

# Making use of the syntax on the ClassPad300.

*This resource was written by Derek Smith with the support of CASIO New Zealand. It may be freely distributed but remains the intellectual property of the author and CASIO.*

## Enter into the Main icon.

Bring up the soft keyboards by pressing the **Keyboard** button.

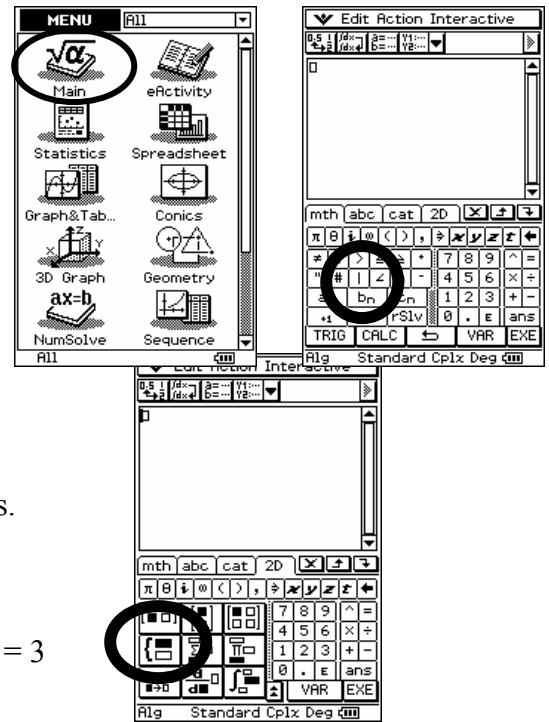
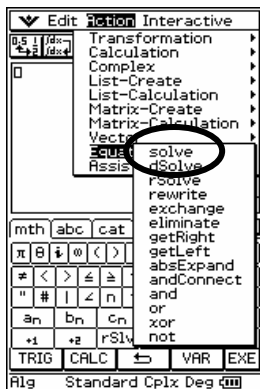
Using the '[' symbol via Math and OPTN keypad.

This symbol can be defined as, 'given that' or 'when'.

Using the '{' symbol via the 2D keypad and  $\nabla$ .

{ Solving simultaneously, 2 equations and 2 unknowns.

**Example 1:** Solve for  $a$  in the equation  $2a + b = 4$  when  $b = 3$



**Example 2:** Given  $f(x) = ax^2+bx+c$  Solve for  $a$  and  $b$  in terms of  $c$ , given that  $f(1) = 3$  and  $f'(4) = 1$ .

**Try this by pencil and paper first.**

$a + b + c = 3$  by substitution of  $f(1) = 3$ .

$8a + b = 1$  by differentiating and then substitution of  $f'(4) = 1$ .

Now solving for  $a$  and  $b$  simultaneously.

$$7a - c = -2 \quad \text{also} \quad 8a + 8b + 8c = 24$$

$$8a + b = 1$$

$$7b + 8c = 23$$

giving

$$a = \frac{(-2+c)}{7}$$

giving

$$b = \frac{(23-8c)}{7}$$

**Now on the ClassPad 300:**

Need to solve simultaneously

$$ax^2+bx+c=3|x=1 \text{ and } \text{diff}(ax^2+bx+c,x)=1|x=4$$

$$\left\{ \begin{array}{l} ax^2+bx+c=3|x=1 \text{ and} \\ \text{diff}(ax^2+bx+c,x)=1|x=4 \text{ a,b} \end{array} \right.$$

$$a = \frac{(c-2)}{7} \text{ and } b = \frac{-(8c-23)}{7}$$

