

CLEP College Algebra Exam Guide

Section: CLEP College Algebra Exams • Total Questions: 10 • Format: Verified Q&A

1. What is the greatest common factor of the three terms in the polynomial $12x^4y^2 + 18x^2y^4 + 24x^3y$?

- (A) $2xy$
 - (B) $2x^2y$
 - (C) $3x^4y^4$
 - (D) $6x^2y$
 - (E) $6x^2y^7$
-

2. Which of the following is equal to $a^{1/2}b^{1/3}a^{1/4}b^{-2/3}$, where $a > 0$ and $b > 0$?

- (A) $a^{3/4}/b^{1/3}$
 - (B) $a^{1/8}/b^{2/9}$
 - (C) $-a^{3/4}b^{1/3}$
 - (D) $-a^{3/4}b$
-

3. Which of the following expressions is equivalent to $x/(x^2 + 6x + 9) - (x - 3)/(x^2 + 5x + 6)$?

- (A) $(2x - 9)/((x + 2)(x + 3))$
 - (B) $(2x + 9)/((x + 2)(x + 3))$
 - (C) $(2x - 9)/((x + 2) * (x + 3)^2)$
 - (D) $(2x + 9)/((x + 2) * (x + 3)^2)$
 - (E) $(2x + 9)/((x + 2)^2 * (x + 3)^2)$
-

4. When a stone is dropped from a certain tower, its height h above the ground, in feet, is given by the function $(h(t) = -16t^2 - 60t + 984)$ where t is the time, in seconds, since the stone was dropped. Approximately what is the value of t , in seconds, when the stone hits the ground?

- (A) 4.5
 - (B) 6.2
 - (C) 8.9
 - (D) 10.4
 - (E) 12.9
-

5. If $z = a + bi = (3+i)(2-3i)$, then z is equal to which of the following?

- (A) $(3-7i)$
 - (B) $(3+5i)$
 - (C) $(6-6i)$
 - (D) $(9-7i)$
 - (E) $(9+5i)$
-

6. If $0 < r < s < t$ which of the following CANNOT be true?

- (A) $r^2 < s^2 < t^2$
 - (B) $rt < rs$
 - (C) $1/t < 1/s < 1/r$
 - (D) $s/r < t/r$
 - (E) $r/t < r/s$
-

7. The graph of a quadratic function is shown in the xy -plane above. The x -intercepts are 3 and -1, and the y -intercept is 2. What is the y -coordinate of the vertex?

- (A) $5/2$
 - (B) $8/3$
 - (C) $7/3$
 - (D) $11/4$
 - (E) $9/4$
-

8. If $\log_b(x) = 5$, what is the value of x in terms of b ?

- (A) $5/b$
 - (B) $5b$
 - (C) 5^b
 - (D) b^5
 - (E) b^{10}
-

9. The function g is defined by $g(x) = x + 1$. If h is the inverse function of g , what is the value of $h(2)$?

- (A) -2
 - (C) 1
 - (D) 2
 - (E) 3
-

10. In the xy -plane, the graph of the equation $y = x^2$ is stretched by a factor of 3 in the vertical direction. The resulting graph is then translated 5 units upward, and finally the translated graph is reflected across the x -axis. Which of the following is an equation of the final result?

- (A) $y = -3x^2 - 5$
- (B) $y = -3x^2 + 5$
- (C) $y = -3(x - 5)^2$
- (D) $y = -3(x + 5)^2$
- (E) $y = 3x^2 - 5$