

Texas Surveyor in Training Practice Test (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

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- 1. What term describes a survey tape that includes minor graduations placed ahead of the zero point?**
 - A. Add tape**
 - B. Survey line**
 - C. Measuring tape**
 - D. Flag tape**

- 2. What significant mistake did Rene-Robert de La Salle make during his expedition?**
 - A. He failed to establish trade routes**
 - B. He mistakenly settled in Matagorda Bay**
 - C. He lost his ships at sea**
 - D. He failed to find a passage to Asia**

- 3. What is the term for the additional angle that a triangle on a spherical surface has compared to 180 degrees?**
 - A. Spherical excess**
 - B. Triangular deviation**
 - C. Spherical angle**
 - D. Curvature surplus**

- 4. How many minutes can a section line depart from a cardinal direction and still be considered regular?**
 - A. 15**
 - B. 21**
 - C. 30**
 - D. 45**

- 5. What is the process called when expressing a polynomial as the product of its factors?**
 - A. Factoring**
 - B. Distributing**
 - C. Dividing**
 - D. Multiplying**

- 6. What can affect a landowner's riparian rights?**
- A. Only federal regulations**
 - B. State laws**
 - C. Private agreements with neighbors**
 - D. The economic status of the landowner**
- 7. What term describes the act of neglecting a legal right for a period sufficient to imply that the right has been waived?**
- A. Abandonment**
 - B. Acquiescence**
 - C. Waiver**
 - D. Retention**
- 8. Which system is established by the National Oceanic Survey/National Geodetic Survey for Texas?**
- A. Texas Land Survey System**
 - B. Texas State Plane Coordinate System**
 - C. Texas Geodetic Survey System**
 - D. Texas Height Reference System**
- 9. What is the process of estimating a value within two known values in a sequence, often used for drawing contour lines?**
- A. Interpolation**
 - B. Extrapolation**
 - C. Calibration**
 - D. Differentiation**
- 10. What is the purpose of recording magnetic declination in surveying?**
- A. To establish the average temperature**
 - B. To correct for angle measurements**
 - C. To enhance visual representation on maps**
 - D. To calculate area accurately**

Answers

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

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Explanations

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1. What term describes a survey tape that includes minor graduations placed ahead of the zero point?

- A. Add tape**
- B. Survey line**
- C. Measuring tape**
- D. Flag tape**

The term "add tape" refers to a survey tape that has minor graduations placed ahead of the zero point. This feature is particularly useful for surveyors as it allows for greater precision when making measurements. The minor graduations provide additional reference points that help in establishing accurate distances without having to move the tape away from the starting point. Measuring tape is a more general term and does not specifically refer to this added feature. Survey line typically refers to a defined path or route along which surveys are conducted, rather than a specific type of tape. Flag tape is a type of marking tape often used to signal boundaries or reference points in the field, but it does not have the graduations that add tape provides. The definition and specific purpose of add tape make it the only correct answer in this context.

2. What significant mistake did Rene-Robert de La Salle make during his expedition?

- A. He failed to establish trade routes**
- B. He mistakenly settled in Matagorda Bay**
- C. He lost his ships at sea**
- D. He failed to find a passage to Asia**

Rene-Robert de La Salle's significant mistake during his expedition was settling in Matagorda Bay. In 1685, La Salle was attempting to establish a French colony near the mouth of the Mississippi River, believing that this location could provide a strategic advantage for trade and territorial claims. However, due to navigational errors and misunderstandings of the geography of the region, he ended up in Matagorda Bay, which was not the intended landing site. This miscalculation severely impacted his expedition, as La Salle and his crew faced numerous challenges, including hostile encounters with local Native American tribes, difficulty in securing supplies, and the inability to find suitable land for a permanent settlement. Ultimately, the location did not offer the resources and strategic advantages that a settlement at the mouth of the Mississippi would have provided. This incorrect settlement site contributed to the eventual failure of his colony and loss of his expedition's initial goals.

3. What is the term for the additional angle that a triangle on a spherical surface has compared to 180 degrees?

- A. Spherical excess**
- B. Triangular deviation**
- C. Spherical angle**
- D. Curvature surplus**

The term for the additional angle that a triangle on a spherical surface has compared to 180 degrees is known as spherical excess. In spherical geometry, the sum of the angles in a triangle exceeds 180 degrees due to the curvature of the surface. This additional amount is specifically referred to as the spherical excess, which quantifies how much larger the angles are compared to the planar case. In practical terms, when dealing with triangles on a sphere, the measurement of spherical excess becomes crucial for accurate calculations in various fields including surveying, navigation, and geodesy. It emphasizes the effect of the Earth's curvature on angle measurement and is foundational in understanding how geometric principles change when applied to non-flat surfaces. This concept is pivotal for students training in surveying, as it impacts how land parcels or features are calculated and represented on maps.

4. How many minutes can a section line depart from a cardinal direction and still be considered regular?

- A. 15**
- B. 21**
- C. 30**
- D. 45**

In surveying, especially with respect to land platting and the orientation of section lines, a section line can generally deviate from the cardinal directions (north, south, east, west) by a specific angle while still being categorized as "regular." A standard deviation that is often recognized is 21 minutes. This amount has been established in practice to ensure that the integrity of a rectangular survey system is maintained, while still allowing for minor adjustments due to physical terrain or other practical considerations. The other options present larger deviations from the cardinal directions. For instance, if a section line were to depart by 30 minutes or more, it may begin to distort the intended layout of sections and townships defined by the Public Land Survey System. Thus, while a small degree of deviation is acceptable, moving beyond the established threshold compromises the defining parameters necessary for maintaining regularity in the survey's layout. This balance is particularly important in ensuring that there is uniformity and clarity in land delineation.

5. What is the process called when expressing a polynomial as the product of its factors?

- A. Factoring**
- B. Distributing**
- C. Dividing**
- D. Multiplying**

The process of expressing a polynomial as the product of its factors is known as factoring. In mathematics, factoring involves breaking down a polynomial into simpler components called factors, which when multiplied together yield the original polynomial. This is a fundamental concept particularly used in algebra to simplify expressions, solve equations, and analyze polynomial behavior. For instance, if you have a polynomial like $(x^2 - 5x + 6)$, factoring would involve finding two binomials that multiply to give this polynomial, specifically $((x - 2)(x - 3))$. The other terms describe different mathematical operations: distributing refers to applying the distributive property to multiply a term across a sum or difference, dividing involves splitting a quantity into equal parts or determining how many times one value is contained within another, and multiplying is merely the process of combining numbers or expressions to find their product. These operations do not encompass the concept of rewriting a polynomial in terms of its factors, which is specifically what factoring represents.

6. What can affect a landowner's riparian rights?

- A. Only federal regulations**
- B. State laws**
- C. Private agreements with neighbors**
- D. The economic status of the landowner**

Riparian rights refer to the entitlements of landowners whose property is adjacent to a watercourse, such as a river or stream. These rights typically include the ability to access and use the water. Various factors can significantly influence these rights, and state laws play a crucial role in defining the extent and limitations of riparian rights. State laws govern the allocation and use of water resources, dictate how much water a landowner can extract for personal use, and establish guidelines for environmental protection. Since laws can vary widely from one state to another, they directly impact how riparian rights are exercised within that jurisdiction. This includes regulations regarding water quality, conservation measures, and dispute resolution among landowners, which are all codified at the state level. Federal regulations can also influence water rights in certain contexts, especially concerning navigable waters and broader environmental protections, but state laws are the foundational framework for riparian rights in most cases. Private agreements with neighbors can establish specific arrangements regarding water use but do not generally change the overarching state laws that govern riparian rights. The economic status of a landowner does not play a direct role in the legal recognition of those rights, either. Thus, understanding the role of state laws is essential for anyone dealing with riparian

7. What term describes the act of neglecting a legal right for a period sufficient to imply that the right has been waived?

- A. Abandonment**
- B. Acquiescence**
- C. Waiver**
- D. Retention**

The term that best describes the act of neglecting a legal right for a period sufficient to imply that the right has been waived is "acquiescence." Acquiescence occurs when a party knowingly allows another party to act in a certain way without objection over a significant period of time, which can imply consent or acceptance of the situation. In legal contexts, this is important because it can affect one's rights and how they can assert those rights later on. For example, if a property owner observes a neighbor using their property without permission for an extended time and does nothing to stop it, the property owner might be seen as acquiescing to that use, potentially undermining future claims to ownership or use of that property. In contrast, abandonment refers to the decision to relinquish a property right entirely without any intention of reclaiming it, while waiver specifically involves the intentional relinquishment of a known right, demonstrating a conscious choice rather than a passive implication. Retention doesn't pertain to the concept of neglect or inaction related to rights but rather suggests keeping or holding onto something.

8. Which system is established by the National Oceanic Survey/National Geodetic Survey for Texas?

- A. Texas Land Survey System**
- B. Texas State Plane Coordinate System**
- C. Texas Geodetic Survey System**
- D. Texas Height Reference System**

The Texas State Plane Coordinate System is the correct answer because it is specifically designed to provide a consistent framework for mapping and surveying in Texas. This system uses planar coordinates for accuracy in local surveys, minimizing distortion that can occur when representing the earth's curved surface on a flat plane. The National Oceanic and Atmospheric Administration (NOAA) through its National Geodetic Survey (NGS) has developed the State Plane Coordinate System to cater to the unique geographical and legal framework of states within the U.S., including Texas. This system is crucial for ensuring that data from various surveying projects remains consistent and reliable across large geographical areas. Other systems mentioned in the choices include the Texas Land Survey System, which is a historical land division system, and the Texas Geodetic Survey System, which is less commonly referenced in modern practices compared to the State Plane system. The Texas Height Reference System focuses on elevation data rather than horizontal positioning, making it suitable for different applications but not the primary coordinate system used for surveying in Texas.

9. What is the process of estimating a value within two known values in a sequence, often used for drawing contour lines?

A. Interpolation

B. Extrapolation

C. Calibration

D. Differentiation

The process of estimating a value within two known values in a sequence is known as interpolation. This method is commonly used in various fields, including surveying and cartography, especially for drawing contour lines on maps. By taking two adjacent known data points, interpolation allows surveyors to deduce an estimated value or position of a point that lies between them. For example, in contour mapping, if you have elevation markers at certain points, interpolation helps compute the elevation at intermediate points, allowing for a smoother transition of values and accurate representation of the terrain. This process is crucial for creating detailed maps and for understanding the topography accurately. The other options represent different processes that do not match the context of estimating values within a defined range. Extrapolation, for instance, involves extending a sequence beyond known data points, while calibration relates to adjusting measurements or equipment for accuracy, and differentiation pertains to mathematical changes and rates of change.

10. What is the purpose of recording magnetic declination in surveying?

A. To establish the average temperature

B. To correct for angle measurements

C. To enhance visual representation on maps

D. To calculate area accurately

The purpose of recording magnetic declination in surveying is primarily to correct for angle measurements. Magnetic declination is the angle between magnetic north (the direction a compass points) and true north (the direction along the Earth's surface towards the geographic North Pole). This angle varies depending on location and changes over time due to shifts in the Earth's magnetic field. In surveying, precise angle measurements are crucial for establishing accurate positions and lines. If the declination is not taken into account, it could lead to significant errors in the location of points or in the alignment of structures. By accurately recording and adjusting for magnetic declination, surveyors can ensure that their measurements correspond to true geographic directions, thereby enhancing the reliability of the survey results. While other options mention temperature and visual representation, these factors do not directly relate to the primary purpose of magnetic declination in surveying. Additionally, calculating area may require accurate angle measurements, but the purpose of recording magnetic declination specifically centers on angles rather than areas.

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://txsurveyorintraining.examzify.com>

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

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