Algebra 1 ECA Remediation **Name** Answer Key

Homework 19.1

1. Kali and Asanji are selling pies for a school fundraiser. Customers can buy blueberry pies and lemon meringue pies. Kali sold 5 blueberry pies and 10 lemon meringue pies for a total of $245. Asanji sold 4 blueberry pies and 9 lemon meringue pies for a total of $216. Write a system of equations that can be used to determine the cost of one blueberry pie (B) and one lemon meringue pie (L).

$5B + 10L = 245$

Answer $4B + 9L = 216$

	Kali	Asanji
Blueberry	5	4
Lemon Meringue	10	9
Total	245	216

$5B + 10L = 245$ ①

$4B + 9L = 216$ ②

$B + 2L = 49$ $(\div 5)$

$-4B - 8L = -196$ $(\cdot -4)$

$4B + 9L = 216$

$L = 20$

What is the cost of one blueberry pie?

Answer #9

① $5B + 10(20) = 245$

$5B + 200 = 245$

$-200 \quad -200$

$5B = 45$

$\frac{5B}{5} = \frac{45}{5}$

$B = 9$

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 5 vans and 12 buses with 642 students. High School B rented and filled 11 vans and 6 buses with 372 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).

$5A + 12B = 642$

Answer $11A + 6B = 372$

	School A	School B
Vans	5	11
Buses	12	6
Totals	642	372

$5V + 12B = 642$ ①

$11V + 6B = 372$ ②

$5V + 12B = 642$

$-22V - 12B = -744$

$\frac{-17V}{-17} = \frac{-102}{-17}$

$V = 6$

How many students does each bus hold?

Answer 51 students

① $5(6) + 12B = 642$

$30 + 12B = 642$

$-30 \quad -30$

$\frac{12B}{12} = \frac{612}{12}$

$B = 51$

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3. Matt's school is selling tickets to a play. On the first day of ticket sales the school sold 9 senior citizen tickets and 14 student tickets for a total of $307.60. The school took in $234.40 on the second day by selling 11 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).

Answer $9C + 14S = 307.60$, $11C + 7S = 234.40$

	Day 1	Day 2
Senior	9	11
Student	14	7
Total	$307.60	$234.40

What is the cost of one student ticket?

Answer $14.00

$9C + 14S = 307.60$ ①

$11C + 7S = 234.40$ ②

$9(12.40) + 14S = 307.60$

$111.60 + 14S = 307.60$

$\frac{14S}{14} = \frac{196}{14}$

$S = 14$

$9C + 14S = 307.60$

$-22C - 14S = -468.80$

$\frac{-13C}{-13} = \frac{-161.20}{-13}$

$C = 12.40$