

SYSTEM APPLICATIONS

Directions

- 1. IDENTIFY VARIABLES**
- 2. WRITE EQUATIONS**
- 3. EXPLAIN SOLUTIONS**

- 1) Yellowstone National Park is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 6 vans and 9 buses with 600 students. High School B rented and filled 13 vans and 3 buses with 343 students. Every van had the same number of students in it as did the buses. How many students can a van carry? How many students can a bus carry?

- 2) Ming and Matt are selling fruit for a school fundraiser. Customers can buy small boxes of oranges and large boxes of oranges. Ming sold 12 small boxes of oranges and 5 large boxes of oranges for a total of \$234. Matt sold 13 small boxes of oranges and 13 large boxes of oranges for a total of \$390. Find the cost each of one small box of oranges and one large box of oranges.

- 3) Micaela and Perry are selling wrapping paper for a school fundraiser. Customers can buy rolls of plain wrapping paper and rolls of shiny wrapping paper. Micaela sold 2 rolls of plain wrapping paper and 5 rolls of shiny wrapping paper for a total of \$120. Perry sold 14 rolls of plain wrapping paper and 2 rolls of shiny wrapping paper for a total of \$246. What is the cost each of one roll of plain wrapping paper and one roll of shiny wrapping paper?

- 4) Sumalee and Beth are selling flower bulbs for a school fundraiser. Customers can buy bags of windflower bulbs and bags of daffodil bulbs. Sumalee sold 6 bags of windflower bulbs and 7 bags of daffodil bulbs for a total of \$185. Beth sold 8 bags of windflower bulbs and 11 bags of daffodil bulbs for a total of \$275. Find the cost each of one bag of windflower bulbs and one bag of daffodil bulbs.

- 5) 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 12 vans and 3 buses with 255 students. High School B rented and filled 7 vans and 1 bus with 109 students. Every van had the same number of students in it as did the buses. Find the number of students in each van and in each bus.
- 6) The indoor climbing gym is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 9 vans and 6 buses with 459 students. High School B rented and filled 14 vans and 8 buses with 646 students. Each van and each bus carried the same number of students. Find the number of students in each van and in each bus.
- 7) The school that Trevon goes to is selling tickets to the annual talent show. On the first day of ticket sales the school sold 9 adult tickets and 13 child tickets for a total of \$269. The school took in \$61 on the second day by selling 2 adult tickets and 3 child tickets. What is the price each of one adult ticket and one child ticket?
- 8) Molly and Jenny each improved their yards by planting grass sod and ivy. They bought their supplies from the same store. Molly spent \$102 on 5 ft² of grass sod and 8 pots of ivy. Jenny spent \$153 on 12 ft² of grass sod and 9 pots of ivy. Find the cost of one ft² of grass sod and the cost of one pot of ivy.
- 9) Carlos and Adam each improved their yards by planting daylilies and shrubs. They bought their supplies from the same store. Carlos spent \$128 on 14 daylilies and 12 shrubs. Adam spent \$122 on 14 daylilies and 11 shrubs. What is the cost of one daylily and the cost of one shrub?
- 10) DeShawn's school is selling tickets to a choral performance. On the first day of ticket sales the school sold 13 adult tickets and 11 student tickets for a total of \$223. The school took in \$230 on the second day by selling 14 adult tickets and 11 student tickets. Find the price of an adult ticket and the price of a student ticket.