The Ultimate Step by Step Guide

to Preparing for the CLEP College Algebra Test

Test taker's #1 Choice

CLEP COLLEGE ALGEBRA 2021

for Beginners

Reza Nazari

✓ Recommended by Test Prep Experts

CLEP College Algebra for Beginners

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By

Reza Nazari



About Effortless Math Education Inc.

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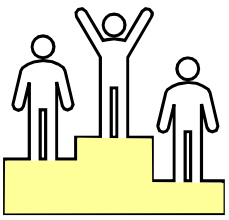
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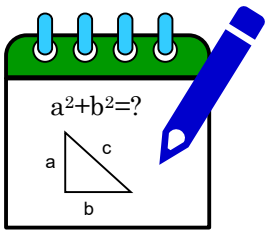


Thank you for choosing Effortless Math for your CLEP College Algebra test preparation and congratulations on making the decision to take the CLEP College Algebra test! It's a remarkable move you are taking, one that shouldn't be diminished in any capacity. That's why you need to use every tool possible to ensure you succeed on the test with the highest possible score, and this extensive study guide is one such tool.

If math has never been a strong subject for you, **don't worry**! This book will help you prepare for (and even ACE) the CLEP College Algebra test. As test day draws nearer, effective preparation becomes increasingly more important. Thankfully, you have this comprehensive study guide to help you get ready for the test. With this guide, you can feel confident that you will be more than ready for the CLEP College Algebra test when the time comes.



First and foremost, it is important to note that this book is a study guide and not a textbook. It is best read from cover to cover. Every lesson of this "self-guided Algebra book" was carefully developed to ensure that you are making the most effective use of your time while preparing for the test. This up-to-date guide reflects the 2021 test guidelines and will put you on the right track to hone your math skills, overcome exam anxiety, and boost your confidence, so that you can have your best to succeed on the CLEP College Algebra test.



This study guide will:

- ☑ Explain the format of the CLEP College Algebra test.
- ☑ Describe specific test-taking strategies that you can use on the test.
- ☑ Provide CLEP College Algebra test-taking tips.
- ☑ Review all CLEP College Algebra concepts and topics you will be tested on.
- ☑ Help you identify the areas in which you need to concentrate your study time.
- ☑ Offer exercises that help you develop the basic math skills you will learn in each section.
- ☑ Give **2 realistic and full-length practice tests** (featuring new question types) with detailed answers to help you measure your exam readiness and build confidence.

This resource contains everything you will ever need to succeed on the CLEP College Algebra test. You'll get in-depth instructions on every math topic as well as tips and techniques on how to answer each question type. You'll also get plenty of practice questions to boost your test-taking confidence.

In addition, in the following pages you'll find:

Use the distributive property to simply each expression.

25) $2(6+x) =$ _____

26) $5(3-2x) =$ _____

27) $7(1-5x) =$ _____

28) $(3-4x)7 =$ _____

29) $6(2-3x) =$ _____

30) $(-1)(-9+x) =$ _____

31) $(-6)(3x-2) =$ _____

32) $(-x+12)(-4) =$ _____

33) $(-2)(1-6x) =$ _____

34) $(-5x-3)(-8) =$ _____

Evaluate each expression using the value given.

35) $x = 4 \rightarrow 10 - x =$ ____

36) $x = 6 \rightarrow x + 8 =$ ____

37) $x = 3 \rightarrow 2x - 6 =$ ____

38) $x = 2 \rightarrow 10 - 4x =$ ____

39) $x = 7 \rightarrow 8x - 3 =$ ____

40) $x = 9 \rightarrow 20 - 2x =$ ____

41) $x = 5 \rightarrow 10x - 30 =$ ___

42) $x = -6 \rightarrow 5 - x =$ ____

43) $x = -3 \rightarrow 22 - 3x =$ ____

44) $x = -7 \rightarrow 10 - 9x =$ ____

45) $x = -10 \rightarrow 40 - 3x =$ ____

46) $x = -2 \rightarrow 20x - 5 =$ ____

47) $x = -5 \rightarrow -10x - 8 =$ ___

48) $x = -4 \rightarrow -1 - 4x =$ ___

Evaluate each expression using the values given.

49) $x = 2, y = 1 \rightarrow 2x + 7y =$ _____

50) $a = 3, b = 5 \rightarrow 3a - 5b =$ _____

51) $x = 6, y = 2 \rightarrow 3x - 2y + 8 =$ _____

52) $a = -2, b = 3 \rightarrow -5a + 2b + 6 =$ _____

53) $x = -4, y = -3 \rightarrow -4x + 10 - 8y =$ _____

Chapter 3: Answers

1) $4x + 2$
2) $-2x + 2$
3) $7x - 4$
4) $8x - 9$
5) $-9x + 5$
6) $-3x - 4$
7) $2x - 12$
8) $-3x^2 + 4x - 11$
9) $9x^2 + x - 9$
10) $5x^2 - 7x - 3$
11) $4x^2 - 8x - 3$
12) $3x^2 - 12x - 2$
13) $9x^2 - 6x - 6$
14) $-x^2 - 3x + 6$
15) $3x^3 - 4x^2 + 2x$
16) $2x^5 + x^4 + 3x^2$
17) $6x^3 - 5x^2 + 11x$
18) $7x^3 + 2x^2 - 13x$
19) $7x^4 + 7x^3$
20) $15x^5 - 12x^3 - x^2$
21) $14x^4 + 6x^3 + 24$
22) $22x^4 + 7x^3$
23) $15x^3 - 21x^2$
24) $-4x^4 - 7x^3$
25) $2x + 12$
26) $-10x + 15$
27) $-35x + 7$
28) $-28x + 21$
29) $-18x + 12$
30) $-x + 9$
31) $-18x + 12$
32) $4x - 48$
33) $12x - 2$
34) $40x + 24$
35) 6
36) 14
37) 0
38) 2
39) 53
40) 2
41) 20
42) 11
43) 31
44) 73
45) 70
46) -45
47) 42
48) 15
49) 11
50) -16
51) 22
52) 22
53) 50

CHAPTER

4 Equations and Inequalities

Math topics that you'll learn in this chapter:



- ☑ One-Step Equations
- ☑ Multi-Step Equations
- ☑ System of Equations
- ☑ Graphing Single–Variable Inequalities
- ☑ One-Step Inequalities
- ☑ Multi-Step Inequalities



One–Step Equations

- The values of two expressions on both sides of an equation are equal. Example: $ax = b$. In this equation, ax is equal to b.
- Solving an equation means finding the value of the variable.
- You only need to perform one Math operation to solve the one-step equations.
- To solve a one-step equation, find the inverse (opposite) operation is being performed.
- The inverse operations are:
  - ❖ Addition and subtraction
  - ❖ Multiplication and division

Examples:

Example 1. Solve this equation for x. $4x = 16, x = ?$

Solution: Here, the operation is multiplication (variable x is multiplied by 4) and its inverse operation is division. To solve this equation, divide both sides of equation by 4: $4x = 16 \rightarrow \frac{4x}{4} = \frac{16}{4} \rightarrow x = 4$

Example 2. Solve this equation. $x + 8 = 0\ ,\ x = ?$

Solution: In this equation 8 is added to the variable x. The inverse operation of addition is subtraction. To solve this equation, subtract 8 from both sides of the equation: $x + 8 - 8 = 0 - 8$. Then: $\rightarrow x = -8$

Example 3. Solve this equation for x. $x + 12 = 0$

Solution: Here, the operation is addition and its inverse operation is subtraction. To solve this equation, subtract 12 from both sides of the equation: $x + 12 - 12 = 0 - 12 \rightarrow\ x = -12$

Multi–Step Equations

- To solve a multi-step equation, combine "like" terms on one side.
- Bring variables to one side by adding or subtracting.
- Simplify using the inverse of addition or subtraction.
- Simplify further by using the inverse of multiplication or division.
- Check your solution by plugging the value of the variable into the original equation.

Examples:

Example 1. Solve this equation for $\boldsymbol{x}$. $4x + 8 = 20 - 2x$

Solution: First, bring variables to one side by adding $2x$ to both sides. Then:
$4x + 8 + 2x = 20 - 2x + 2x \rightarrow 4x + 8 + 2x = 20$.
Simplify: $6x + 8 = 20$ Now, subtract 8 from both sides of the equation:
$6x + 8 - 8 = 20 - 8 \rightarrow 6x = 12 \rightarrow$Divide both sides by 6:
$6x = 12 \rightarrow \frac{6x}{6} = \frac{12}{6} \rightarrow x = 2$
Let's check this solution by substituting the value of 2 for x in the original equation:
$x = 2 \rightarrow 4x + 8 = 20 - 2x \rightarrow 4(2) + 8 = 20 - 2(2) \rightarrow 16 = 16$
The answer $x = 2$ is correct.

Example 2. Solve this equation for x. $-5x + 4 = 24$

Solution: Subtract 4 from both sides of the equation.
$-5x + 4 = 24 \rightarrow -5x + 4 - 4 = 24 - 4 \rightarrow -5x = 20$
Divide both sides by -5, then: $-5x = 20 \rightarrow \frac{-5x}{-5} = \frac{20}{-5} \rightarrow x = -4$
Now, check the solution:
$x = -4 \rightarrow -5x + 4 = 24 \rightarrow -5(-4) + 4 = 24 \rightarrow 24 = 24$
The answer $x = -4$ is correct.