Name: _____ Date: _____

BLM 8–7

Section 8.3 Extra Practice

1. Predict the number of solutions for each system of linear equations. Justify your answers.

a) $y = 5x - 1$

$y = -2x - 1$

b) $y = \frac{1}{2}x + 5$

$y = \frac{1}{2}x + 5$

c) $y = 4x - 1$

$y = 4x + 3$

2. How many solutions does each linear system have? Justify your answers.

a) $2x + 3y = 20$

$6x - y = 20$

b) $x - 5y = 1$

$-x + 5y = 1$

c) $x + 3y = 5$

$2x + 6y = 10$

3. In the system of linear equations $y = 3x + 4$ and $y = 3x + b$, what values of b will result in a system that has

a) no solution?

b) one solution?

c) an infinite number of solutions?

4. In the system of linear equations $y = -2x + 1$ and $y = mx + 1$, what values of m will result in a system that has

a) no solution?

b) one solution?

c) an infinite number of solutions?

5. In the system of linear equations $y = 4x - 1$ and $y = mx + b$, what values of m and b will result in a system that has

a) no solution?

b) one solution?

c) an infinite number of solutions?

6. In the system of linear equations $x + 2y = 4$ and $3x + 6y = C$, what values of C will result in a system that has

a) no solution?

b) one solution?

c) an infinite number of solutions?

7. Consider the following four linear equations:

A $4x + 2y = 20$

B $6x + 3y = 5$

C $2x + y = 10$

D $4x - 2y = -20$

Identify two lines that form a system that has

i) no solution

ii) one solution

iii) an infinite number of solutions