Algebra 1-a

FINAL TEST

Solve using the substitution method

1) $x + 3y = 13$
    $2x -- y = 5$

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

Solve using the addition-subtraction method.

3) $4x + y = 6$
    $3x - y = 1$

4) $2x + 3y = 19$
    $x - 3y = ^-4$

5) $4x + 5y = ^-21$
    $x - 5y = 1$

Graph the following sets of equations.

6) $2x + 4y = 2$
    $x - 4y = ^-11$

7) $4x - 3y = 5$
    $3x + 3y = 30$

8) $2x - 5y = ^-11$
    $x + 5y = 17$
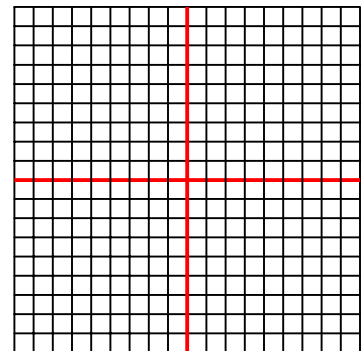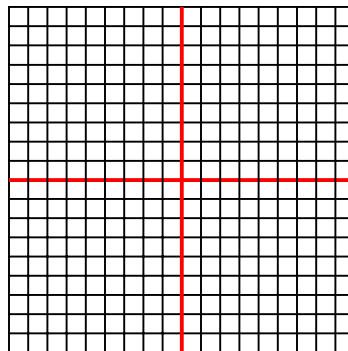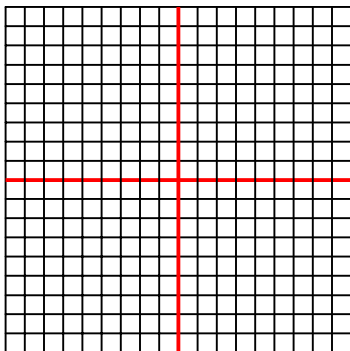
9) If a plane flies 300 miles with the wind in one hour and it takes the same plane 2 hours to make the reverse trip against the wind, how fast would the plane fly in still air? How fast is the wind blowing?

10) The sum of the digits of a two digit number is 11. If the digits are reversed, the new number is 63 less than the original. Find the original number.

11)   A solution of 47% alcohol is mixed with a solution of 27% alcohol to form a 60 quart solution of 40% alcohol. How many quarts of each solution must be mixed together?
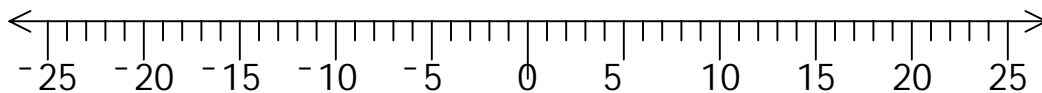
Solve these inequalities.
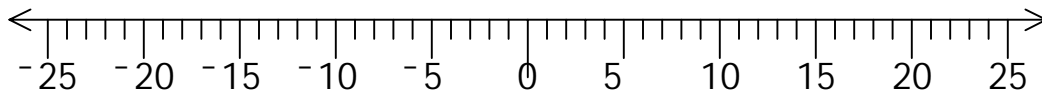
12) $11b - 10 \leq 12b + 14$ 13) $x + 2 + (x + 4) > 0$

Solve and grafh.

14) $\dfrac{x}{6} - \dfrac{x}{4} < \dfrac{x -- 6}{6}$

15) $18x - 4x + 17 > 4x - (5 - 8x)$

Solve these systema of equations.

16) $4X - 4Y + 8Z = 4$ 17) $2X - 2Y + 4Z = {}^-9$
       $8X + 4Y - 4Z = {}^-11$ $4X + 2Y - 2Z = 9$
       $12X - 8Y - 4Z = {}^-21$ $6X - 6Y + 2Z = {}^-12$

Solve this problem using a system of equations.

18)   Tickets to a local movie were sold at $5.00 for adults and $3.50 for students. If 310 tickets were sold for a total of $1430.00, how many of each tickets were sold?

Graph the following systems of inequalities.

19) $y \le x - 7$
$x + y \le {}^-4$

20) $x \ge {}^-2$
$y \le {}^-3$

21) $y \ge {}^-2x + 2$
$y > {}^-3$