Algebra 1 ECA Remediation **Name** Answer Key

Homework 19.3

1. Amy and Nicole are selling pies for a school fundraiser. Customers can buy apple pies and lemon meringue pies. Amy sold 5 apple pies and 9 lemon meringue pies for a total of $198. Nicole sold 3 apple pies and 14 lemon meringue pies for a total of $265. Write a system of equations that can be used to determine the cost of one apple (A) and one lemon meringue pie (L).

$5A+9L=198$

Answer $3A+14L=265$

	Amy	Nicole
Apple	5	3
Lemon Meringue	9	14
Total	198	265

$5A+9L=198$ ①
$3A+14L=265$ ②

What is the cost of one lemon meringue pie?

Answer $17.00

$-15A-27L=-594$ ①
$15A+70L=1325$ ②

$\frac{43L}{43}=\frac{731}{43}$

$L=17$

2. The senior classes at High School A and High School B planned separate trips to the water park. The senior class at High School A rented and filled 6 vans and 6 buses with 378 students. High School B rented and filled 12 vans and 9 buses with 585 students. Each van and each bus carried the same number of students. Write a system of equations that can be used to determine the number of students each van holds (V) and the number of students each bus holds (B).

$6V+6B=378$

Answer $12V+9B=585$

	School A	School B
Vans	6	12
Buses	6	9
Total	378	585

How many students does each bus hold?

Answer 57 students

$6V+6B=378$ ①
$12V+9B=585$ ②

$-12V-12B=-756$ ①
$12V+9B=585$ ②

$\frac{-3B}{-3}=\frac{-171}{-3}$

$B=57$

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3. Dan's school is selling tickets to a play. On the first day of ticket sales the school sold 8 senior citizen tickets and 14 student tickets for a total of $137.80. The school took in $45.30 on the second day by selling 2 senior citizen tickets and 7 student tickets. Write a system of equations that can be used to find the cost a one senior citizen ticket (C) and one student ticket (S).

$8c + 14s = 137.80$

Answer $2c + 7s = 45.30$

	Day 1	Day 2
Senior	8	2
Students	14	7
Total	$137.80	$45.30

What is the cost of one student ticket?

Answer $3.10

$8c + 14s = 137.80$ (1)

$2c + 7s = 45.30$ (2)

$8c + 14s = 137.80$ (1)

$-4c - 14s = -90.60$

$\frac{4c}{4} = \frac{\$47.20}{4}$

$c = \$11.80$

$2(11.80) + 7s = 45.30$

$23.60 + 7s = 45.30$

$-23.60 \quad -23.60$

$\frac{7s}{7} = \frac{21.70}{7}$

$s = 3.10$