Name:_____ Systems Review

Match the graph with its linear system. Does the system have exactly one solution, no solution, or infinitely many solutions?

A. $-2x + y = 6$
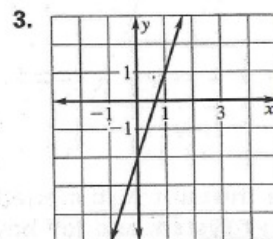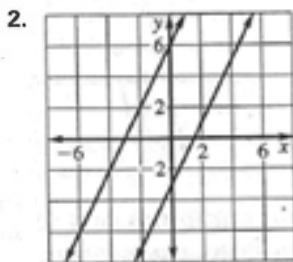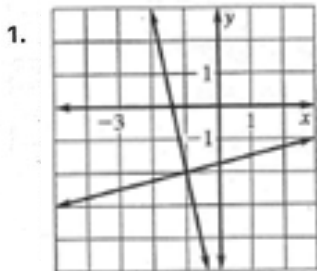 $-4x + 2y = -6$

B. $x - 4y = 7$
  $5x + y = -7$

C. $-9x + 3y = -6$
  $-3x + y = -2$

1.

2.

3.

Use the substitution method or linear combinations to solve the linear system and tell how many solutions the system has.

4. $y = -x + 2$
  $3x + 3y = 12$

5. $y = 3x - 1$
  $y = -2x + 4$

6. $y = 4x$
  $y = -3x$

7. $-8x + 8y = -6$
  $3x - 3y = 8$

8. $-6x - 6y = -12$
  $-2x - 2y = -4$

9. $-4x - 2y = 2$
  $4x - 2y = 18$

10. $6x - 4y = -6$
  $3x + 2y = 1$

11. $3x - 2y = -5$
  $-9x + 6y = 15$

12. $x + 3y = -3$
  $\frac{1}{3}x + y = 1$

13. The school that Stefan goes to is selling tickets to a choral performance. On the first day of ticket sales the school sold 3 senior citizen tickets and 1 child ticket for a total of $38. The school took in $52 on the second day by selling 3 senior citizen tickets and 2 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

14. The state fair is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 8 vans and 8 buses with 240 students. High School B rented and filled 4 vans and 1 bus with 54 students. Every van had the same number of students in it as did the buses. Find the number of students in each van and in each bus.