

Lesson #2 C-3: Understanding and Solving Systems of Equations-Applications of Systems of Equations
(Reference: Lesson #15, #21 & #24 in book)**Problem**

- 1. For each of the following application word problems, please create two equations from the given information and then solve the system of equations using the method of your choice. (SHOW ALL OF YOUR WORK.)**
 1. A school play charged adults \$16 and students \$10 for tickets. There were 75 people who attended the play. The box office collected \$888. How many adults and how many students attended the play?
 2. Tickets to a summer concert cost either \$12 for grass or lawn seats or \$15 for pavillon seats. A total of 300 tickets are sold, and the total receipts were \$4140. How many of each kind of ticket were sold?
 3. The school that Stefan goes to is selling tickets to a choral performance. On the first day of ticket sales the school sold 3 senior citizen tickets and 1 child ticket for a total of \$38. The school took in \$52 on the second day by selling 3 senior citizen tickets and 2 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.
 4. A museum sells 280 tickets in one day for a special exhibit. A regular ticket costs \$20 and a student ticket costs \$14.50. How many student tickets did the museum sell if it made \$4,918.
 5. Susan and Stephanie went to the pet store to buy frogs and goldfish for their fish tank. Susan bought 3 goldfish and 4 frogs for \$15, and Stephanie bought 2 goldfish and 5 frogs for \$17. How much did each frog and each goldfish cost?
 6. The senior classes at High School A and High School B planned separate trips to New York City. The senior class at High School A rented and filled 8 vans and 24 buses with 1,560 students. High School B rented and filled 2 vans and 12 buses with 744 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?
 7. The school track team earned \$2 for each cap they sold and \$5 for each sweatshirt they sold. The total profits were \$317. If they sold 1 more of the caps than of the sweatshirts, how many sweatshirts and caps did they sell?
 8. A school play charged adults \$8 and students \$4 for tickets. The box office triple the amount of student tickets as adult tickets. The box offices' goal was to collect \$500. How many adults and how many students attended the play?