

Solving Systems All 3 Ways plus Story Problems!!!

Date _____ Period _____

- 1) The senior classes at Dakota High School and Chippewa Valley High School planned separate trips to Yellowstone National Park. The senior class at Dakota rented and filled 10 vans and 13 buses with 539 students. Chip rented and filled 5 vans and 5 buses with 220 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?

- 2) Meri and Vince are selling pies for a school fundraiser. Customers can buy cherry pies and lemon meringue pies. Meri sold 13 cherry pies and 4 lemon meringue pies for a total of \$138. Vince sold 6 cherry pies and 2 lemon meringue pies for a total of \$66. Find the cost each of one cherry pie and one lemon meringue pie.

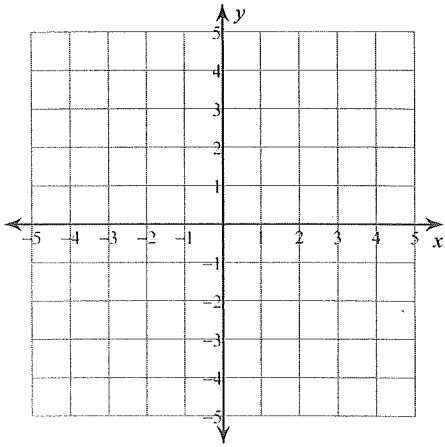
- 3) Jesus and Elma are selling flower bulbs for a school fundraiser. Customers can buy packages of tulip bulbs and bags of daffodil bulbs. Jesus sold 14 packages of tulip bulbs and 6 bags of daffodil bulbs for a total of \$140. Elma sold 2 packages of tulip bulbs and 10 bags of daffodil bulbs for a total of \$84. What is the cost each of one package of tulips bulbs and one bag of daffodil bulbs?

- 4) The school that Christina goes to is selling tickets to a spring musical. On the first day of ticket sales the school sold 7 senior citizen tickets and 9 student tickets for a total of \$233. The school took in \$226 on the second day by selling 14 senior citizen tickets and 2 student tickets. Find the price of a senior citizen ticket and the price of a student ticket.

Solve each system by graphing.

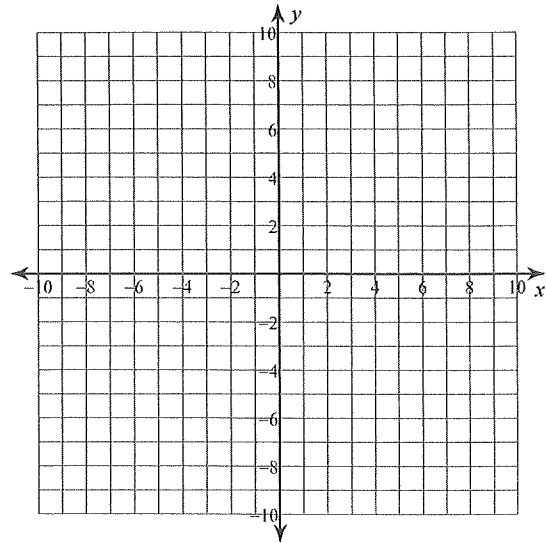
5) $y = \frac{1}{2}x + 4$

$y = -\frac{5}{2}x - 2$



6) $7x + 9y = -72$

$7x + 9y = -54$



Solve each system by substitution.

7) $-x + 3y = 12$

$-4x + y = 4$

8) $-x + y = 1$

$-3x + 3y = 3$

9) $-8x + 6y = 2$

$-x + y = -1$

10) $2x + 2y = -6$

$4x + y = -15$

Solve each system by elimination.

$$\begin{aligned} 11) \quad & 20x + 8y = -8 \\ & -10x + y = -1 \end{aligned}$$

$$\begin{aligned} 12) \quad & 15x - 15y = 20 \\ & 5x - 5y = 5 \end{aligned}$$

$$\begin{aligned} 13) \quad & -2x + 7y = 25 \\ & -7x + 5y = 29 \end{aligned}$$

$$\begin{aligned} 14) \quad & 8x + 8y = 16 \\ & -9x - 9y = -18 \end{aligned}$$

15. Find the value of two numbers if their sum is 25 and their difference is 1.

16. Find the value of two numbers if their sum is 17 and their difference is 1.