

Applications of Linear Systems Assignment

Block: _____ Mark Out Of 24 _____

1) The difference of two numbers is 26. Their sum is 168. Find the numbers.

2) Traveling with the current a certain boat went 46 mph. Against the same current it only went 20 mph. Find the current and the speed of the boat if there were no current.

3) Darryl and Abhasra are selling cheesecakes for a school fundraiser. Customers can buy French silk cheesecakes and apple cheesecakes. Darryl sold 75 French silk cheesecakes and 9 apple cheesecakes for a total of \$1380. Abhasra sold 71 French silk cheesecakes and 18 apple cheesecakes for a total of \$1496. What is the cost each of one French silk cheesecake and one apple cheesecake?

4) Shanice and Natalie each improved their yards by planting rose bushes and shrubs. They bought their supplies from the same store. Shanice spent \$762 on 66 rose bushes and 84 shrubs. Natalie spent \$816 on 86 rose bushes and 21 shrubs. Find the cost of one rose bush and the cost of one shrub.

5) The school that Mark goes to is selling tickets to the annual dance competition. On the first day of ticket sales the school sold 26 adult tickets and 94 student tickets for a total of \$1064. The school took in \$444 on the second day by selling 13 adult tickets and 36 student tickets. What is the price each of one adult ticket and one student ticket?

6) The county fair 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 35 vans and 89 buses with 3036 students. High School B rented and filled 47 vans and 37 buses with 1684 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?

7) A plane traveled 933.3 miles to Paris and back. The trip there was with the wind. It took 9 hours. The trip back was into the wind. The trip back took 12.2 hours. What is the speed of the plane in still air? What is the speed of the wind?

8) The sum of the digits of a certain two-digit number is 9. Reversing its digits decreases the number by 63. What is the number?