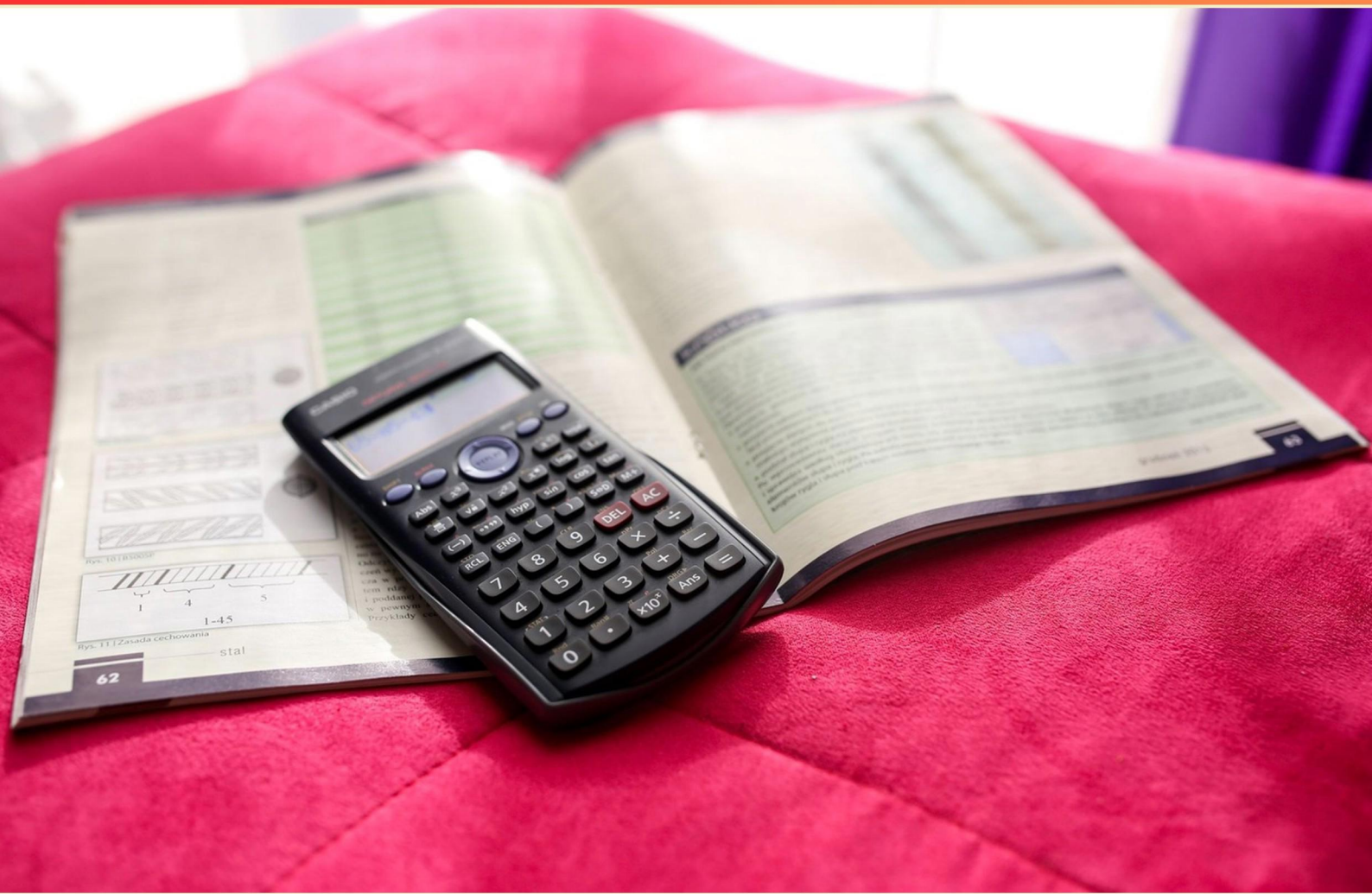


# LEAVING CERTIFICATE MATHEMATICS DEFINITIONS PRACTICE TEST (SAMPLE) STUDY GUIDE



## SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR  
THE FULL VERSION STUDY GUIDE

<https://leavingcertmathsdef.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.

# 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

SAMPLE

- 1. A proportion of the population is taken and then conclusions are made about the entire population.**
  - A. Descriptive statistics
  - B. Data capture
  - C. Inferential statistics
  - D. Univariate data
- 2. Which term describes a four-sided figure that touches a circle at its corner points?**
  - A. Cyclic quadrilateral
  - B. Rectangle
  - C. Parallelogram
  - D. Rhombus
- 3. What is the name of the proof that assumes a statement and then proves it wrong by using valid axioms?**
  - A. Proof by contradiction
  - B. Direct proof
  - C. Inductive proof
  - D. Empirical proof
- 4. Which sampling method ensures every member of the population has an equal chance of selection and uses randomization without considering subgroups?**
  - A. Simple random sampling
  - B. Systematic random sampling
  - C. Stratified random sampling
  - D. Quota sampling
- 5. The term for the numeric value of the variable for a single element in the sample.**
  - A. Data capture
  - B. Data set
  - C. Observations
  - D. Univariate data

6. From  $a + b = 15$ , which expression solves for  $a$  in terms of  $b$ ?
- A.  $a + b = 15$
  - B.  $a = b - 15$
  - C.  $a = 15 - b$
  - D.  $b = 15 - a$
7. Which angle is formed outside a triangle when one side is extended?
- A. Interior angle
  - B. Vertical angle
  - C. Exterior angle
  - D. Adjacent angle
8. Data collected by the person who was going to use it is called
- A. Primary data
  - B. Secondary data
  - C. Qualitative data
  - D. Explanatory variable
9. A triangle with two equal sides and two equal angles.
- A. Isosceles triangle
  - B. Equilateral triangle
  - C. Right triangle
  - D. Scalene triangle
10. Process by which data is transferred from a paper copy to an electric file.
- A. Data set
  - B. Data capture
  - C. Observations
  - D. Outlier



## **Answers**

SAMPLE

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

SAMPLE

## **Explanations**

SAMPLE

**1. A proportion of the population is taken and then conclusions are made about the entire population.**

- A. Descriptive statistics
- B. Data capture
- C. Inferential statistics**
- D. Univariate data

*Making conclusions about a whole population from a sample is the essence of inferential statistics. It uses information gathered from a subset to estimate characteristics of the entire group and to judge how confident we can be in those estimates, often with margins of error, confidence intervals, or hypothesis tests. This is different from descriptive statistics, which only describes the sample itself. Data capture is about collecting the data, not the analysis, and univariate data refers to data with a single variable, not the idea of drawing general conclusions. So the scenario described fits inferential statistics because it involves generalizing findings from a sample to the entire population with an awareness of uncertainty.*

**2. Which term describes a four-sided figure that touches a circle at its corner points?**

- A. Cyclic quadrilateral**
- B. Rectangle
- C. Parallelogram
- D. Rhombus

*If a circle goes through all four corner points of a four-sided figure, that means the four vertices lie on the circle. The term for any quadrilateral with all four vertices on a circle is a cyclic quadrilateral. This is the broad description that fits any shape with that property, not just one specific type. Note that a rectangle is a special case of a cyclic quadrilateral (its four vertices do lie on a circle), but the question asks for the general description of a figure whose corners touch the circle, which is captured precisely by cyclic quadrilateral. Parallelogram and rhombus don't automatically have all four corners on a circle unless they happen to be rectangles (or squares), so they don't describe the given situation as reliably.*

**3. What is the name of the proof that assumes a statement and then proves it wrong by using valid axioms?**

- A. Proof by contradiction**
- B. Direct proof
- C. Inductive proof
- D. Empirical proof

*The main idea here is a proof by contradiction. You suppose that the statement you want to prove is false (its negation), and then you reason using valid axioms and logic to see what would follow. If this leads to a contradiction—something that cannot be true given the established rules—then the initial assumption must be false, so the original statement is true. This is also known as *reductio ad absurdum* in many contexts. Direct proofs go straight from the axioms to the conclusion without assuming the negation. Inductive proofs establish a claim for all natural numbers by proving a base case and showing that if it holds for one case, it holds for the next. Empirical proofs rely on observation and experimentation rather than formal deduction.*

4. Which sampling method ensures every member of the population has an equal chance of selection and uses randomization without considering subgroups?

- A. Simple random sampling
- B. Systematic random sampling
- C. Stratified random sampling
- D. Quota sampling

*This is about giving every member of the population an equal chance to be selected, with the selection driven entirely by random chance and without dividing the population into subgroups. In simple random sampling, you treat all individuals as a single pool, assign each a unique identifier, and draw the sample randomly (for example, using a random number generator or a lottery). Because no subgroup structure is used, every person has exactly the same probability of being chosen, and the method avoids systematic patterns or stratification that could bias the results. In contrast, systematic sampling selects at regular intervals, which can introduce bias if there's an underlying pattern; stratified sampling divides the population into subgroups and samples within each one; quota sampling fills predefined subgroup numbers without random selection.*

5. The term for the numeric value of the variable for a single element in the sample.

- A. Data capture
- B. Data set
- C. Observations
- D. Univariate data

*In statistics, the value you record for one member of the sample is an observation (often called a data point). Each element of the sample yields one observation, and collecting all of them together forms the data set. If you're measuring just one variable, the data set is univariate data. Data capture, by contrast, refers to the process of recording the data, not the value itself. So the single numeric value for one element is best described as an observation.*

6. From  $a + b = 15$ , which expression solves for  $a$  in terms of  $b$ ?

- A.  $a + b = 15$
- B.  $a = b - 15$
- C.  $a = 15 - b$
- D.  $b = 15 - a$

*Isolating the variable  $a$  is the goal. From  $a + b = 15$ , subtract  $b$  from both sides to move it away from  $a$ :  $a = 15 - b$ . This directly expresses  $a$  in terms of  $b$ , showing how  $a$  depends on the value of  $b$ . The alternative  $b = 15 - a$  would describe  $b$  in terms of  $a$ , which is not the asked-for form, even though it's algebraically equivalent. So the form that provides  $a$  explicitly as a function of  $b$  is  $a = 15 - b$ .*

**7. Which angle is formed outside a triangle when one side is extended?**

- A. Interior angle
- B. Vertical angle
- C. Exterior angle
- D. Adjacent angle

*When you extend one side of a triangle, the angle that appears outside the triangle is called an exterior angle. It's formed by the extended line and the side of the triangle that meets it, sitting outside the figure. This is different from an interior angle, which lies inside the triangle; a vertical angle appears opposite at the intersection of two lines; and an adjacent angle shares a side with another angle. So the outside angle created by extending a side is specifically the exterior angle.*

**8. Data collected by the person who was going to use it is called**

- A. Primary data
- B. Secondary data
- C. Qualitative data
- D. Explanatory variable

*Data collected by the person who will use it is called primary data. This means you gather the information yourself for your specific study, so you know exactly how and why it was collected. Data that someone else collected for a different purpose and that you use is secondary data. Qualitative data describes non-numeric qualities or categories, not the source of the data, and an explanatory variable is a variable used to explain changes in another variable, not about who collected the data.*

**9. A triangle with two equal sides and two equal angles.**

- A. Isosceles triangle
- B. Equilateral triangle
- C. Right triangle
- D. Scalene triangle

*Two equal sides in a triangle force the angles opposite those sides to be equal. This is the defining feature of an isosceles triangle. So a triangle described as having two equal sides and two equal angles fits this type—the two equal angles are the base angles opposite the equal sides. In contrast, an equilateral triangle would have all three sides and all three angles equal; a right triangle has a 90-degree angle; a scalene triangle has no equal sides or angles.*

**10. Process by which data is transferred from a paper copy to an electric file.**

- A. Data set
- B. Data capture**
- C. Observations
- D. Outlier

*Transferring information from a paper copy into an electronic file is data capture. This term covers the process of converting or inputting data from a physical source into a digital format, whether by typing, scanning, or using OCR to read forms and turn them into electronic records. Data capture can be done manually (data entry) or automatically (scanning with OCR, barcode readers, etc.), and it is the step that turns paper data into a usable digital form. The other terms describe what the data are, not how they are moved into a computer. A data set is simply a collection of data values. Observations are the individual data points or measurements collected. An outlier is a data point that lies far from the rest of the data.*

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](mailto:hello@examzify.com).

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

<https://leavingcertmathsdef.examzify.com>

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

SAMPLE