present the information necessary for performing the job.

### Types of Skills

- Reading Comprehension
- Writing
- Mathematics

### Related Firefighter Duties

- Understand Fire Service manuals, fire codes, and department operating policies.
- Complete logs, forms, reports, and narratives to describe incidents, and write memos, letters, and correspondence.
- Calculate required settings on equipment to accomplish goals.

The test may also contain a section that measures mechanical aptitude.

5. **Mechanical Aptitude** refers to the ability to understand and learn physical and mechanical concepts. Firefighters must be able to conceptualize these principles in order to carry out the technical aspects of the job.

### Types of Skills

- Use of leverage and force
- Workings of gears and pulleys
- Reading gauges

### Related Fire Fighter Duties

- Make forcible entries into buildings using appropriate tools and techniques.
- Determine the stability of roof, floor, and other supporting structures.
- Operate and monitor aerial ladder devices, pumping apparatus, and the tiller.
- Rescue trapped victims using manual tools (such as pry bars and ram bars) and powered mechanical tools (such as drills, hydraulic spreaders, jacks, etc.).

## Types of Questions on the Test

The test contains multiple-choice questions which assess the skills and abilities listed on page 4 of this study guide. There are three types of test questions (described below). Each question may have as few as two or up to five answer choices. Some questions may have pictures, diagrams, or graphs that you must interpret or use in order to determine an answer. You may refer to the Sample Questions beginning on page 10 for examples of each of these types of questions.

### **Factual Questions**

Many of these questions may look very similar to questions on other types of tests that you have taken. They ask for factual information such as the answer to a math problem or the correct way to punctuate a sentence.

### **Situational Questions**

These questions ask you to interpret and respond to various situations related to an event or subject. On a multiple-choice test, it is impossible to list all of the different ways that a person could interpret and respond to a particular situation. For these types of questions, you should choose the response which is closest to how you would respond, even if it is not exactly what you would do or think.

These types of questions describe typical and everyday situations that have been experienced by individuals across age, gender, ethnicity, religion, region, or other background or experience. If a given situation is not familiar to you, try to place yourself in the situation, or remember a situation you have been in that was similar to the one being described, and choose the response (or responses) that you think is most reflective of what you would do.

Some of these questions may trigger an emotional reaction. They are not intended to make you feel uncomfortable or offend you in any way. They are, however, intended to assess how you would respond to a variety of real-life situations, many of which can be highly emotional in nature. Remember that while you may not completely agree with the answer choices provided, you should pick the answer that is the closest to how you would respond.

### **Questions about You**

These questions ask how you feel or think about a specific topic, or ask you to describe yourself in some way. The best way for you to answer these questions is to think about your own experiences and skills, and answer the questions honestly and thoughtfully.

## Test Language

The language used on the test was reviewed and approved by current fire service experts and individuals from diverse demographic groups. It uses standard, conversational English, and every effort was made to eliminate slang. In the interest of avoiding the use of awkward constructions such as *he/she* and *he or she*, the questions alternate between *he* and *she*. In other words, some questions refer to *your boss...he said*. Other questions refer to *your boss...she said*. Some questions may refer to specific demographic groups in order to provide situational context. When referring to racial or ethnic groups, the test uses the terms Asian, Black, White, Hispanic, Middle Eastern, and Native American.

# Study and Preparation Tips

## Tip #1

### Assess your strengths and weaknesses.

After reading this study guide, make a list of your strongest and weakest areas. Think about the skills and abilities that are required for the job and try to assess how well you meet those requirements.

## Tip #2

### Plan and prioritize.

Develop a plan for improving your weak areas by prioritizing what concepts, information, or material you should study. Then decide what will be your best method to study them. For example, some people find it helpful to set aside time alone and away from distractions to study. For others, it is helpful to study with a friend or in a group. Visual learners may want to read information or use flash cards. Auditory learners may need to speak out loud or use audio cassettes. Determine what works best for you and establish a plan to follow it through.

## Tip #3

### Brush up on basic skills.

The test will measure your basic competence in Reading, Writing, and Mathematics. To improve your reading skills, you might consider setting aside time to read everyday. Practice active reading by asking yourself questions as you read, such as: What do I think about this? What is the point of this article or story? Reading could also improve your writing skills because you will become familiar with grammar, punctuation, and sentence flow and construction. To improve your math skills, you might consider visiting local colleges to participate in programs that they may offer.

## Tip #4

### Practice taking tests.

Taking tests successfully is a skill, too. Some studies have found that many people do not perform well on tests because the test-taking experience is unnatural, unfamiliar, or intimidating. Also, if you did not do well on tests in school, you may have negative expectations that prevent you from doing well. Try going to a local college learning center or advisor and ask about opportunities to take different types of tests. You can also read and study in "test-like" conditions, such as at the library, to become familiar with the test-taking environment.

## Tip #5

### Develop and maintain a positive attitude.

The key to success is to believe in yourself. If you have confidence, set realistic goals, and do the work necessary to achieve them, *you can be successful*.

# Test-Taking Tips

## Tip #1

**Be prepared, rested, and calm.**

Reading this study guide is a good way to prepare for the test. Get plenty of rest the night before the exam. Arrive early - rushing will needlessly increase your anxiety. You can also do some breathing or relaxation exercises right before the exam.

## Tip #2

**Read, listen, and follow all instructions.**

If you do not follow all instructions exactly, you may not score well on the test. Many studies have shown that people who score low on tests often have failed to follow directions.

## Tip #3

**Read each question carefully.**

Mistakes can occur when a question is read too quickly or only partially. It is in your best interest to read all questions completely before choosing a response. Likewise, you should read all possible answer choices before deciding on a particular response.

## Tip #4

**Choose only once response for each item.**

A question may have as few as two or up to five answer choices from which to choose. Be sure you read all choices before deciding. Choose one answer. You will lose points if you select more than one answer choice.

## Tip #5

**Keep an even pace.**

You should try to maintain a pace that will allow you to devote enough time to each question so that you can finish the entire test. Do not spend too much time on any one question. If you find yourself re-reading or having difficulty with a given question, skip it and come back to it later.

## Tip #6

**Stay calm and don't give up.**

If you think that you are not answering the questions very well, or you are not sure how to answer the questions, keep going. Some questions may seem easier or more difficult than others. Skip questions that are too difficult and come back to them after you finish the rest of the test.

## Tip #7

**If none of the answers seems "right," pick the one that is "more right than the others."**

Some questions ask *What would you do?* or *What do you think?* It may be that none of the choices provided reflects what your actions or thoughts would be; however, in any given situation, there are ways to respond that are better or more appropriate than others. Choose the response that seems better than the other choices, even if it is not exactly what you would do.

## Tip #8

**Provide a response to all questions, even if you are unsure about the correct answer.**

You do not have a chance to get a correct score on a question if you do not answer it.

On the basic skills questions, such as Reading, Writing, and Mathematics, if you cannot determine the correct answer, you can usually eliminate one or more responses that you know are definitely wrong and then choose between the remaining alternatives.

On the situational and self description questions, if you are not sure how you would respond in a situation, follow your first impulse about what you would probably do.

## Tip #9

**Be yourself and be honest.**

In answering some questions, there may be a difference between how you think you "should" handle a situation and how you "would" actually respond in real life. You should keep the following point in mind:

### ***Important!***

It is in your best interest to answer questions *honestly* in order to accurately reflect your skills, abilities, and aptitude to become a firefighter.

## Example References

You are *not* required to study any specific material for the test.

The references provided below are examples of the types of reading and study material that are available to assist you in your test preparation. Please note that some of these references may go out of print or be replaced with newer editions before the printing of this study guide. Additionally, there may be other books and resources beyond those listed which cover similar topics and subject areas. For information on these and other resources, you may wish to visit your local library or bookstore.

### ENGLISH AND WRITING

1. **Easy English, Basic Grammar and Usage.** Bonet, Diana. Menlo Park, CA: Crisp Publications, Inc. 1993.
2. **English Made Simple, Revised Edition: A Complete, Step-by-Step Guide to Better Language Skills.** Waldhorn, Arthur and Zeiger, Arthur. Garden City, NY: Doubleday & Company, Inc. 2011.
3. **Rewrite Right! : Your Guide to Perfectly Polished Prose.** Venolia, Jan. 2011.
4. **Write Right! A Desktop Digest of Punctuation, Grammar, and Style.** Venolia, Jan. Berkeley, CA: Ten Speed Press. 2011.
5. **Writing that Works: Communicating Effectively on the Job.** Oliu, Walter, Brusaw, Charles, and Alred, Gerald. 2009.

### MATHEMATICS

1. **Everyday Math Demystified.** Gibilisco, Stan. 2012.
2. **Math for Civil Service Tests.** Sobanski, Jessika. 2007.
3. **Practical Math Success in 20 Minutes a Day.** Skill Builders. New York: Learning Express. 2012.

### READING

1. **501 Reading Comprehension Questions.** Skill Builders. 2010.
2. **Improving Reading Comprehension & Speed, Skimming & Scanning, Reading for Pleasure.** McGraw-Hill. 2001.
3. **Reading Comprehension Success in 20 minutes a day.** Chelsla, Elizabeth. 2012.

### GENERAL CAREER GUIDANCE

1. **Career Directions. The Path to Your Ideal Career.** Yena, Donna J. 2010.
2. **What Color is your Parachute? A Practical Manual for Job-Hunters & Career Changers.** Bolles, Richard Nelson. 2012.

### PRACTICAL SKILLS

1. **7 Kinds of Smart: Identifying and Developing Your Multiple Intelligences.** Armstrong, Thomas. 1999.

### FIRE SERVICE IN GENERAL

Use these resources for obtaining general information about the Fire Service and skills required for the job.

1. **Firefighter Career Starter 2E.** Masi, Mary. 2001.
2. **Firefighter Exam.** Learning Express. 2013.
3. **How to Prepare for the Firefighters Examinations.** Murtaugh, J. Hauppauge, NY: Barron's (Most Recent Edition)
4. **Master the Firefighter Exam.** Arco. DeAngelis, Therese. 2009.
5. **Master the Firefighter Exam.** Peterson. 2013
6. **McGraw-Hill's Firefighter Exams.** Spadafora, R. 2007.

### INTERPERSONAL SKILLS

1. **Charisma: Seven Keys to Developing the Magnetism that leads to Success.** Alessandra, Anthony. 2000.
2. **Effective Interpersonal Relationships.** Lucas, Robert W. Burr Ridge, IL. Irwin Professional Publishing 1994.
3. **Effective Listening Skills.** Kratz, Dennis M and Kratz, Abby Robinson. Burr Ridge, IL. Irwin Professional Publishing. 1995.
4. **The Hard Truth about Soft Skills.** Klaus, Peggy. 2008.
5. **The Lost Art of Listening.** Nichols, Michael. 2009.
6. **Messages: The Communication Skills Book.** McKay, Matthew. 2009.

### EMOTIONAL OUTLOOK & SKILLS

1. **How Good is Your IQ?** Haselbauer, N.
2. **The Language of Emotional Intelligence: The Five Essential Tools for Building Powerful and Effective Relationships.** Segal, Jeanne. 2008.
3. **Raising Your Emotional Intelligence: A Practical Guide.** Segal, Jeanne. New York, NY: Holt and Company. 1997.
4. **Self-Scoring Emotional Intelligence Tests.** Daniel, M. 2007.
5. **7 Steps to Emotional Intelligence.** Merlevede, Patrick, et al. Carmarthen, UK: Crown House Publishing. 2001.

## Sample Questions

The next few pages contain sample questions similar to the types that you will see on the actual test. It is best to review the Sample Questions in a “test-taking” environment that is quiet and away from distractions. Allow about 20 minutes to read and answer these questions. The content and format of actual questions will vary.

### ***Practical Skills, Interpersonal Skills, and Emotional Outlook***

(Question Types: Situational Questions and Questions about You)

**Questions 1 – 3** refer to specific situations for which you must indicate your response. Choose one answer.

1. Lately, you have noticed that there has been an increase in salespeople coming to your door trying to sell you various items. You find this irritating, and you wish they would stop. What is the best way to solve this problem?
  - 1) Angrily tell each salesperson to leave you alone.
  - 2) Let the salespeople believe that they are close to making a sale, then tell them to leave.
  - 3) Let the salespeople tell you about their products before deciding whether you are interested.
  - 4) Put up a sign on your door that says, “No Solicitors.”
  - 5) Refuse to open your door to anyone who looks like a salesperson.
2. When a co-worker is having personal problems that are affecting his ability to get his work done, it is better to:
  - 1) Encourage him to talk to someone who can help him solve his problems.
  - 2) Encourage him to tell you about his problems so that you can help him.
  - 3) Let him know that you would be willing to take some of his work if it would help.
  - 4) Not discuss personal problems at work, and let him work it out for himself.
3. You are attending a playoff game for your university basketball team, the Tigers. They are playing the Elks. As you go to get a hot-dog, you accidentally bump into an Elks fan. Even though you apologize, he turns to you and yells: “What’s the matter with you, you idiot? You better look where you’re going, you stupid Tiger fan. Where’d you get that stupid hat? All you stupid Tiger fans are wearing those stupid hats. Those hats are stupid and you’re stupid!”

You do not feel threatened by the man, but you think he is irritating. Of the following, which would you be most likely to say?

  - 1) “Move away from me please.”
  - 2) “No wonder everyone thinks Elks fans are a bunch of hot-heads.”
  - 3) “Security can kick you out of here for bothering people.”
  - 4) “Why don’t we just go back to our seats and enjoy the game.”
  - 5) “You’re the one who’s acting like an idiot. Go sit down.”

## Educational Skills such as Reading, Writing, and Mathematical ability

(Question Type: Factual)

Questions 4 - 7 refer to the following Reading Comprehension passage.

The emotional abilities children acquire in later life build on those of the earliest years. And these abilities are the essential foundation for all learning. Successful learning is not predicted by how many facts a person knows or the ability to read so much as by emotional and social measures: being self-assured and interested; knowing what kind of behavior is expected and how to rein in the impulse to behave poorly; being able to wait, to follow directions, and to turn to others for help; and expressing needs while getting along with others.

A child's emotional abilities depend on the most basic of all knowledge, *how* to learn. There are seven key ingredients of this crucial capacity – all related to emotional intelligence:

*Confidence*: A sense of control and mastery of one's body, behavior, and world; the child's sense that he is more likely than not to succeed at what he undertakes, and that adults will be helpful.

*Curiosity*: The sense that finding out about things is positive and leads to pleasure.

*Intentionality*: The wish and capacity to have an impact, and to act upon that with persistence. This is related to a sense of competence, of being effective.

*Self-control*: The ability to modulate and control one's own actions in age-appropriate ways; a sense of inner control.

*Relatedness*: The ability to engage with others based on the sense of being understood by and understanding others.

*Capacity to Communicate*: The wish and ability to verbally exchange ideas, feelings, and concepts with others. This is related to a sense of trust in others and of pleasure in engaging with others, including adults.

*Cooperativeness*: The ability to balance one's own needs with those of others in group activity.

4. According to this passage, which of the following is true?

- 1) The ability to read is not important to a child's successful learning.
- 2) A child's level of emotional intelligence is highly related to how well she can control her impulses.
- 3) Emotional intelligence is learned early in life and does not change once adulthood is reached.
- 4) A child's level of emotional intelligence is independent of the child's ability to learn in school.

5. Sara is selling chocolate bars to raise money for the school's new gymnasium. The first ten people she asks refuse to buy any chocolate. According to this passage, she should:

- 1) Think of other ways to make money for the new gymnasium instead of continuing to fail.
- 2) Stop trying to sell the chocolate since she has been unsuccessful.
- 3) Freely vent her frustration to other students who are selling more candy.
- 4) Believe that she will begin to sell more chocolate if she remains positive and keeps trying.

6. A class is attending a science fair at which there are several new scientific inventions. As the children walk past the displays, one of the students, Joseph, talks to the other students about topics not related to the science fair. When he is not talking, he seems to walk quickly by the displays. Based on the information in this passage, what do you think about Joseph's behavior?

- 1) He is balancing his need to socialize with the need to let other students enjoy the science fair.
- 2) He is lacking self-control because he does not like the science fair.
- 3) He seems to lack a natural curiosity and appreciation for learning about the science displays.
- 4) He only feels understood if he is talking about himself.

7. A school counselor notices that a young student named Marisha is a loner. She only speaks when someone speaks to her first. During lunch and in classes, she sits by herself. Which of the seven key ingredients for being able to learn does Marisha seem to be missing?

- 1) Self Control
- 2) Curiosity
- 3) Intentionality
- 4) Cooperativeness
- 5) Capacity to Communicate

For **Questions 8 – 13** refer to grammatical rules of Standard English. For the items in this section, choose the option that represents the correct usage, spelling, or punctuation. You should choose the ONE response that makes the statement most clear, concise, and effective.

8. After a fire, there is \_\_\_\_\_ of clean up work to be done.

- 1) alot
- 2) much
- 3) tons
- 4) a lot

9. Small children need lots of attention because they cannot care for \_\_\_\_\_.

- 1) theirselfs
- 2) theirselves
- 3) themselves
- 4) themselfs

10. The Chief met us at the station where we \_\_\_\_\_ the incident at the fire scene.

- 1) disgust
- 2) discust
- 3) disgussed
- 4) discussed

11. The firefighters will \_\_\_\_\_ be praised for their excellent work.

- 1) definitely
- 2) definately
- 3) defenately
- 4) defenitely

12. Choose the sentence that does not have any spelling, punctuation, or word usage errors.

- 1) I would prefer a plain bagel to one with raisins and cinnamon.
- 2) I would prefer a plane bagel; to one with raisins and cinnamon.
- 3) I would prefer a plain bagel too one with raisins and cinnamon.
- 4) I would prefer a plane bagel to one with raisins and cinnamon.

13. Choose the sentence that does not have any spelling, punctuation, or word usage errors.

- 1) John has a picture of his wife, Karen, on his desk.
- 2) John has a pitcher of his wife, Karen on his desk.
- 3) John has a picture of his wife Karen on his desk.
- 4) John has a pitcher of his wife, Karen, on his desk.

Questions 14 – 17 require you to perform mathematical calculations. You will **not** be allowed to use a calculator on the test.

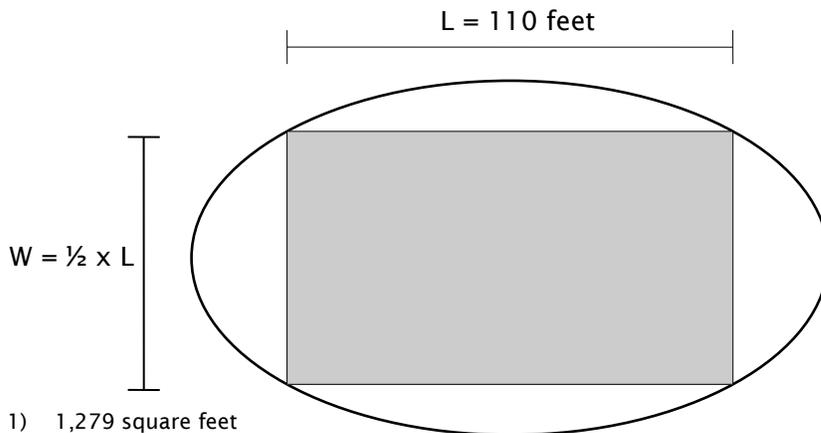
14. What is the decimal equivalent of 6/15?

- 1) .25
- 2) .30
- 3) .35
- 4) .40

15. A piece of rope is 50 feet in length. It is found that the rope shrank by 10% when it got wet. After drying, the rope was stretched 5% longer than its wet length. How long is the rope after it is stretched?

- 1) 57.50 feet
- 2) 55.00 feet
- 3) 47.50 feet
- 4) 47.25 feet

16. The drawing below is a sketch of a floor plan. The entire floor covers 7,329 square feet. Suppose the shaded area was destroyed by fire. How much of the floor was *not* burned? Hint: The area of a rectangle can be found using the following formula: Area (square feet) = Length (feet) X Width (feet).



- 1) 1,279 square feet
- 2) 2,329 square feet
- 3) 4,304 square feet
- 4) 6,050 square feet

17. In order to estimate the pressure of the flow of a particular liquid through a piping system, the following formula is used:

$$P = \frac{V \sqrt{F}}{3}$$

- P = Pressure
- V = Volume
- F = Force
- $\sqrt{\quad}$  = Square Root

If a liquid is running through the system with a volume of 10 and a force of 81, what is its pressure?

- 1) 13.5
- 2) 16.4
- 3) 30
- 4) 135

## Mechanical Aptitude

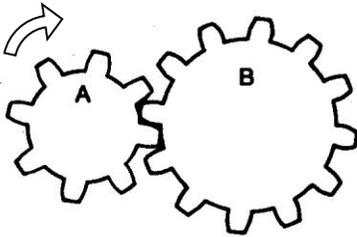
(Question Type: Factual)

Questions 18 – 19 utilize illustrations to measure your mechanical aptitude.

18. In the following diagrams, the fulcrum is represented by the black triangle and the load is the black box. The placement of the arrow shows where effort would be applied to lift the load. Which of the following diagrams shows the most effective placement of effort and the box to lift the load?

|    |   |
|----|---|
| 1) |  |
| 2) |  |
| 3) |  |
| 4) | It makes no difference where the box is located because the weight is the same.   |

19. If gear A turns clockwise, as indicated, which of the following is true?



- 1) Gear B will turn clockwise also.
- 2) Gear B will turn counter clockwise.
- 3) Gear B will turn faster than gear A.
- 4) Every time gear A turns one revolution, gear B will turn 2 revolutions.

**End of Sample Questions**

## Answers for Sample Questions

### Practical, Interpersonal, and Self Awareness Skills

1. Option 4 is the best answer. It provides a logical solution and demonstrates sound judgment, while the other options will either exacerbate the problem or cause unnecessary interpersonal conflict. This question measures practical skills.
2. Option 1 is the best answer. This answer offers support and empathy, and recognizes that the co-worker's problems appear serious enough that professional help may be necessary. This question measures Interpersonal Skills.
3. Option 4 is the best answer. It is the least confrontational and most likely to defuse the situation, rather than make it worse. This question measures Emotional Outlook.

### Reading Comprehension

4. Option 2 is correct because Self Control is one of the emotional skills listed in the passage.
5. Option 4 is correct. Sara is demonstrating Intentionality by believing that she can sell more chocolate.
6. Option 3 is correct. Based on Joseph's behavior, it is not clear if any of the other statements are true.
7. Option 5 is correct. Marisha clearly has trouble communicating with others.

### Writing Skills

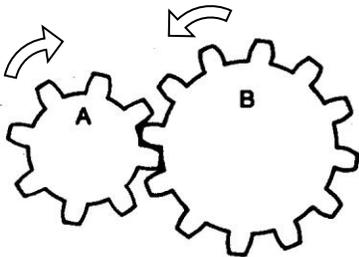
8. Option 4 is correct.
9. Option 3 is correct.
10. Option 4 is correct.
11. Option 1 is correct.
12. Option 1 is correct. "Plain" is correct, not "plane."
13. Option 1 is correct. "Picture is correct, not "pitcher," and commas should separate the wife's name.

### Mathematical Skills

14. Option 4 is correct. To solve this problem, divide 6 by 15.
15. Option 4 is correct. To solve this problem, multiply 50 by .10. This is equal to 5. Subtract 5 from 50 = 45. Then, multiply 45 by .05. This is equal to 2.25. Add 2.25 to 45.
16. Option 1 is correct. To solve this problem, determine the width of the shaded area by multiplying 110 by  $\frac{1}{2}$ , which equals 55. Then find the area of the burned floor by multiplying 110 by 55. This is equal to 6,050. Subtract this amount from the total floor area of 7,329 to get the area that was not burned.
17. Option 3 is correct. You must insert the given quantities into the equation. F is 81, and the square root is equal to 9. 9 times the quantity of V (10) equals 90. 90 divided by 3 is equal to 30.

### Mechanical Aptitude

18. Option 1 is correct. The box should be placed opposite the effort between the fulcrum and the load to make it easiest to lift.
19. Option 2 is correct. Refer to the diagram below for illustration.



### How did you do on the Sample Questions?

Remember, if you have weaknesses in a particular area, develop a plan to improve your skills in this area. Set a timeline and a goal. Look at the Example References on page 8 for the types of additional study materials that are available.

## Frequently Asked Questions

You may have some specific questions about the test you will be taking to become a firefighter. Some answers to frequently asked questions are provided below. If you have questions that are not listed below, refer to the job bulletin for more information.

### **1. What does this test measure?**

As with many other firefighter tests, this test will measure your ability to read, use proper grammar, and perform mathematical calculations. It will also measure other skills that research has found to be important for firefighters, such as the ability to learn the technical aspects of the job and the ability to get along with others.

### **2. How was the test developed and validated?**

The test development and validation process followed strict professional and legal standards. Part of the development process included interviewing current firefighters, administering detailed questionnaires about the duties performed and skills required, and having firefighters actually take the test. The validation process included statistically analyzing data from current firefighters to show that those who perform better on the test also perform better on the job.

### **3. Is this a personality or a psychological test?**

The test does not determine or evaluate your personality “type.” It uses situational questions to measure your skills in interacting with diverse people, handling your reactions, and dealing with problems. It is also not a psychological exam. This is a skills test, that measures how well you are able to solve problems, interact with people, understand complex situations, and other job related abilities.

### **4. What if I am not sure of the right answer?**

If you cannot determine the correct answer, try to eliminate one or more responses that you know are definitely wrong and then choose among the remaining alternatives. It is in your best interest to answer all questions.

### **5. Do I have to study or memorize any information?**

The test does not contain any questions that require specific job knowledge or memorization of information. The references provided in this study guide are only examples of the types of resources that are available to help you improve your skills in any weak areas.

### **6. Some of the sample questions do not seem relevant to the job of a firefighter. What does this test have to do with fighting fires?**

The questions on the test are designed to measure some aspect of Practical Skills, Interpersonal Skills, Emotional Outlook, or Basic Educational Skills, which have each been determined to be important skills for firefighters. The test does not measure your knowledge of fighting fires or other fire service job duties because these will be taught during on-the-job training.

### **7. How do you determine the correct answers for situational questions? Isn't it a matter of opinion?**

The correct answers are based on research, not opinion. The scoring key was based on interviews with Subject Matter Experts (people who perform or understand the job well), research into the skills being measured, and objective data based on how successful firefighters have answered the questions.

**We wish you success in achieving your career goals!**