NATIONAL TESTING NETWORK (NTN) FIREFIGHTER TESTING SYSTEM (FIRETEAM) MATH PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

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How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

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Questions

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1. What is the area of a rhombus with diagonals measuring 10 feet and 6 feet?

A. 50 square feet

B. 30 square feet

C. 60 square feet

D. 40 square feet

2. What is the answer to 30-3?

A. 26

B. 27

C. 28

D. 25

3. If a firefighter responds to a call that takes 30 minutes, how long is that in hours?

A. 0.5 hours

B. 0.6 hours

C. 0.75 hours

D. 0.25 hours

4. If a fire truck travels 150 miles and average 10 miles per gallon, how many gallons of fuel were consumed?

A. 10 gallons

B. 12 gallons

C. 15 gallons

D. 20 gallons

5. What is the greatest value obtained from any of the answers?

A. 18

B. 17

C. 16

D. 15

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6. What is the total surface area of a rectangular prism measuring 4 feet by 6 feet by 2 feet?

A. 76 square feet

B. 80 square feet

C. 88 square feet

D. 96 square feet

7. What is the answer to 30-5?

A. 22

B. 25

C. 23

D. 20

8. Which of the following is true when using hose sections related to length?

A. Each section is consistently 40 feet

B. Each section is consistently 50 feet

C. Each section is inconsistently measured

D. Each section is 60 feet

9. What fraction of an hour is 15 minutes?

A. 1/2 hour

B. 1/4 hour

C. 1/3 hour

D. 3/4 hour

10. If a firefighter needs to fill a tank that holds 500 gallons and the flow rate of the hose is 10 gallons per minute, how long will it take to fill the tank?

A. 30 minutes

B. 50 minutes

C. 40 minutes

D. 60 minutes

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Answers

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1. B
2. B
3. A
4. C
5. A
6. C
7. B
8. B
9. B
10. B

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Explanations

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1. What is the area of a rhombus with diagonals measuring 10 feet and 6 feet?

A. 50 square feet

B. 30 square feet

C. 60 square feet

D. 40 square feet

*To determine the area of a rhombus using its diagonals, you can use the formula: Area = (d1 * d2) / 2 where d1 and d2 are the lengths of the diagonals. In this case, the diagonals measure 10 feet and 6 feet. Applying the values to the formula: Area = (10 feet * 6 feet) / 2 Area = 60 feet² / 2 Area = 30 feet² This calculation shows that the area of the rhombus is indeed 30 square feet. The result gives a clear indication of how the dimensions contribute to the overall area through the formula provided for a rhombus.*

2. What is the answer to 30-3?

A. 26

B. 27

C. 28

D. 25

The expression 30 - 3 involves basic subtraction, where you take the number 3 away from 30. To solve this, you start with 30 and count backwards 3 units. When you subtract 3 from 30, you are left with 27. This means, after taking away 3 from 30, the result is 27. Therefore, this value corresponds accurately to the mathematical operation performed. Understanding basic subtraction is essential as it is a foundational skill in mathematics used in various practical situations, including those encountered in professions like firefighting, where numerical accuracy is critical for calculations related to measurements and resource management.

3. If a firefighter responds to a call that takes 30 minutes, how long is that in hours?

A. 0.5 hours

B. 0.6 hours

C. 0.75 hours

D. 0.25 hours

To convert minutes into hours, you need to remember the relationship between these two units of time. Specifically, 1 hour is equal to 60 minutes. Therefore, to find out how many hours are represented by 30 minutes, you divide the number of minutes by the number of minutes in an hour: 30 minutes ÷ 60 minutes/hour = 0.5 hours. This calculation shows that 30 minutes is equivalent to half an hour, which confirms that the answer is correct. In practical terms, understanding this conversion is essential for firefighters and other professionals who must manage their time effectively while responding to emergencies.

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4. If a fire truck travels 150 miles and average 10 miles per gallon, how many gallons of fuel were consumed?

A. 10 gallons

B. 12 gallons

C. 15 gallons

D. 20 gallons

To determine how many gallons of fuel were consumed by the fire truck that travels 150 miles and averages 10 miles per gallon, you can use the formula: $$\text{Gallons of fuel consumed} = \frac{\text{Total miles traveled}}{\text{Miles per gallon}}$$ Here, the truck travels 150 miles and has a fuel efficiency of 10 miles per gallon. Plugging in the numbers: $$\text{Gallons of fuel consumed} = \frac{150 \text{ miles}}{10 \text{ miles per gallon}} = 15 \text{ gallons}$$ This calculation shows that the fire truck consumed 15 gallons of fuel during its journey of 150 miles, providing a clear understanding of how fuel consumption can be calculated based on distance and fuel efficiency. Thus, the correct answer is 15 gallons.

5. What is the greatest value obtained from any of the answers?

A. 18

B. 17

C. 16

D. 15

The greatest value among the given choices is 18, which is simply the highest numerical figure present in the list. When comparing 18 to the other numbers—17, 16, and 15—it's clear that 18 is greater than all of them. This is fundamental in understanding numerical comparisons, as the task is to identify the largest single value, making 18 the conclusive answer. Understanding how to rank numbers in terms of value is essential in many areas of mathematics and practical applications where identifying maximum values is crucial, such as budgeting or resource allocation in firefighting scenarios.

6. What is the total surface area of a rectangular prism measuring 4 feet by 6 feet by 2 feet?

A. 76 square feet

B. 80 square feet

C. 88 square feet

D. 96 square feet

To find the total surface area of a rectangular prism, you can use the formula: $$\text{Total Surface Area} = 2(lw + lh + wh)$$ where l is the length, w is the width, and h is the height. In this case, the dimensions of the prism are 4 feet (length), 6 feet (width), and 2 feet (height). First, calculate the areas of the three distinct pairs of opposite faces: 1. The area of the pair of faces measuring lw (length × width): $lw = 4 \times 6 = 24 \text{ square feet}$ 2. The area of the pair of faces measuring lh (length × height): $lh = 4 \times 2 = 8 \text{ square feet}$ 3. The area of the pair of faces measuring wh (width × height): $wh = 6 \times 2 = 12 \text{ square feet}$ Now, sum these areas: $lw + lh + wh = 24 + 8 + 12 = 44$

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7. What is the answer to 30-5?

A. 22

B. 25

C. 23

D. 20

To determine the answer to the expression 30 - 5, you simply perform a basic subtraction operation. The number 30 represents the total quantity from which you want to take away 5. When you subtract 5 from 30, you are left with 25. This can be visualized as starting at 30 on a number line and moving 5 steps to the left, landing on 25. This specific calculation is straightforward and foundational in mathematics, laying the groundwork for more complex operations. Understanding basic subtraction is essential in many real-world applications, including those encountered in firefighting scenarios, where quick calculations may be necessary for equipment usage, resource management, and operational planning. Therefore, the reasoning leads to the answer being 25, which is the value obtained by accurately performing the operation of subtraction.

8. Which of the following is true when using hose sections related to length?

A. Each section is consistently 40 feet

B. Each section is consistently 50 feet

C. Each section is inconsistently measured

D. Each section is 60 feet

When utilizing hose sections, they are typically standardized to a consistent length to ensure compatibility and ease of use in firefighting operations. In most standard fire service practices, a hose section is made to be consistently 50 feet long. This standardization allows for predictable calculations when determining the amount of hose needed for a specific length of a run or when laying lines to fire scenes. The consistency in hose length is crucial for effective firefighting strategies, ensuring that firefighters can rapidly deploy and manage water supply lines. It simplifies training and communication among team members, as everyone understands the dimensions of the equipment being used. The other lengths mentioned are not commonly used in standard firefighting hose sections, which further reinforces the importance of the 50-foot standard in operational protocols.

9. What fraction of an hour is 15 minutes?

A. 1/2 hour

B. 1/4 hour

C. 1/3 hour

D. 3/4 hour

To find what fraction of an hour corresponds to 15 minutes, it is essential to understand the relationship between minutes and hours. One hour consists of 60 minutes. Therefore, to convert minutes into hours, you divide the number of minutes by the total number of minutes in an hour. In this case, you take 15 minutes and divide it by 60 minutes (1 hour): $$\frac{15 \text{ minutes}}{60 \text{ minutes/hour}} = \frac{15}{60} = \frac{1}{4}$$ Thus, 15 minutes is equal to one-fourth of an hour, which is why the correct answer is that 15 minutes represents 1/4 of an hour. This conversion illustrates the concept of fraction in terms of parts of a whole, where the whole in this context is the total length of an hour in minutes.

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10. If a firefighter needs to fill a tank that holds 500 gallons and the flow rate of the hose is 10 gallons per minute, how long will it take to fill the tank?

A. 30 minutes

B. 50 minutes

C. 40 minutes

D. 60 minutes

To determine how long it will take to fill a tank that holds 500 gallons with a hose that has a flow rate of 10 gallons per minute, you can use the formula: Time (in minutes) = Total Volume (in gallons) / Flow Rate (in gallons per minute) In this case, the total volume is 500 gallons, and the flow rate is 10 gallons per minute. Plugging in these values: Time = 500 gallons / 10 gallons per minute = 50 minutes Thus, it will take 50 minutes to fill the tank completely. This calculation clearly shows that the answer is accurate based on the given flow rate and tank capacity. Understanding how to apply this formula is crucial for solving similar problems involving rates and capacities.

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Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

https://ntn-firefightertestingsystemmath.examzify.com

We wish you the very best on your exam journey. You've got this!

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