1. Work out the answers to each of the questions below to find a not-so-secret

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

g + a	m^2		a ÷ g	q - y	f + w	i - j	dg

r - g	gk	d + f	k - q	j^2 + g	b - f	f^2		e^2 - y	kp - m

m - u	lm - g	2g	f^2 - h	k^3 - k	√y	hk^2	!

Message:

2. Complete the table using the three different set of values that need substituting.

	$a + b$	$b - c$	$2a$	ab	bc	$ab + bc$	abc	$2b + 3$	a^2	$b^2 - ac$
$a = 2$ $b = 4$ $c = 1$										
$a = 0$ $b = -4$ $c = 2$										
$a = 2$ $b = -4$ $c = \frac{1}{2}$										

3. Match up the original expressions with their simplified partners. One of the answers is missing. What should it be?

$3a + 5a$	$9a$
$3a - 5a$	$5a$
$5a - 3a$	$3a$
$3a + 2a + 4a$	$2a$
$6a + 2a - 3a$	a
$7a - 4a - 2a$	$8a$
$\frac{1}{2}a + \frac{5}{2}a$	

4. Make x the subject and join with the correct answer:

$x + b = a$	$x = 1 - \frac{b}{a}$
$x - a = b$	$x = 2a - 8$
$2x + 4 = a$	$x = 2a + b$
$ax + b = a$	$x = 2a - 4$
$\frac{x+4}{2} = a$	$x = \frac{a}{2} - 2$
$\frac{x}{2} + 4 = a$	$x = \frac{c}{a-b}$
$2(x + a) = b$	$x = \frac{c}{a+b}$
$\frac{x-b}{2} = a$	$x = \frac{b}{2} - a$
$ax + bx = c$	$x = a - b$
$ax - bx = c$	$x = \frac{c}{a-1}$
$ax = x + c$	$x = b + a$

5. Solve the following problems:

a. The sum of two numbers is 50 and their difference is 22. Find the numbers.
The numbers are and

b. 3 tables and 2 chairs cost $1900 and 2 tables and 4 chairs cost $1800. Find the cost of table and a chair.
Answer: $

6. Solve the following simultaneous equations

a. $3a + 4b = 43$

$-2a + 3b = 11$ Answer: a = , b =

b. $4x - 3y = 23$

$3x + 4y = 11$ Answer: x = , y =

c. $3x + 2y = 8$
$4x + y = 9$ Answer: x = , y =

d. $x - y = -1$
$2y + 3x = 12$ Answer: x = , y =