Chapter 4 / **Example 18**
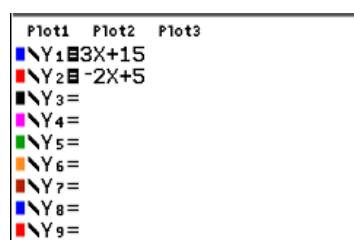# Intersecting lines

Two straight roads have equations $y = 3x + 15$ and $y = -2x + 5$. A traffic light has to be installed at their intersection point. Find the coordinates of the intersection point of the two roads.

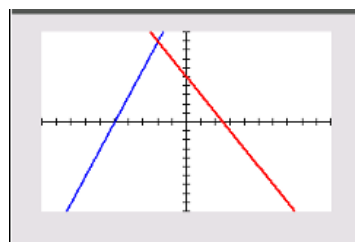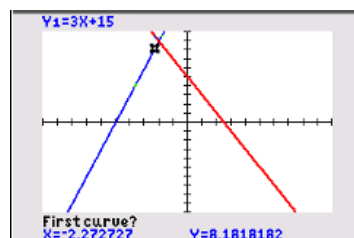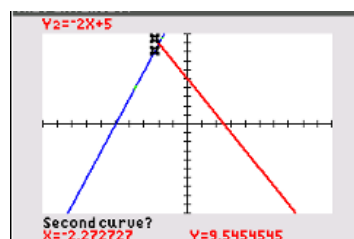|	
Press $[f1]$ $\boxed{y=}$ to display the equation entry screen. Type $3x + 15$ and press $\boxed{enter}$ to enter the first equation as Y_1. Type $-2x + 5$ and press $\boxed{enter}$ to enter the second equation as Y_2.	
Press $[f5]$ $\boxed{graph}$ to display the graph screen The GDC now displays both straight-line graphs: $Y_1 = 3x + 15$ $Y_2 = -2x + 5$ The default axes are $-10 \le x \le 10$ and $-10 \le y \le 10$.	
Press $\boxed{2nd}$ $[f4]\boxed{calc}$ 5:intersect To find the intersection you need to choose the two lines that intersect. The GDC shows a cross on one of the lines and 'First curve?'. Press $\boxed{enter}$.	
The GDC shows a cross on the other line and 'Second curve?'. Press $\boxed{enter}$.	
The GDC requires an initial guess for the position of the intersection. Choose the default position. Press $\boxed{enter}$.	
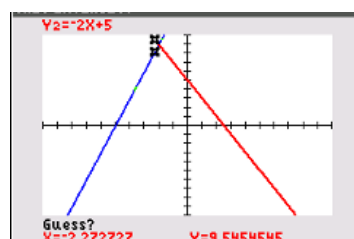
Chapter 4 / **Example 18**
Intersecting lines

The GDC displays the intersection of the two straight lines at the point $(-2, 9)$.

The solution is $(-2, 9)$.