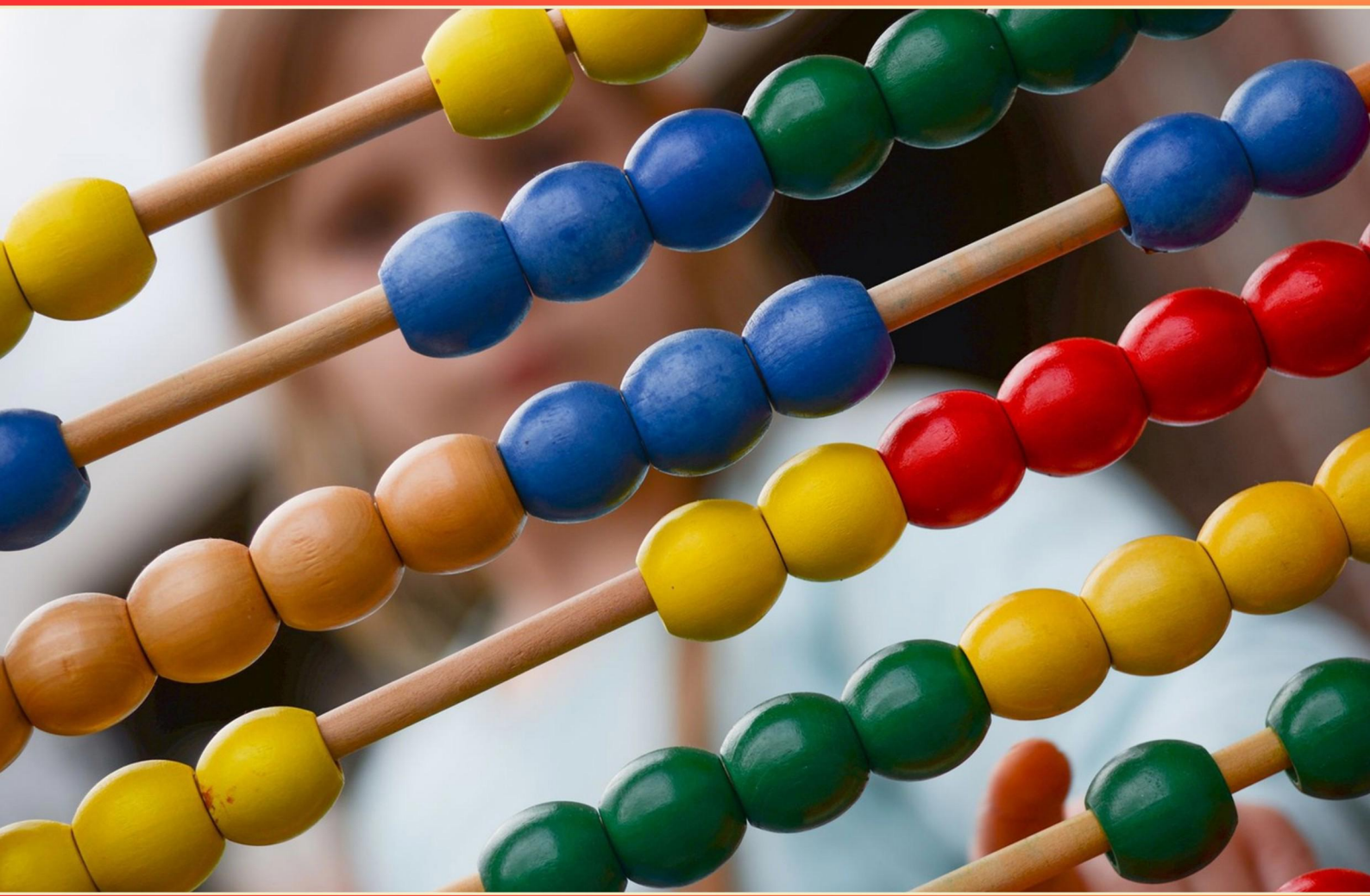
CERTIFY TEACHER EC-6 (391) MATHEMATICS (902) PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

https://certifyteacherec6math902.examzify.com

Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

Copyright 1

Table of Contents 2

Introduction 3

How to Use This Guide 4

Questions 5

Answers 8

Explanations 10

Next Steps 15

SAMPLE

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.

SAMPLE

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!

SAMPLE

Questions

SAMPLE

1. Convert 0.625 to a fraction.

A. 3/5

B. 5/8

C. 7/8

D. 13/16

2. If 20 students each require 12 ounces of plaster for an impression, how many pounds of plaster are needed in total?

A. 10 pounds

B. 12 pounds

C. 15 pounds

D. 20 pounds

3. A triangle has sides 5, 5, and 6. What type of triangle is it?

A. Equilateral

B. Scalene

C. Isosceles

D. Right

4. An algebra tiles activity forms a rectangle; which equation represents the area and its factorization?

A. 2(x+2) = 2x + 4

B. x(2x+4) = 2x^2+4x

C. (x+2)^2 = x^2+4x+4

D. 2x+4 = x^2+2x

5. Which strategy best demonstrates applying a math concept to another subject?

A. Use contexts relevant to the other subject and require calculation

B. Isolate math in separate worksheets only

C. Show only theoretical definitions

D. Use timed assessments exclusively

SAMPLE

6. For the line with slope -2 passing through (4,6), what is the y-intercept?

A. 10

B. -14

C. 14

D. 2

7. Is this graph misleading? A survey shows Christmas 45%, Birthday 10%, Anniversary 35%, Valentine's Day 15%, Mother's Day 15%. The sum of the percentages appears to exceed 100%.

A. Yes. The sum of the percentages is more than 100.

B. No. The percentages add to 100%.

C. Cannot determine.

D. It is accurate.

8. What does an amortization schedule illustrate?

A. A payment plan showing how each payment reduces loan principal and covers interest over time

B. A calendar of exam dates

C. A grocery list

D. A schedule for cafeteria lunch

9. Which activity would be appropriate for integrating multiplication into a second-grade science curriculum?

A. Calculating how much food the class pet will need for the week

B. Measuring the length of the pet's cage

C. Recording weather data for the week

D. Building a model of the solar system

10. Which expression correctly computes the area of a trapezoid with bases b1 and b2 and height h?

A. $A = (b1 - b2)\ h$

B. $A = b1\ h + b2\ h$

C. $A = (b1 + b2)\ h$

D. $A = 1/2\ (b1 + b2)\ h$

SAMPLE

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. Convert 0.625 to a fraction.

A. 3/5

B. 5/8

C. 7/8

D. 13/16

When a terminating decimal is written as a fraction, you can place the digits over a power of 10 and then simplify. Since 0.625 has three digits after the decimal, write it as 625/1000. Both numbers share a greatest common divisor of 125, so divide numerator and denominator by 125 to get 625/1000 = 5/8. This fraction equals 0.625, so it matches the decimal exactly. The other fractions correspond to decimals 0.6, 0.875, and 0.8125, which are not equal to 0.625.

2. If 20 students each require 12 ounces of plaster for an impression, how many pounds of plaster are needed in total?

A. 10 pounds

B. 12 pounds

C. 15 pounds

D. 20 pounds

Convert the total from ounces to pounds. Multiply 20 by 12 to get 240 ounces. Since 1 pound is 16 ounces, divide 240 by 16 to convert to pounds: 240 ÷ 16 = 15. So the total plaster needed is 15 pounds. A quick check: 16 × 15 = 240 confirms the conversion is correct.

3. A triangle has sides 5, 5, and 6. What type of triangle is it?

A. Equilateral

B. Scalene

C. Isosceles

D. Right

Having two equal sides makes the triangle isosceles. Here the side lengths are 5, 5, and 6, so the two sides of length 5 are equal and the third side is different. An equilateral triangle would need all three sides equal, which isn't the case, and a scalene triangle has all sides different, which also isn't the case. A right triangle would meet the Pythagorean condition with the largest side as the hypotenuse: 5^2 + 5^2 = 25 + 25 = 50, which does not equal 6^2 = 36, so it's not right. Since two sides are equal, the triangle is isosceles, and the angles opposite those equal sides are equal.

SAMPLE

4. An algebra tiles activity forms a rectangle; which equation represents the area and its factorization?

A. 2(x+2) = 2x + 4

B. x(2x+4) = 2x^2+4x

C. (x+2)^2 = x^2+4x+4

D. 2x+4 = x^2+2x

In algebra tiles, the area of a rectangle is found by multiplying its length and its width. The tiles in this rectangle form a width of 2 and a length of (x+2), so the area is 2 times (x+2). Writing that as a product shows the factorization: 2(x+2). If you expand it, you get 2x + 4, which matches the same area written in standard form. This is exactly what the equation demonstrates: the area factored as 2(x+2) equals its expanded form 2x+4. The other expressions don't fit the tile arrangement: x(2x+4) would imply a rectangle with dimensions x and (2x+4), giving area 2x^2 + 4x, which isn't what the tiles show. (x+2)^2 corresponds to a square with side x+2, yielding x^2 + 4x + 4, not the 2-by-(x+2) rectangle. And 2x+4 = x^2 + 2x would mix terms that don't align with the same rectangle's area.

5. Which strategy best demonstrates applying a math concept to another subject?

A. Use contexts relevant to the other subject and require calculation

B. Isolate math in separate worksheets only

C. Show only theoretical definitions

D. Use timed assessments exclusively

Applying a math concept to another subject means showing how numbers, measurements, and patterns help solve problems in different areas. The best approach is to use contexts relevant to the other subject and require calculation. When tasks connect math to, say, science, students might analyze data from experiments, calculate averages, interpret graphs, or determine rates from timing data. This shows math as a versatile tool students can carry into any subject, helping them see how mathematical reasoning works in real situations and promoting true transfer of learning. Requiring calculations in those contexts ensures they're using actual math skills, not just talking about them. Other approaches fall short because isolating math in separate worksheets keeps it detached from real tasks, presenting only theoretical definitions misses the practical application, and relying on timed assessments emphasizes speed over meaningful problem-solving and cross-disciplinary use.

6. For the line with slope -2 passing through (4,6), what is the y-intercept?

A. 10

B. -14

C. 14

D. 2

To find the y-intercept, use the slope-intercept form y = mx + b, where m is the slope and b is the y-intercept. With slope -2 and the point (4, 6), plug in: 6 = (-2)(4) + b, so 6 = -8 + b, giving b = 14. Thus, the line crosses the y-axis at 14. You can also check by writing the equation in point-slope form: y - 6 = -2(x - 4), which simplifies to y = -2x + 14, again showing the intercept is 14.

SAMPLE

7. Is this graph misleading? A survey shows Christmas 45%, Birthday 10%, Anniversary 35%, Valentine's Day 15%, Mother's Day 15%. The sum of the percentages appears to exceed 100%.

A. Yes. The sum of the percentages is more than 100.

B. No. The percentages add to 100%.

C. Cannot determine.

D. It is accurate.

Understanding multi-response survey data helps here. When respondents can choose more than one occasion for a gift, each percentage shows the share of people who selected that occasion, not a slice of a single, whole group. That means a person can be counted in several categories, so the totals can add up to more than 100%. Here, 45% + 10% + 35% + 15% + 15% = 120%, which simply reflects overlap among responses. So the graph appears misleading only if you expect the totals to sum to 100% for a single-respondent distribution; since it's multi-response data, the sum exceeding 100% is possible.

8. What does an amortization schedule illustrate?

A. A payment plan showing how each payment reduces loan principal and covers interest over time

B. A calendar of exam dates

C. A grocery list

D. A schedule for cafeteria lunch

An amortization schedule focuses on how a loan is paid off over time, showing for each payment how much goes to interest and how much reduces the principal, plus the remaining loan balance after that payment. This layout reveals how the payment structure unfolds: early payments largely cover interest, while the portion that goes toward principal grows over time, steadily lowering the balance. It can also show the total interest paid over the life of the loan and the effect of extra payments. It's not about exam dates, grocery lists, or cafeteria schedules.

9. Which activity would be appropriate for integrating multiplication into a second-grade science curriculum?

A. Calculating how much food the class pet will need for the week

B. Measuring the length of the pet's cage

C. Recording weather data for the week

D. Building a model of the solar system

Using multiplication to find totals over time in a science context. This activity shows how multiplying a daily amount by the number of days helps you plan for a week, turning a real-world scenario into a math problem. For example, if the class pet eats 2 cups of food each day, 2 × 7 equals 14 cups for the week. This makes the usefulness of multiplication clear and concrete in a science setting. Measuring the length of the pet's cage focuses on units and measurement techniques, not on combining equal groups. Recording weather data for the week centers on collecting information and looking for patterns, rather than calculating a total using repeated addition. Building a model of the solar system involves modeling and spatial reasoning, with multiplication not being the primary skill needed.

SAMPLE

10. Which expression correctly computes the area of a trapezoid with bases b1 and b2 and height h?

A. A = (b1 - b2) h

B. A = b1 h + b2 h

C. A = (b1 + b2) h

D. A = 1/2 (b1 + b2) h

The area of a trapezoid depends on its height and the widths of its two parallel sides. Think of the width across the shape varying linearly from one base to the other; the area is effectively the height times the average width between the bases. That gives the area formula A = h times the average of the bases, which is A = h · (b1 + b2)/2, or equivalently A = (1/2)(b1 + b2)h. This makes intuitive sense: if the two bases are equal, the shape is a rectangle with area b1·h, and the formula reduces to (b1 + b1)/2 · h = b1·h. The other expressions don't fit the geometry: using the difference (b1 – b2)h would not consistently represent area and can even be negative, while summing the products b1h + b2h effectively double-counts the space.

SAMPLE

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://certifyteacherec6math902.examzify.com

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

SAMPLE