

**Math 80**  
**Chapter 3 Review**  
**Ms. Meier**

1) Is (3, -5) a solution to the system?  $\begin{cases} 2x - 3y = 21 \\ 4x + 2y = 2 \end{cases}$

2) Solve by graphing method:  $\begin{cases} x + 2y = 0 \\ 2x + y = -6 \end{cases}$

3) Solve by any method:  $\begin{cases} 2x - 5y = 29 \\ -x + 3y = -17 \end{cases}$

4) Solve by any method:  $\begin{cases} 4x + \frac{3}{2}y = 9 \\ x = \frac{9}{8} - \frac{3}{8}y \end{cases}$

5) Solve by any method:  $\begin{cases} \frac{1}{2}x + \frac{1}{3}y = \frac{2}{3} \\ \frac{1}{3}x + \frac{2}{5}y = \frac{4}{15} \end{cases}$

6) 850 people attended a concert. Adult tickets cost \$14 and children's tickets cost \$9. Total sales receipts were \$10,400. How many children's tickets were sold?

7) Against the wind a plane flew 630 miles in 3.5 hours. With the wind the return trip took 3 hours. What was the speed of the wind and the speed of the plane in still air?

8) Solve the system:  $\begin{cases} 3x + y - 3z = 31 \\ 3x + 3y - z = 9 \\ x + 5y - 6z = 17 \end{cases}$

9) Solve the system:  $\begin{cases} 2x - y + z = -1 \\ 3x - 2y + z = 1 \\ 2x - z = -3 \end{cases}$

10) The Tasty Bakery sells three kinds of muffins: Chocolate chip for 20 cents each, oatmeal at 25 cents each and cranberry at 30 cents each. If Chuck buys 13 total muffins for \$3.45 and three times as many cranberry muffins as chocolate chip muffins, how many of each type of muffin does he buy?

**Answers:**

- 1) yes                      2)  $(-4, 2)$                       3)  $(2, -5)$
- 4) No solution (inconsistent system, lines are parallel)                      5)  $(2, -1)$
- 6) 300                      7) plane 195 mph, wind 15 mph.                      8)  $(6, -5, -6)$                       9)  $(-2, -4, -1)$
- 10) 5 Oatmeal, 2 chocolate chip and 6 cranberry