

CLEP College Algebra Foundation Worksheet

8 original questions, working space and separate answer explanations. Version 2026-10-27.

Scope

College Algebra foundations.

This is an untimed foundation study sample, not an official examination or complete mock test. Author-reviewed learning materials; independent educator review and learner calibration remain pending.

How to use this worksheet

Work through the questions before opening the answer section. Write your calculation or the reason for your choice. After checking the explanation, return to the linked lesson for any unfamiliar distinction.

<https://openexam.site/exams/clep-algebra/worksheets/>

QUESTION 1 / Powers, roots and equivalent forms

For $x \neq 0$, $x^9/x^5 = x^k$. What is k ?

- A. 45
- B. $9/5$
- C. 4
- D. 9

Working / reasoning:

Item clep-power-quotient-1 | Lesson: <https://openexam.site/exams/clep-algebra/learn/powers/>

QUESTION 2 / Linear equations, systems and boundaries

Solve $(2x - 3)/3 = 6$. What is x ?

- A. $15/2$
- B. $7/2$
- C. $21/2$
- D. 21

Working / reasoning:

Item clep-fraction-linear-2 | Lesson: <https://openexam.site/exams/clep-algebra/learn/linear/>

QUESTION 3 / Functions, composition and inverse inputs

Over the real numbers, what is the smallest allowed x for $f(x) = \sqrt{2x - 12}$?

- A. 12
- B. -6
- C. 6
- D. 3

Working / reasoning:

Item clep-radical-domain-3 | Lesson: <https://openexam.site/exams/clep-algebra/learn/functions/>

QUESTION 4 / Complex numbers without losing the sign

What is the real part of $(6 + 3i)(2 - i)$?

Your answer: _____

Working / reasoning:

Item clep-complex-real-product-4 | Lesson: <https://openexam.site/exams/clep-algebra/learn/complex/>

QUESTION 5 / Read and combine polynomial structure

In the expansion of $(x + 8)(x + 11)$, what is the coefficient of x ?

- A. 19
- B. 11
- C. 1
- D. 8

Working / reasoning:

Item clep-coefficient-product-5 | Lesson: <https://openexam.site/exams/clep-algebra/learn/polynomials/>

QUESTION 6 / Quadratic equations and discriminants

What is the sum of the roots of $3x^2 - 21x + 3 = 0$?

- A. 7
- B. -7
- C. $7/3$
- D. 1

Working / reasoning:

Item clep-root-sum-nonmonic-2 | Lesson: <https://openexam.site/exams/clep-algebra/learn/quadratics/>

QUESTION 7 / Transformations and graph features

The function $y = 2(x + 5)^2 - 5$ has its vertex at (h,k) . What is h ?

- A. 0
- B. 45
- C. -5
- D. 5

Working / reasoning:

Item clep-vertex-input-3 | Lesson: <https://openexam.site/exams/clep-algebra/learn/graphs/>

QUESTION 8 / Sequences, factorials and binomial choices

An arithmetic sequence starts at 7 and has common difference 4. What is term 9?

Your answer: _____

Working / reasoning:

Item clep-arithmetic-term-4 | Lesson: <https://openexam.site/exams/clep-algebra/learn/sequences/>

CLEP College Algebra: Answers & Explanations

Compare the method or rule as well as the final answer. These explanations are study aids, not official scoring guidance.

QUESTION 1 / clep-power-quotient-1

Answer: 4

1. The bases are equal, so subtract exponents in the quotient.
2. The nonzero restriction belongs to the original denominator.
3. The requested value is 4. Substitute or reverse the operation to check this result.

QUESTION 2 / clep-fraction-linear-2

Answer: $21/2$

1. Multiply both sides by 3.
2. Add the subtracted constant before dividing by the coefficient of x .
3. The requested value is $21/2$. Substitute or reverse the operation to check this result.

QUESTION 3 / clep-radical-domain-3

Answer: 6

1. An even-root radicand must be nonnegative.
2. Solve $2x$ minus the constant greater than or equal to zero.
3. The requested value is 6. Substitute or reverse the operation to check this result.

QUESTION 4 / clep-complex-real-product-4

Answer: 15

1. Multiply the real terms and the two imaginary terms.
2. Since $i^2 = -1$, the product of $3i$ and $-i$ contributes positive 3 to the real part.
3. The requested value is 15. Substitute or reverse the operation to check this result.

QUESTION 5 / clep-coefficient-product-5

Answer: 19

1. The x terms come from the two cross products.
2. Add their coefficients while keeping the x^2 and constant terms separate.
3. The requested value is 19. Substitute or reverse the operation to check this result.

QUESTION 6 / clep-root-sum-nonmonic-2

Answer: 7

1. For $ax^2 + bx + c = 0$, the root sum is $-b/a$.
2. Use the signed coefficient b rather than only its magnitude.
3. The requested value is 7. Substitute or reverse the operation to check this result.

QUESTION 7 / clep-vertex-input-3

Answer: -5

1. The inner expression equals zero at the vertex.
2. Solve x plus the constant equal to zero; the positive sign inside indicates a left shift.
3. The requested value is -5. Substitute or reverse the operation to check this result.

QUESTION 8 / clep-arithmetic-term-4

Answer: 39

1. Count one fewer step than the term number.
2. Add that many common differences to the first term.
3. The requested value is 39. Substitute or reverse the operation to check this result.

References and scope notes

The questions and teaching explanations are original catalog materials. References support the selected concepts; they are not endorsements or a reproduced official examination bank.

CLEP College Algebra exam overview

<https://clep.collegeboard.org/clep-exams/college-algebra>

Siyavula Grade 10 foundation reference

<https://www.siyavula.com/read>

Foundation pilot: selected college-algebra skills, not complete syllabus coverage.

No official score conversion or guaranteed college credit.

Question mix and timing are not a full CLEP simulation.

Fees and appointment availability require confirmation with the official provider.

Independent educator review pending.

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