

11u p76 #4f

Unit 1

4f) the value "x" when  $f(x) = g(x)$

$$f(x) = x^2 + 3x - 5$$

$$g(x) = 2x - 3$$

$$\therefore x^2 + 3x - 5 = 2x - 3$$

← -2x      +3 →

collect like terms and make RS = 0.

$$x^2 + 1x - 2 = 0$$

factor and set each factor to 0.

$$\begin{array}{r} x^2 + 1x - 2 \\ x \longrightarrow +2 = 2x \\ x \longrightarrow -1 = -1x \end{array}$$

$$\therefore (x+2)(x-1) = 0$$

Set each factor to 0.

$$x+2=0$$

$$x = -2$$

and/or  $x-1=0$

$$x = 1$$

Check:

$$f(-2) = (-2)^2 + 3(-2) - 5$$

$$= 4 - 6 - 5$$

$$= -2 - 5$$

$$= -7$$

$$g(-2) = 2(-2) - 3$$

$$= -4 - 3$$

$$= -7$$

$$\therefore f(-2) = g(-2)$$

$\therefore x = -2$  and  $1$ .