

NLN PAX MATHEMATICS 1 EXAM PRACTICE (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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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.

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!

Questions

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1. If 350 is 70% of a number, what is that number?
 - A. 350
 - B. 500
 - C. 700
 - D. 250
2. A student received scores of 75, 60, 80, and 88 on four tests. If all tests are weighted equally, what is the average (rounded to the nearest whole number)?
 - A. 70
 - B. 76
 - C. 80
 - D. 82
3. If one quart equals 0.9 liters, how many liters are in 4 quarts?
 - A. 3.2 L
 - B. 4.5 L
 - C. 3.0 L
 - D. 3.6 L
4. A 4-kilogram object revolves in a circle at constant speed with a centripetal force of 200 N. If the mass is doubled while speed and radius stay the same, what is the new centripetal force?
 - A. 800 N
 - B. 50 N
 - C. 400 N
 - D. 100 N
5. 500 is what percent of 125?
 - A. 200%
 - B. 300%
 - C. 350%
 - D. 400%

6. 48 is what percent more than 40?

- A. 15%
- B. 18%
- C. 20%
- D. 22%

7. What is the square of $1\frac{3}{5}$ (one and three fifths)?

- A. $2\frac{14}{25}$
- B. $2\frac{1}{5}$
- C. $1\frac{9}{25}$
- D. $1\frac{9}{10}$

8. If 1 kilometer equals 0.6 miles, how many miles are in 2.75 kilometers?

- A. 1.65
- B. 2.15
- C. 3.35
- D. 4.58

9. A snack consists of 2 oz. Swiss cheese, six whole wheat crackers, and 1.5 tablespoons of milk in a cup of coffee. One ounce of Swiss cheese provides 7.7 grams of protein; each cracker provides 0.4 grams of protein; and 2 tablespoons of milk provide 1.1 grams of protein. How much protein does this snack provide?

- A. 15.4 g
- B. 2.4 g
- C. 0.825 g
- D. 18.625 g

10. A car travels 60 miles per hour for 0.75 hours. How many miles does it travel?

- A. 45 miles
- B. 30 miles
- C. 60 miles
- D. 15 miles

Answers

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

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Explanations

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1. If 350 is 70% of a number, what is that number?

- A. 350
- B. 500**
- C. 700
- D. 250

To find a number when a percentage of it is given, treat the percentage as a fraction of the whole. If the unknown number is x and 70% of it is 350, then $0.70 \times x = 350$. Solving for x gives $x = 350 \div 0.70 = 500$. A quick check: 70% of 500 is 350, so it matches. Another way is $(7/10)x = 350$, so $x = 350 \times (10/7) = 500$. The remaining options would yield different results when taking 70% of them, so they don't fit.

2. A student received scores of 75, 60, 80, and 88 on four tests. If all tests are weighted equally, what is the average (rounded to the nearest whole number)?

- A. 70
- B. 76**
- C. 80
- D. 82

The idea is to compute the average when each test counts equally: add all the scores and divide by the number of tests. So, $75 + 60 + 80 + 88$ equals 303. With four tests, the average is $303 \div 4 = 75.75$. Rounding to the nearest whole number gives 76. The option that shows 76 is the correct one.

3. If one quart equals 0.9 liters, how many liters are in 4 quarts?

- A. 3.2 L
- B. 4.5 L
- C. 3.0 L
- D. 3.6 L**

Converting units by scaling is the idea: you multiply the amount in liters per quart by the number of quarts. If 1 quart equals 0.9 liters, then 4 quarts is 4×0.9 liters, which equals 3.6 liters. So the amount in liters is 3.6 L. The other numbers wouldn't come from this straightforward scaling (they'd require a different factor or a different quantity of quarts).

4. A 4-kilogram object revolves in a circle at constant speed with a centripetal force of 200 N. If the mass is doubled while speed and radius stay the same, what is the new centripetal force?

- A. 800 N
- B. 50 N
- C. 400 N**
- D. 100 N

Centripetal force depends linearly on mass when speed and radius are fixed. The formula is $F_c = m v^2 / r$, so the factor that changes when you change the mass is m , while v^2/r stays the same. If you double the mass from 4 kg to 8 kg, the centripetal force also doubles: F_c becomes $2 \times 200 \text{ N} = 400 \text{ N}$.

5. 500 is what percent of 125?

- A. 200%
- B. 300%
- C. 350%
- D. 400%**

Percent tells you how many parts per hundred a quantity represents. To find what percent 500 is of 125, see how many times 125 fits into 500. Since $125 \times 4 = 500$, 500 is four times as large as 125. Four times as large corresponds to $4 \times 100\% = 400\%$. So 500 is 400% of 125.

6. 48 is what percent more than 40?

- A. 15%
- B. 18%
- C. 20%**
- D. 22%

The main idea is percent increase: how much bigger the new number is compared to the original, expressed as a percentage of the original. The increase from 40 to 48 is 8. Relative to the original 40, that's $8/40 = 0.2$, which is 20% when converted to a percent. So 48 is 20% more than 40 (since $40 \times 1.2 = 48$). Quick check: 20% of 40 is 8, and $40 + 8 = 48$.

7. What is the square of $1 \frac{3}{5}$ (one and three fifths)?

- A. $2 \frac{14}{25}$**
- B. $2 \frac{1}{5}$
- C. $1 \frac{9}{25}$
- D. $1 \frac{9}{10}$

When squaring a mixed number, it's simplest to convert it to an improper fraction first. $1 \frac{3}{5}$ equals $8/5$. Squaring gives $(8/5)^2 = 64/25$. Converting back to a mixed number: $64/25 = 2$ with a remainder of 14, so it's $2 \frac{14}{25}$. This is the same as 2.56 in decimal form, since $14/25 = 0.56$.

8. If 1 kilometer equals 0.6 miles, how many miles are in 2.75 kilometers?

- A. 1.65**
- B. 2.15
- C. 3.35
- D. 4.58

Unit conversions work by multiplying the amount you have by the conversion factor. Here, 1 kilometer equals 0.6 miles, so you multiply 2.75 by 0.6. Doing the math gives $2.75 \times 0.6 = 1.65$. So, 2.75 kilometers is 1.65 miles. This demonstrates how a fixed miles-per-kilometer factor scales the measurement; other numbers would come from using a different factor or from calculating incorrectly.

9. A snack consists of 2 oz. Swiss cheese, six whole wheat crackers, and 1.5 tablespoons of milk in a cup of coffee. One ounce of Swiss cheese provides 7.7 grams of protein; each cracker provides 0.4 grams of protein; and 2 tablespoons of milk provide 1.1 grams of protein. How much protein does this snack provide?

- A. 15.4 g
- B. 2.4 g
- C. 0.825 g
- D. 18.625 g**

The amount of protein in the snack is found by adding the protein from each component, using the provided amounts per unit. For cheese: 2 ounces $\times$ 7.7 g per ounce = 15.4 g of protein. For crackers: 6 crackers $\times$ 0.4 g per cracker = 2.4 g of protein. For milk: 2 tablespoons give 1.1 g, so 1 tablespoon has 0.55 g; 1.5 tablespoons give $1.5 \times 0.55 = 0.825$ g of protein. Total protein = $15.4 + 2.4 + 0.825 = 18.625$ g. So the snack provides 18.625 g of protein, which corresponds to the option with 18.625 g.

10. A car travels 60 miles per hour for 0.75 hours. How many miles does it travel?

- A. 45 miles**
- B. 30 miles
- C. 60 miles
- D. 15 miles

Distance traveled comes from multiplying speed by time. At 60 miles per hour for 0.75 hours, the distance is $60 \times 0.75 = 45$ miles. So the car covers 45 miles. You can check with intuition: in one hour it would go 60 miles, and 0.75 of that hour is three quarters, which is $60 \times 0.75 = 45$.

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://nlnpaxmath1.examzify.com>

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

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