# **PreCalc** - 6-3 Review (Solving w/ Calculator & Applications) ***– Answer Key***

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| 1. Solve each of the following systems of equations using matrices. | | | | |
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| 1. Given the following facts, how many of each type of ticket were sold? | | | | |
| * The Cinema sold a total of 8500 movie tickets. * Proceeds totaled $64,600 * Matinee admission costs $5 | | | * Student admission costs $6 * Regular admission costs $8.50 * Twice as many student tickets sold compared to the matinee tickets. | |
| **5800 regular tickets, 1800 student tickets and 900 matinee tickets were sold** | | | | |
| 1. Amelia purchased 25 total pounds of dog food, bird seed, and cat food for $100. She purchased 10 pounds more dog food than bird seed. The cost per pound of each type of food is shown. | | | | |
| **Let: d = number of pounds of dog food, b = number of pounds of bird seed, c = number of pounds of cat food**  **; 13 pounds of dog food, 9 pounds of cat food, 3 pounds of bird seed** | | | | |
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| 1. Payton, Santiago, and Queisha each have a paper route. Payton delivers 5 times as many papers as Santiago. Santiago delivers twice as many papers as Queisha. If 20 papers were added to Payton’s route, he would then deliver four times the total number of papers that Santiago and Queisha deliver. How many papers does each person deliver? | | | | |
| **Payton delivers 100 papers, Santiago delivers 20 and Queisha delivers 10.** | | | | |
| 1. The senior classes at Tinsdale High School and Billinger High School planned separate trips to Los Angeles. The senior class at Tinsdale High School filled 1 van and 6 buses with 365 students. The senior class at Billinger High School filled 4 vans and 12 buses with 752 students. Each van and each bus carried the same number of students. How many students can a van carry? How many students can a bus carry? | | | | |

 **; x (van) = 11, y (bus) = 59**