Name: _____

Solving Linear Equations

1) Solve the following system

1) $5x + 3y = -2$
$-3x + y = 4$

2) $x + y = 1$
$2x + y = -1$

3) $x + y + z = 7$
$2x - 2y + 3z = 14$
$-x - y + z = 1$

4) $2x + 3y + z = -3$
$3x + 2z = 7$
$x + 2y + z = 0$

5) $x + 2y + 2z = 0$
$2x - y - 6z = -5$
$2y + 5z = 6$

6) $2x + 2y + z = 2$
$x + y + z = 3$
$3x + 5y + 2z = 2$

7) $[1/2]x + y - 3z = -4$
$4x + 2y - 6z = -2$
$5x + 5y + 4z = 4$

8) $2x + z = 2$
$x + y = 3$
$3x + 2y + z = 1$

9) $x + y + z = 0$
$-x + 2y = -1$
$x + z = 1$

10) $x - y + z = 1$
$x + z = 1$
$x + y + z = 2$

11) $x + 2y - z = 0$
$2x + y + z = 0$
$-3x + y + 2z = -6$

12) $7x+5y-3z = 1$
$3x-5y+2z = -8$
$5x+3y-7z = 0$

13) $x + y + z = 4$
$x - 2y - z = 1$
$2x - y - 2z = -1$

14) $x + y + z = 6$
$2x - y + 3z = 9$
$-x + 2y + 2z = 9$

2) Solve for x and y

$$\begin{cases} 4x + 5y = 22 \\ 2x + 3y = 12 \end{cases}$$

3) Using matrices, calculate the values of *x* and *y* for the following simultaneous equations:

$3x - 2y - 3 = 0$
$5y = 7x + 2$

4) A store sells large and small sizes of blue shirts and yellow shirts. The selling price of either shirt is $\$x$ for a large size and $\$y$ for a small size. The table shows the number of shirts sold in a day.

	large	small
blue shirt	5	3
yellow shirt	6	4

The total income from the sale of the blue shirt was $84 and from the yellow shirt was $104.