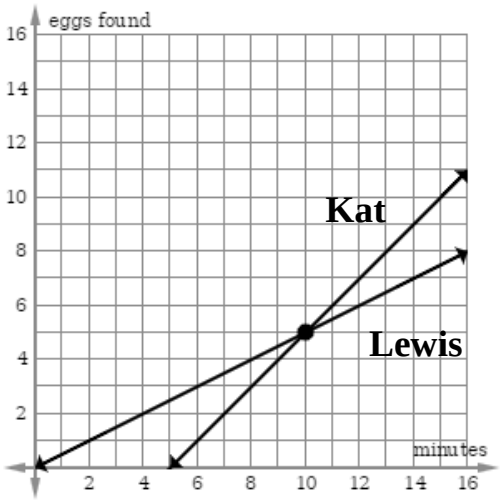
Algebra Readiness SBAC Practice 6 Name _____ Date _____ Period ___

Part A: Analyzing and Solving Systems of Linear Equations [8.EE.8]

1. **Solve** the linear equation, showing your steps. **Show** that the solution makes the equation true.

$3x-21+2x=17x-7-2x+6$

2. A family is having an egg hunt. The graph below shows the eggs found per minute of two children, Kat and Lewis.



A) **Describe** the intersection in the context of the problem.

B) **Which** child collects eggs at a faster rate? **Justify** your reasoning.

3. **Select** the statement that correctly describes the solution to the system of linear equations.

$y=2x-4$

$5x+y=10$

A) There is no solution. B) There is one solution. C) There are infinitely many solutions.

4. **Find** a value for x that makes the equation $3a-2(a+1)+6=-2a+34$ true.

Part B: Modeling with Systems of Equations [8.EE.8]

5. A new music service offers two subscription plans:

Plan A: $5 per month and $1.50 per song purchased.
Plan B: $0 per month and $2 per song purchased.

A) **Determine** the number of songs purchased in a month that would result in the cost of the plans being equal. **Justify** your reasoning.

B) **Write** a linear equation to represent the cost of each plan.

C) **Construct** a graph of the situation, labeling and scaling appropriately.

D) Tai is considering the new music service. Looking at their music buying habits for the last 10 months, which plan would you recommend they purchase? **Justify** your reasoning.

Month	March	April	May	June	July	August	September	October	November	December
Songs Purchased	12	2	4	15	13	10	9	14	19	13