Name _____ Date _____

Solve each system of equations by substitution. Determine whether the system is consistent or inconsistent.

13) $\begin{cases} y = 2x - 3 \\ x = 4 \end{cases}$

$y = 2(4) - 3$

$y = 8 - 3$

$y = 5$

The solution is (4, 5).

The system is consistent.

14) $\begin{cases} 2x + y = 9 \\ y = 5x + 2 \end{cases}$

15) $\begin{cases} y = 3x - 2 \\ y - 3x = 4 \end{cases}$

16) $\begin{cases} \frac{1}{2}x + \frac{3}{2}y = -7 \\ \frac{1}{3}y = 2x - 10 \end{cases}$

17) $-3x - 4y = 2$
$3x + 3y = -3$

18) $-2x + 6y = 6$
$-7x + 8y = -5$

19) $-5x-8y=17$
$2x-7y=-17$

20) $-2x-y=-9$
$5x-2y=18$

21) $y=5x-7$
$-3x-2y=-12$

22) $-3x+3y=4$
$-x+y=3$

Critical thinking questions:

23) Write a system of equations with the solution $(4,-3)$.