Algebra IA- Ms. Linzmeier Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 6 Assessment Parallel/Perpendicular Lines and Systems of Equations Review

1.) What is the relationship between the slopes of two parallel lines?

2.) What is the relationship between the slopes of two perpendicular lines?

3.) Give an example of parallel lines.

4.) Give an example of perpendicular lines.

Write the equation of the that is **parallel** to the given equation and contains the given point.

 5.) $y=\frac{3}{2}x-4;  (-4, 5)$           6.) $y+2x=3; (3,  1)$

Write the equation of the that is **perpendicular** to the given equation and contains the given point.

 7.) $y=\frac{1}{4}x-3; (2, 10)$ 8.) $y+3x=5;  (9, 2)$

*A.REI.C.6 – I can Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.*

Solve the following system of equations by graphing.

 9.) $x-2y= -6$ 10.) $y=2x-1$

 $ 3x-y=7    $ $2x-4y= -8$



*A.REI.C.6 – I can Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.*

Solve the system of equations using substitution.

 11.)    $y=2x$                                                                          12.) $3x+2y=10$

         $5x-y=30                                                                         x+y=10$

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| Solve the system of equations using elimination. 13.)  $-3x+5y=45                                                                      $14.)$ 4x-7y=13$              $3x+13y=9                                                                           2x-7y=3$ 15.) $4x-3y=8$                                                          16.)  $4x+5y=22$       $2x+y=14                                                                  5x-y=13$Solve the system of equations using any method.17.)$ y=3x-6$                                                                             18.)  $6x-3y=15$ $       -3x+y=6                                                                          y=2x-5$19.) When solving a system of equations and both variables are eliminated, what possible situations describe the lines?  |
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Answers:

1. Parallel lines have the same slope.
2. Perpendicular lines have opposite reciprocal slopes. (ex: 2 & -1/2)
3. y = 2x + 1 & y = 2x -4
4. y = -2x + 5 & y = 1/2x + 7

5. y=3/2x+11

6. y=-2x+7

7. y=-4x+18

8. y=1/3x-1

9. (4, 5)

10. (2, 3)

11. (10, 20)

12. (-10, 20)

13. (-10, 3)

14. (5, 1)

15. (5, 4)

16. (3, 2)

17. No solution

18. Infinite Solution

19. The lines are either parallel(no solution) or they are the same line (infinite solutions).