

SPARK Hybrid Education Center

UNIT TEST - November - Systems of Equations

Upper Level

Name: _____
Total: 16 questions. Show all work where indicated.

Date: _____ Period: _____

Section 1: Multiple Choice

1. Solution of system $y=2x+1$ and $y=-x+4$: A) (1,3) B) (2,5) C) (0,4) D) (3,7)
2. Method used when one equation has isolated variable: A) graphing B) substitution C) elimination D) factoring
3. No solution system has: A) intersecting lines B) same line C) parallel lines D) perpendicular lines
4. Eliminate y from: $2x+y=8$ and $x-y=1$: A) add B) subtract C) multiply D) divide
5. System with infinite solutions has: A) parallel lines B) perpendicular lines C) same line D) no lines
6. Solve by substitution: $y=3x$ and $2x+y=15$. $x=$ A) 2 B) 3 C) 4 D) 5

Section 2: Matching

7. ___ consistent system A) has no solution
8. ___ inconsistent system B) has exactly one solution
9. ___ dependent system C) has infinite solutions
10. ___ substitution method D) replace variable with equivalent expression
11. ___ elimination method E) add/subtract equations to cancel a variable

Section 3: Show Your Work

12. Solve by graphing (sketch): $y = x + 2$ and $y = -x + 6$.
13. Solve by substitution: $y = 2x - 1$ and $3x + y = 14$.
14. Solve by elimination: $2x + 3y = 13$ and $x - 3y = -4$.

Section 4: Word Problems

15. Two numbers sum to 25 and their difference is 7. Write and solve a system to find both numbers.
16. Adult tickets cost \$8, student tickets \$5. They sold 200 tickets totaling \$1,150. How many of each?

Unit Test: November - Systems of Equations - Upper Level

Section 1: Multiple Choice

1. A) (1,3)
2. B) substitution
3. C) parallel lines
4. A) add
5. C) same line
6. B) 3

Section 2: Matching

7. B
8. A
9. C
10. D
11. E

Section 3: Show Your Work

12. Intersection at (2,4)
13. $x=3$, $y=5$
14. $3x=9 \rightarrow x=3$, $y=7/3$; substitute back: $2(3)+3(7/3)=13$?; $x=3$, $y=7/3$

Section 4: Word Problems

15. $x+y=25$, $x-y=7 \rightarrow x=16$, $y=9$
16. 50 adult, 150 student