Chapter 3 / **Example 30 a**

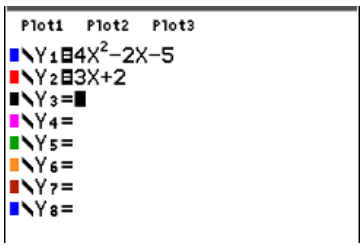
Intersecting Graphs

Find the points of intersection of the graphs of $f(x) = 4x^2 - 2x - 5$ and $g(x) = 3x + 2$.

Press [f1] [y=] to display the equation entry screen.

Type $4x^2 - 2x - 5$ and press [enter] to enter the first equation as Y_1.

Type $3x + 2$ and press [enter] to enter the second equation as Y_2.



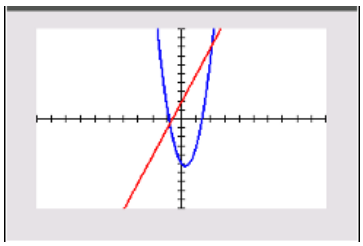
Press [f5] [graph] to display the graph screen

The GDC now displays the curve and the straight-line:

$Y_1 = 4x^2 - 2x - 5$

$Y_2 = 3x + 2$

The default axes are $-10 \le x \le 10$ and $-10 \le y \le 10$.

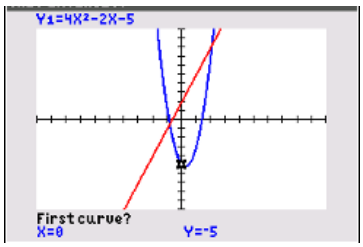


Press [2nd] [f4] [calc] 5:intersect

To find the intersection you need to choose the two lines that intersect.

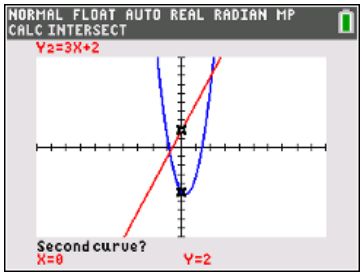
The GDC shows a cross on the curve and 'First curve?'.

Press [enter].



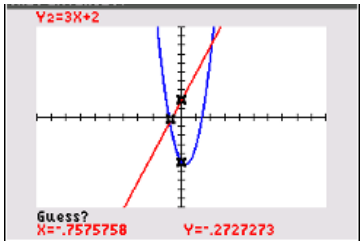
The GDC shows a cross on the line and 'Second curve?'.

Press [enter].



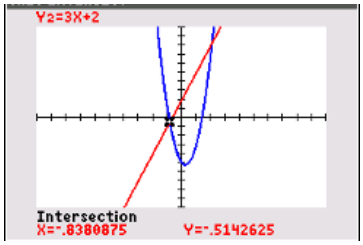
The GDC requires an initial guess for the position of the intersection. Choose a point close to the first intersection by moving the cursor with the ◄ ► keys.

Press [enter].



Chapter 3 / **Example 30 a**

Intersecting Graphs

The GDC displays the first intersection at $(-0.838, -0.514)$.	
Repeat for the second intersection. The GDC an intersection at $(2.09, 8.26)$.