DERIVATIVE GRAPHS OF TRIGONOMETRIC FUNCTIONS: When drawing derivative graphs, take note of:

- $\cdot$  When the graph is increasing (derivative graph is positive)
- $\cdot$  When the graph is decreasing (derivative graph is negative)
- A turning point or horizontal point has a derivative graph value of zero (x-intercept on the derivative graph)

By sketching the gradient/derivative function of  $\sin x$ , we get the graph of  $\cos x$ .



Similarly, by sketching the gradient function of  $\cos x$ , we get the graph of  $-\sin(x)$ 



## 1.2 WORKED EXAMPLE

Draw the derivative graph of the sine function on top of the graph provided. What type of graph is the resultant graph?

