

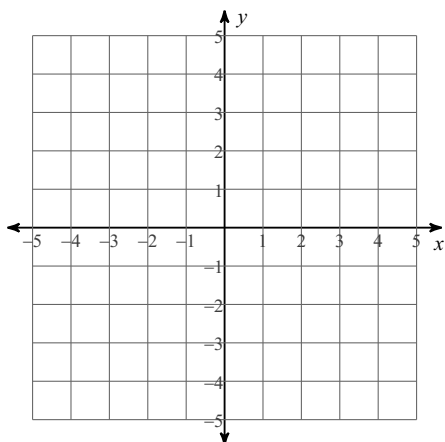
Warm-Ups & Class Notes - Systems by Substitution

Date _____

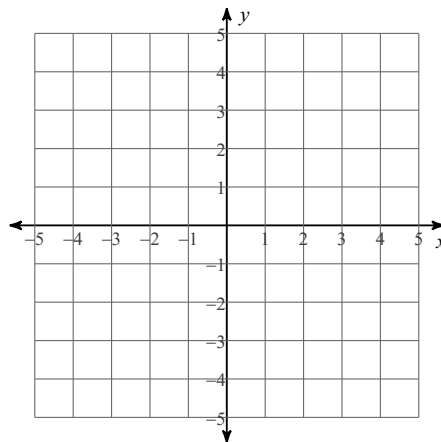
WARM-UPS - Solve each system by graphing.

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

$y = x - 2$

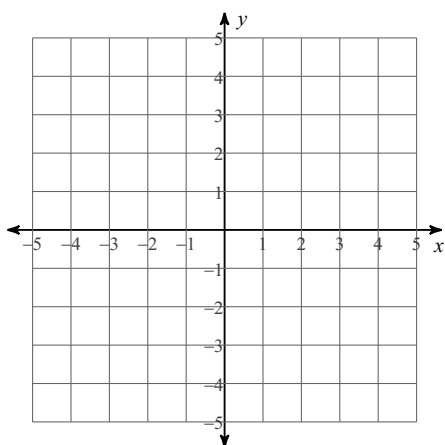


2) $2x - y \leq 3$
 $y < -1$



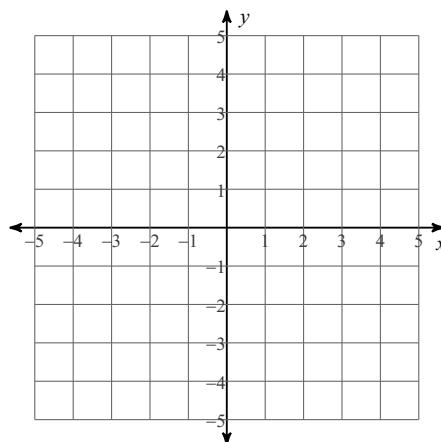
3) $y = \frac{5}{3}x - 1$

$y = \frac{5}{3}x + 3$



4) $y = -\frac{1}{2}x + 3$

$x + 2y = 6$



CLASS EXAMPLES: Solve each system by substitution.

5) $y = 4x$
 $y = x + 3$

6) $y = -7x + 22$
 $y = -3x + 6$

7) $y = x + 6$
 $-6x - 4y = -14$

8) $y = -5x - 16$
 $10x + 2y = -32$

9) $3x - 2y = -2$
 $x + 5y = 5$

10) $-3x - 3y = 5$
 $x + y = 3$

Set up a system of equations that would help to solve the problem. (Students do not have to solve the system at this time.)

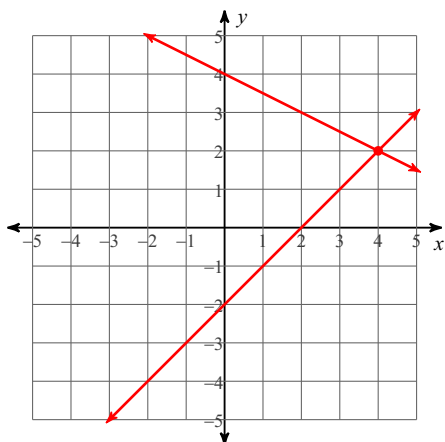
- 11) Joe's school is selling tickets to a fall musical. On the first day of ticket sales the school sold 7 adult tickets and 6 student tickets for a total of \$129. The school took in \$222 on the second day by selling 10 adult tickets and 12 student tickets. Find the price of an adult ticket and the price of a student ticket.

Warm-Ups & Class Notes - Systems by Substitution

WARM-UPS - Solve each system by graphing.

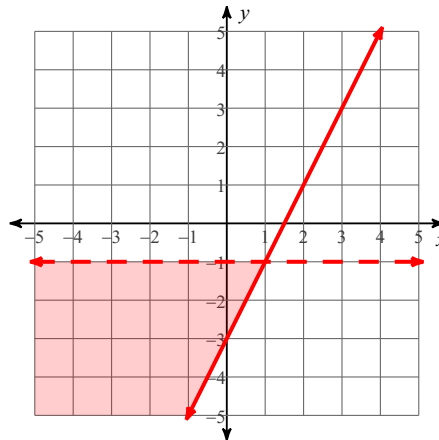
1) $y = -\frac{1}{2}x + 4$

$y = x - 2$



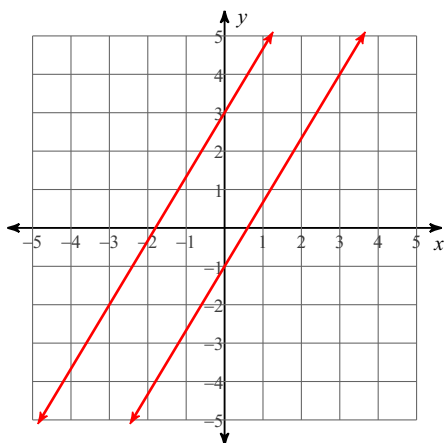
(4, 2)

2) $2x - y \leq 3$
 $y < -1$



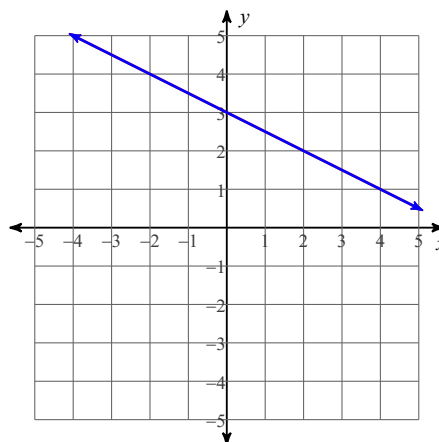
3) $y = \frac{5}{3}x - 1$

$y = \frac{5}{3}x + 3$



No solution

4) $y = -\frac{1}{2}x + 3$
 $x + 2y = 6$



CLASS EXAMPLES: Solve each system by substitution.

5) $y = 4x$
 $y = x + 3$
 $(1, 4)$

6) $y = -7x + 22$
 $y = -3x + 6$
 $(4, -6)$

7) $y = x + 6$
 $-6x - 4y = -14$
 $(-1, 5)$

8) $y = -5x - 16$
 $10x + 2y = -32$
Infinite number of solutions

9) $3x - 2y = -2$
 $x + 5y = 5$
 $(0, 1)$

10) $-3x - 3y = 5$
 $x + y = 3$
No solution

Set up a system of equations that would help to solve the problem. (Students do not have to solve the system at this time.)

- 11) Joe's school is selling tickets to a fall musical. On the first day of ticket sales the school sold 7 adult tickets and 6 student tickets for a total of \$129. The school took in \$222 on the second day by selling 10 adult tickets and 12 student tickets. Find the price of an adult ticket and the price of a student ticket.

$7a + 6s = 129$
 $10a + 12s = 222$
adult ticket: \$9, student ticket: \$11