Praxis Elementary Education: Three Subject Bundle – Mathematics (5903) Practice Exam (Sample)

Study Guide

Everything you need from our exam experts!

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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

1. What is the probability of rolling a 1 or 2 on a fair six-sided die?

A. 1/3

B. 1/6

C. 2/3

D. 1/2

2. Round 76,284 to the nearest thousand.

A. 76,284

B. 77,000

C. 76,200

D. 76,000

3. Which statement defines an algebraic expression?

A. An equation that contains an equals sign.

B. An expression that contains at least one variable and has no equals sign.

C. A numeric value with no variables.

D. A product of numbers and letters.

4. If two angles form a linear pair and one measures 110 degrees, what is the measure of the other angle?

A. 110

B. 90

C. 60

D. 70

5. Which graph is best for data with two sets and to show correlation between the two sets?

A. Line graph

B. Scatter plot

C. Bar graph

D. Circle graph

6. A square has side length 9 units. What is its perimeter?

A. 18

B. 36

C. 81

D. 27

7. Which expression represents Kelvin to Celsius temperature conversion?

A. K = C + 273

B. C = K - 273

C. K = 273 - C

D. C = K - 273

8. Which graph would you use to show how a variable changes alongside time, potentially with multiple series?

A. Line graph

B. Circle graph

C. Bar graph

D. Scatter plot

9. A thermometer reads -3 degrees and then rises 5 degrees. What is the new temperature?

A. -2

B. 7

C. 2

D. 1

10. What is the prime factorization of 60?

A. 2^3 × 3 × 5

B. 2 × 3 × 5

C. 2^2 × 5

D. 2^2 × 3 × 5

Answers

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

Explanations

1. What is the probability of rolling a 1 or 2 on a fair six-sided die?

A. 1/3

B. 1/6

C. 2/3

D. 1/2

On a fair six-sided die, each face is equally likely. There are six possible results, and two of them are favorable (rolling a 1 or a 2). So the probability is 2 out of 6, which simplifies to 1/3. This matches the idea that you count how many outcomes you want divided by how many outcomes could happen. If you see other numbers, they correspond to different counts of favorable outcomes: one-sixth would mean only one specific face is favorable, two-thirds would require four favorable faces, and one-half would require three favorable faces.

2. Round 76,284 to the nearest thousand.

A. 76,284

B. 77,000

C. 76,200

D. 76,000

Rounding to the nearest thousand means checking the hundreds digit to decide whether to round up or down. For 76,284, the hundreds digit is 2, which is less than 5, so you round down. Keep the thousands part as 76 and set the hundreds, tens, and ones to zero, giving 76,000. If the hundreds digit were 5 or more, you'd round up to 77,000.

3. Which statement defines an algebraic expression?

A. An equation that contains an equals sign.

B. An expression that contains at least one variable and has no equals sign.

C. A numeric value with no variables.

D. A product of numbers and letters.

An algebraic expression is a mathematical phrase that combines numbers, variables, and operation signs, but it does not include an equals sign. That means it can show quantities with variables and be simplified or evaluated, but it isn't about setting two sides equal. The statement that describes an expression as having at least one variable and no equals sign matches this idea precisely: it identifies the presence of a variable (which makes it algebraic) and the absence of an equals sign (which distinguishes an expression from an equation). For example, 3x + 5 or x^2 − 4 are algebraic expressions. If there were an equals sign, or if there were no variables at all (just a number like 7), those would not fit this specific definition.

4. If two angles form a linear pair and one measures 110 degrees, what is the measure of the other angle?

A. 110

B. 90

C. 60

D. 70

A straight-line relationship: when two angles form a linear pair, they sit on a straight line and must add up to 180 degrees. So, if one angle is 110 degrees, the other is 180 − 110 = 70 degrees. This also checks out because 110 + 70 = 180. The other options don't complete a straight line with 110 (110 + 110 = 220; 110 + 90 = 200; 110 + 60 = 170), so 70 degrees is the correct measure.

5. Which graph is best for data with two sets and to show correlation between the two sets?

A. Line graph

B. Scatter plot

C. Bar graph

D. Circle graph

A scatter plot is best for showing how two numerical variables relate to each other. By putting one variable on the horizontal axis and the other on the vertical axis, each point represents an observation. This arrangement makes patterns easy to see: an upward trend means positive correlation, a downward trend means negative correlation, and a loose spread indicates little or no correlation. You can also gauge strength by how tightly the points cluster around a line. Linear line graphs focus on how a single quantity changes over time or across a sequence, which isn't about the relationship between two different variables. Bar graphs compare amounts across categories, which works for categorical data or separate groups but not for illustrating a relationship between two numerical sets. Circle graphs, or pie charts, show parts of a whole and don't depict how two variables relate, so they're not suitable for correlation analysis.

6. A square has side length 9 units. What is its perimeter?

A. 18

B. 36

C. 81

D. 27

Perimeter is the distance around a shape, and for a square that means adding all four equal sides. With each side measuring 9 units, the perimeter is 4 × 9 = 36 units. So the correct value is 36. The other numbers don't match the perimeter: 18 would be two sides, 81 is the area (9 × 9), and 27 would be three sides.

7. Which expression represents Kelvin to Celsius temperature conversion?

A. K = C + 273

B. C = K - 273

C. K = 273 - C

D. C = K - 273

Kelvin and Celsius are the same temperature scale shifted by a constant amount. The Kelvin value is the Celsius value plus 273 (more precisely 273.15). To convert from Kelvin to Celsius, you remove that offset by subtracting 273: Celsius equals Kelvin minus 273 (approximately 273.15). For example, if Kelvin is 300, Celsius is about 27. If Celsius is 0, Kelvin is about 273. This is the form that directly converts Kelvin to Celsius. The alternate form that solves for Kelvin from Celsius is the same relationship rearranged, not the direction the question asks for.

8. Which graph would you use to show how a variable changes alongside time, potentially with multiple series?

A. Line graph

B. Circle graph

C. Bar graph

D. Scatter plot

When you want to show how a variable changes over time, a line graph is the best choice because it connects data points with lines, making trends and patterns over a continuous time axis easy to see. If you're tracking more than one series, you can plot multiple lines in different colors or styles, so you can compare how each variable evolves over the same time period. The other graphs aren't as well suited for time-based change. A circle (pie) graph shows parts of a whole at a single moment, not how things change over time. A bar graph can show values at discrete time points but doesn't naturally emphasize a continuous progression or smooth trends. A scatter plot displays relationships between two variables and isn't focused on time progression unless you add a connecting line, which then becomes a line graph to study trends over time.

9. A thermometer reads -3 degrees and then rises 5 degrees. What is the new temperature?

A. -2

B. 7

C. 2

D. 1

Adding a positive amount to a negative number moves you toward zero and into positive territory. Start at -3 degrees and increase by 5 degrees: -3 + 5 equals 2. So the new temperature is 2 degrees. On a number line, you'd move five steps to the right from -3, cross zero, and land at +2. The other results don't match this increase, so they don't fit.

10. What is the prime factorization of 60?

A. 2^3 × 3 × 5

B. 2 × 3 × 5

C. 2^2 × 5

D. 2^2 × 3 × 5

Prime factorization breaks a number down into prime numbers that multiply to the original number. For 60, you can start by dividing by 2, since 60 is even: 60 = 2 × 30. Then factor 30, which is also even, giving 30 = 2 × 15. Now you have 15, which isn't divisible by 2, so factor 15 as 3 × 5. All the factors are prime, so combine them: 60 = 2^2 × 3 × 5. This matches the product 4 × 3 × 5 = 60. If you tried 2^3 × 3 × 5, that would be 8 × 3 × 5 = 120, which is too large. If you used only one 2, you'd have 2 × 3 × 5 = 30, which is too small. If you used 2^2 × 5, you'd get 4 × 5 = 20, missing the 3.

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://praxis5903.examzify.com

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