IB Math Studies-systems of equations   Name_____

HW due Oct. 2

Solve each system by elimination.

1) $7x + 9y = -20$
$-7x - 6y = 11$

2) $3x - 3y = -3$
$3x - 2y = -5$

3) $7x - 5y = -12$
$-14x + 7y = 21$

4) $20x - 70y = 30$
$-14x + 49y = -21$

Solve each system by substitution.

5) $y = -5x - 24$
$y = -3x - 12$

6) $y = -4x - 3$
$3x + 5y = 19$

7) $4x + 4y = 20$
$-2x + y = -13$

8) The school that Kali goes to is selling tickets to a choral performance. On the first day of ticket sales the school sold 7 senior citizen tickets and 2 child tickets for a total of $84. The school took in $68 on the second day by selling 4 senior citizen tickets and 4 child tickets. What is the price each of one senior citizen ticket and one child ticket?

9) The school that Totsakan goes to is selling tickets to a spring musical. On the first day of ticket sales the school sold 2 adult tickets and 12 student tickets for a total of $162. The school took in $102 on the second day by selling 8 adult tickets and 6 student tickets. Find the price of an adult ticket and the price of a student ticket.

10) Gabriella and Jasmine are selling cheesecakes for a school fundraiser. Customers can buy French silk cheesecakes and strawberry cheesecakes. Gabriella sold 1 French silk cheesecake and 1 strawberry cheesecake for a total of $18. Jasmine sold 4 French silk cheesecakes and 9 strawberry cheesecakes for a total of $142. Find the cost each of one French silk cheesecake and one strawberry cheesecake.

11) 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 10 buses with 698 students. High School B rented and filled 14 vans and 2 buses with 244 students. Each van and each bus carried the same number of students. Find the number of students in each van and in each bus.