Substitution and Elimination Practice Problems Name:_____

Depending on the problem, one method can be easier.

Try each question by elimination or substitution and CHECK BY GRAPHING

1. $x + y = 10$
   $x - y = 2$

2. $x = 5y$
   $3x - 4y = 11$

3. $x - 3y = -13$
   $-x + 4y = 15$

4. $x + 3y = 31$
   $y = 2x + 1$

5. $4x - 2y = -12$
$2x + 3y = 13$

6. $x = 1 - 3y$
$4x - 2y = -38$

7. $2x - 3y = 12$
$3x + 4y = 15$

8. $2x = 6 - y$
$2y = 16 - 4x$

9. $5y + 25x = 105$
$-97 = -10y + 18x$

10. $19x + 13y = 87$
$y = \frac{-1}{7}x - \frac{27}{7}$

11. $8x - 15y = -204$
$8x - 7y = -44$

12. $y = \frac{1}{2}x + 8$
$y = \frac{1}{3}x + 13$

13. $11x - 6y = 494$
$x + 7y = -23$

14. $10x - 9y = 47$
$7x + 2y = -75$

15. $6x + y = 50$
$18x + 7y = 86$

16. $5x - 4y = 256$
$7x + 12y = -64$

17. $\frac{872}{5} = \frac{14}{5}y + 3x$

$y = \frac{11}{10}x - \frac{36}{5}$

18. $y = 2x$

$y = 6x + 8$

19. $y = x - 11$

$4x + \frac{4}{5}y = 70$

20. $-8x + 2y = -48$

$6x - 2y = 28$

Challenge QUESTIONS!

21. $-2x + y + 3z = 7$
$6x - y + 8z = -30$
$-4x - y - 5z = 13$

22. $x - 6y - 2z = -8$
$-x + 5y + 3z = 2$
$3x - 2y - 4z = 18$