

SIFT Math 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

1. Which is greater: $\frac{2}{3}$ or $\frac{3}{5}$?
 - A. $\frac{3}{5}$
 - B. $\frac{2}{3}$
 - C. Equal
 - D. Cannot determine
2. If you have a rectangle length of 10 cm and width of 5 cm, what is its area?
 - A. 50 cm^2
 - B. 15 cm^2
 - C. 25 cm^2
 - D. 35 cm^2
3. If 40% of a number is 80, what is the number?
 - A. 200
 - B. 160
 - C. 180
 - D. 220
4. What is the value of $(4 + 6) \div 2$?
 - A. 5
 - B. 6
 - C. 4
 - D. 3
5. A purchase of \$800 paid in 4 equal installments includes an 8% tax. What is the amount of each payment?
 - A. \$216
 - B. \$217
 - C. \$219
 - D. \$216
6. What is $\frac{3}{5}$ expressed as a decimal?
 - A. A) 0.45
 - B. B) 0.6
 - C. C) 0.5
 - D. D) 0.3

7. Which of the following represents 60% as a fraction?
- A. $\frac{3}{5}$
 - B. $\frac{2}{3}$
 - C. $\frac{5}{8}$
 - D. $\frac{1}{2}$
8. 84 items are evenly distributed into how many boxes if there are 7 boxes?
- A. 10.3
 - B. 12.0
 - C. 11.5
 - D. 11.1
9. Simplify: $(\frac{3}{5}) + (\frac{7}{10})$
- A. 1.2
 - B. 1.3
 - C. 1.4
 - D. 1.5
10. A circle has radius 9. What is its area ($\pi \approx 3.14$)?
- A. 253.5
 - B. 254.34
 - C. 258.3
 - D. 260.1

Answers

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

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Explanations

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1. Which is greater: $\frac{2}{3}$ or $\frac{3}{5}$?

A. $\frac{3}{5}$

B. $\frac{2}{3}$

C. Equal

D. Cannot determine

To determine which fraction is greater, it's helpful to compare the two fractions by converting them to a common denominator. The fractions $\frac{2}{3}$ and $\frac{3}{5}$ need to be expressed with a denominator that both can share. The least common multiple (LCM) of the denominators 3 and 5 is 15. We can convert both fractions: For $\frac{2}{3}$: Multiply both the numerator and denominator by 5: $\frac{2}{3} = \frac{(2 * 5)}{(3 * 5)} = \frac{10}{15}$. For $\frac{3}{5}$: Multiply both the numerator and denominator by 3: $\frac{3}{5} = \frac{(3 * 3)}{(5 * 3)} = \frac{9}{15}$. Now, comparing $\frac{10}{15}$ and $\frac{9}{15}$, it is evident that $\frac{10}{15}$ is greater than $\frac{9}{15}$. Therefore, $\frac{2}{3}$ is indeed greater than $\frac{3}{5}$. This method clearly shows why the comparison yields the result that $\frac{2}{3}$ is the larger fraction, allowing for an informed decision based on equivalent forms of the fractions. This approach illustrates the fundamental principle of fraction comparison through a common denominator, reinforcing understanding in fraction manipulation and comparison.

2. If you have a rectangle length of 10 cm and width of 5 cm, what is its area?

A. 50 cm^2

B. 15 cm^2

C. 25 cm^2

D. 35 cm^2

To find the area of a rectangle, you use the formula: $\text{Area} = \text{Length} \times \text{Width}$. In this case, the length of the rectangle is 10 cm and the width is 5 cm. By multiplying these two dimensions together, you compute the area as follows: $\text{Area} = 10 \text{ cm} \times 5 \text{ cm} = 50 \text{ cm}^2$. The units of area are square units, which is why we express the outcome as 50 cm^2 . This calculation confirms that the area of the rectangle is indeed 50 cm^2 , making it the correct answer.

3. If 40% of a number is 80, what is the number?

A. 200

B. 160

C. 180

D. 220

To determine the number when 40% of it equals 80, you can set up the equation based on the relationship between percentages and their corresponding values. Start by expressing the problem mathematically: Let the unknown number be represented by (x) . Since 40% of (x) equals 80, you can write the equation as: $0.40x = 80$. Next, to isolate (x) , you can divide both sides of the equation by 0.40: $x = \frac{80}{0.40}$. Calculating the right side: $x = \frac{80}{0.40} = \frac{80}{\frac{4}{10}} = 80 \times \frac{10}{4} = 80 \times 2.5 = 200$. Thus, the value of (x) is 200. This means that the number in question is indeed 200, as 40% of 200 is 80. This deduction process reveals that the correct answer represents a straightforward application of percentage calculations and algebraic manipulation.

4. What is the value of $(4 + 6) \div 2$?

A. 5

B. 6

C. 4

D. 3

To find the value of $(4 + 6) \div 2$, you first need to perform the operation inside the parentheses. Adding 4 and 6 gives you 10. So, the expression simplifies to $10 \div 2$. Next, you divide 10 by 2, which equals 5. Thus, the value of the original expression $(4 + 6) \div 2$ is 5. This satisfies the calculation step-by-step: first solving the addition, and then performing the division, leading to the final answer of 5.

5. A purchase of \$800 paid in 4 equal installments includes an 8% tax. What is the amount of each payment?

A. \$216

B. \$217

C. \$219

D. \$216

To determine the amount of each payment when a purchase of \$800 is paid in 4 equal installments that includes an 8% tax, we first need to isolate the purchase price before tax. The total purchase amount of \$800 already includes the tax. Since there is an 8% tax on the purchase price, we can calculate the purchase price without tax, denoted as (P) , using the formula for tax-inclusive pricing: $800 = P + 0.08P = 1.08P$. To find (P) , we rearrange the equation: $P = \frac{800}{1.08}$. Calculating (P) : $P = \frac{800}{1.08} \approx 740.74$. Now that we know the original price of the item is approximately \$740.74, we can find the total payment amount after tax, which is \$800, and then divide it by the number of installments, which is 4. The amount of each payment is: $\text{Each payment} = \frac{800}{4} = 200$. However, this is incorrect, as we should be dividing

6. What is $\frac{3}{5}$ expressed as a decimal?

A. A) 0.45

B. B) 0.6

C. C) 0.5

D. D) 0.3

To express the fraction $\frac{3}{5}$ as a decimal, you can perform the division of the numerator (3) by the denominator (5). When you divide 3 by 5, you get 0.6. This conversion can be understood by recognizing that $\frac{3}{5}$ indicates that for every 5 equal parts, 3 of those parts are being represented. When converted to a decimal, 0.6 reflects the proportion of the whole represented by the fraction, where 0.6 is equivalent to 60% of a whole. This makes 0.6 the correct representation of $\frac{3}{5}$ in decimal form, aligning with the principles of fractional notation and decimal equivalence.

7. Which of the following represents 60% as a fraction?

A. $\frac{3}{5}$

B. $\frac{2}{3}$

C. $\frac{5}{8}$

D. $\frac{1}{2}$

To represent 60% as a fraction, you start by recognizing that percent means "per hundred." Therefore, 60% can be expressed as $\frac{60}{100}$. Next, it is essential to simplify this fraction to its lowest terms. Both the numerator (60) and the denominator (100) can be divided by their greatest common divisor, which is 20. When you divide both by 20, you get: $60 \div 20 = 3$ $100 \div 20 = 5$ This simplifies $\frac{60}{100}$ to $\frac{3}{5}$. Thus, 60% represented as a fraction in its simplest form is $\frac{3}{5}$.

8. 84 items are evenly distributed into how many boxes if there are 7 boxes?

A. 10.3

B. 12.0

C. 11.5

D. 11.1

To determine how many items are in each box when 84 items are evenly distributed into 7 boxes, you need to perform the division of the total number of items by the number of boxes. This means calculating $(84 \div 7)$. When you carry out this division: 1. ****Calculate**:** $(84 \div 7 = 12)$. This means that each box will contain exactly 12 items. The process shows an even distribution where no items are left over, making it an accurate distribution. The answer of 12.0 aligns with the idea of whole items being divided equally. It is important in this type of problem to focus on whole units (items) being distributed without fractions or decimals that would imply leftover items since we cannot distribute part of an item in real-world counting. Therefore, the choice indicating 12.0 is the correct answer as it accurately represents the number of items per box after dividing 84 items into 7 evenly distributed boxes.

9. Simplify: $(\frac{3}{5}) + (\frac{7}{10})$

A. 1.2

B. 1.3

C. 1.4

D. 1.5

To simplify the expression $(\frac{3}{5}) + (\frac{7}{10})$, it is important to have a common denominator for the fractions in order to add them accurately. The denominators in this case are 5 and 10. The lowest common denominator (LCD) for these fractions is 10. Next, we can convert $(\frac{3}{5})$ into a fraction with the denominator of 10. To do this, we multiply the numerator and the denominator of $(\frac{3}{5})$ by 2: $(\frac{3}{5}) \times (\frac{2}{2}) = (\frac{6}{10})$ Now we can rewrite the expression: $(\frac{6}{10}) + (\frac{7}{10})$ With both fractions sharing a common denominator, we can now add them: $(6 + 7) / 10 = 13 / 10$ To express $\frac{13}{10}$ as a decimal, we divide 13 by 10, which results in 1.3. This decimal aligns exactly with one of the choices provided in the question. Thus, the correct simplified form of $(\frac{3}{5}) + (\frac{7}{10})$ is 1.3.

10. A circle has radius 9. What is its area ($\pi \approx 3.14$)?

A. 253.5

B. 254.34

C. 258.3

D. 260.1

To find the area of a circle, the formula used is $A = \pi r^2$, where A represents the area and r represents the radius. In this case, the radius is given as 9. Plugging this into the formula: 1. Calculate the radius squared: $r^2 = 9^2 = 81$. 2. Now, substitute π with the approximate value of 3.14: $A = 3.14 \times 81$. 3. Performing the multiplication: $A = 3.14 \times 81 = 254.34$. Thus, the area of the circle is approximately 254.34 when using the given approximation of π . This value corresponds to one of the choices provided, making it the correct answer. The accuracy of the calculations confirms that this value emerged from appropriately applying the area formula for a circle.

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://siftmath.examzify.com>

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