For questions 1-3: Solve the system of equations by graphing. If need be check your answer.

1. y = $\frac{1}{2}$ x

 y = −x + 3



What is/are the solutions? One, none, infinitely many

 2. y = 2x – 1

 y = 2x + 3



What do you notice about these lines?

What are the solutions? One, none, infinitely many

3. y = $\frac{1}{3}$x – 1

 3y = x – 3



What do you notice about these lines?

What are the solutions? One, none, infinitely many

4.) A line passes through points (0, -3) and (4, 1). (8EE8c)

Another line passes through points (1, -2) and (0, -1).

Determine whether the lines intersect. Explain why/why not.

If they do not intersect are they parallel or coincident? Explain.

5.) A line passes through points (0, 3) and (1,5)

Another line passes through points (1, 1) and (2, 3).

Determine whether the lines intersect. Explain why/why not.

If they do not intersect are they parallel or coincident? Explain.

Solving Systems by Inspection (8EE8b)

Does the following system of equations have **one, none, or infinitely many solutions**?

Tell what the lines would look like: parallel, intersecting, coincident.

1.) x + y = 1

 x + y = 5 Solutions Lines

2.) x + y = 2

 3x + 3y = 6 Solutions Lines

3.) y = 2x + 7

 y = 3x + 4 Solutions Lines

4.) x + y = 4

 y = ⁻ x ― 2 Solutions Lines

5.) x + 4y = 2

 2x + 2y = 8 Solutions Lines

Solving Systems by SUBSTITUTION (8EE8b)

6.) Explain what it means when you arrive at a true statement when solving a system of equations using substitution.

Solve the following system of equations using substitution. Check your work.

7.) y = x – 1

 2x – 3y = -1

8.) y = 5x

 3x – 2y = 14

9.) ⁻3x + 3y = 4

 ⁻x + y = 3

Solve Systems by Elimination (8EE8b)

Solve the following system of equations using elimination. Check your work.

10.) 5x – 2y = 11

 5x + 2y = 9

11.) 4x + 7y = 10

 4x + 7y = ⁻1

12.) 6y + 3x = 6

 ⁻3y + 2x = 4

Real World Connections

13.) Clara bought two t-shirts and a hot dog at a baseball game and spent $31.75. Her friend bought three t-shirts and two hot dogs and spent $51. All of the t-shirts cost the same amount, as do the hot dogs. *What is the price of each?* Solve by writing a system of equations to represent the situation.

14.) Chelsea and Zack are both dog sitters. Chelsea charges $2 per day plus a sign-up fee of $3. Zack charges a flat rate of $3 per day. Write a system of linear equations to find out after *how many days* Chelsea and Zack earn the same amount for dog sitting. *What is the amount?*