5.6 Local minimum and local maximum of a function

5.6.1 Find all turning points of a graph using derivatives

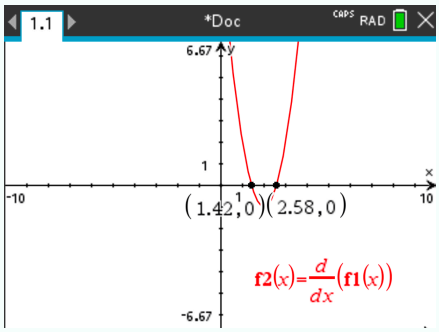
Suppose you want to find graphically all the turning points of the function

$$f(x) = x^3 - 6x^2 + 11x - 6$$

① Create a new document and select Add Graphs. Enter the function into '**f1(x)**'

② Then, enter '$f2(x) = \frac{df1(x)}{dx}$' by pressing  and  to graph the derivative of the function . Select only '**f2(x)**' to show only the derivative.

③ Find the zeros of the derivative. To do so press  and select Analyze Graph > Zero. Select lower and upper bounds between the crossing of x-axis. Press  . Do it again for the second zero.



The results should be x =1.42 and $x = 2.58$ (rounded).