

Chapter 10 / Example 8

Finding a gradient

Consider $y = \frac{x+2}{x-1}, x \neq 1$

Find the gradient of the curve at the points where $x = 2$ and $x = 3$.

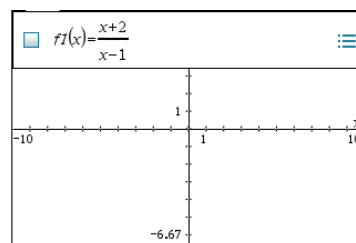
Open a new document and add a Graphs page.

The entry line is displayed at the top of the work area.

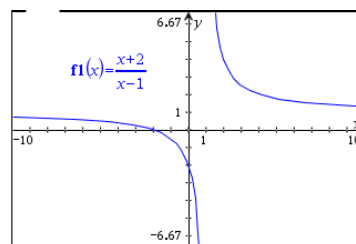
The default graph type is function, so 'f1(x)= ' is displayed.

The default axes are $-10 \leq x \leq 10$ and $-6.67 \leq y \leq 6.67$.

Type $\frac{x+2}{x-1}$ using the fraction template $\boxed{\text{ctrl}} \boxed{\div} \boxed{\left(\frac{\square}{\square}\right)}$ and press $\boxed{\text{enter}}$.



The GDC displays the graph $f1(x) = \frac{x+2}{x-1}$ with the default axes.

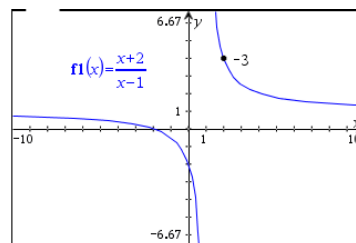


To find the gradient of the curve at the point where $x = 2$ press $\boxed{\text{menu}} \boxed{6:\text{Analyse Graph}} \boxed{5:\text{dy/dx}}$

Type 2, the value of the x-coordinate, and press $\boxed{\text{enter}}$.

The GDC displays a point on $y = \frac{x+2}{x-1}$ and the gradient of the curve at that point.

The gradient at the point where $x = 2$ is -3 .



To find the gradient of the curve at the point where $x = 3$ press $\boxed{\text{menu}} \boxed{6:\text{Analyse Graph}} \boxed{5:\text{dy/dx}}$

The GDC displays a point on $y = \frac{x+2}{x-1}$ and the gradient of the curve at that point.

The gradient at the point where $x = 3$ is -0.75 .

