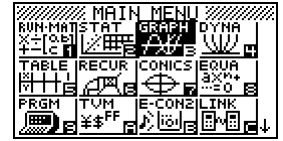


Graphing two equations and finding the intersection points.

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.

Select GRAPH mode from the MAIN MENU by using the arrow keys to highlight the **GRAPH** icon or pressing [5].



Finding the intersection points of two graphs, where $f(x) = g(x)$

Make sure that the V-window is set up to see the graph efficiently.

INITIAL

STANDARD

TRIGONOMETRY

View Window
Xmin : -6.3
max : 6.3
scale: 1
dot : 0.1
Ymin : -3.1
max : 3.1
INIT TRIG STD S10 RCL

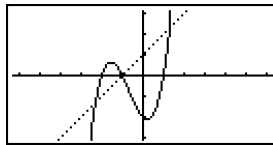
View Window
Xmin : -10
max : 10
scale: 1
dot : 0.15873015
Ymin : -10
max : 10
INIT TRIG STD S10 RCL

View Window
Xmin : -540
max : 540
scale: 90
dot : 8.57142857
Ymin : -1.6
max : 1.6
INIT TRIG STD S10 RCL

View Window
Xmin : -9.42477796
max : 9.42477796
scale: 1.57079632
dot : 0.14959965
Ymin : -1.6
max : 1.6
INIT TRIG STD S10 RCL

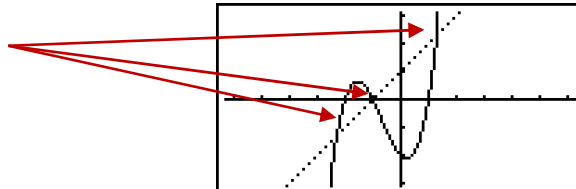
Example 1: Solve $y = (x + 1)(x + 2)(x - 1)$ and $y = x + 1$ simultaneously to find the points of intersection.

Solution: Enter the two equations into the Y1 and Y2 spaces.

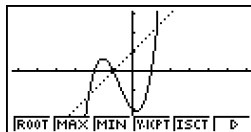


[F6] or [EXE] to draw.

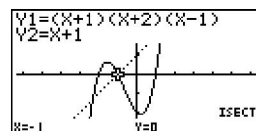
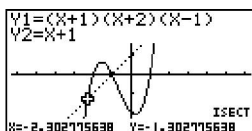
The intersection points



Press [SHIFT] for G-Solve.



Then [F5] for INCT (IterSeCTion), this finds intersection points. The calculator will ALWAYS find the intersection point furthest to the left, then the right replay arrow to find all others.



Remember that the calculator will only work with two equations (graphs) at a time. If you have more equations in the Y1, Y2, ... spaces (up to 20 are possible) then you must select the 2 graphs you wish to work with by either:

1. De-selecting the ones not required [F1] for **Select** or **Deselect** (the '=' sign is either highlighted or not)

OR

2. Selecting these in the graphing space by pressing [EXE].