### GRADIENT OF A FUNCTION IN CONTEXT:

The **gradient at any point** of the graph represents the **rate of change at that moment in time**.

In some cases, a function may be used to represent information on a graph.

For example, by allowing the x-axis to represent time, we can graph the change of a multitude of variables by allowing the y-axis to represent a variety of things.
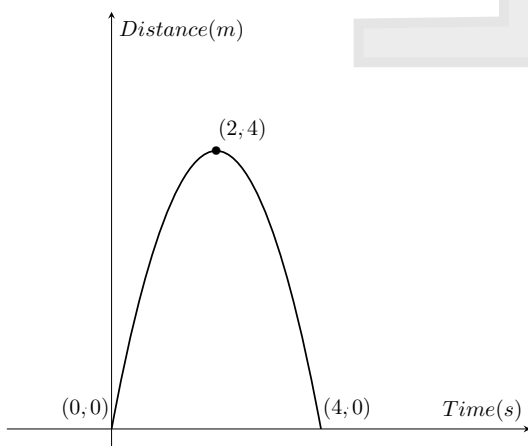
The most common example of this is a distance–time graph.
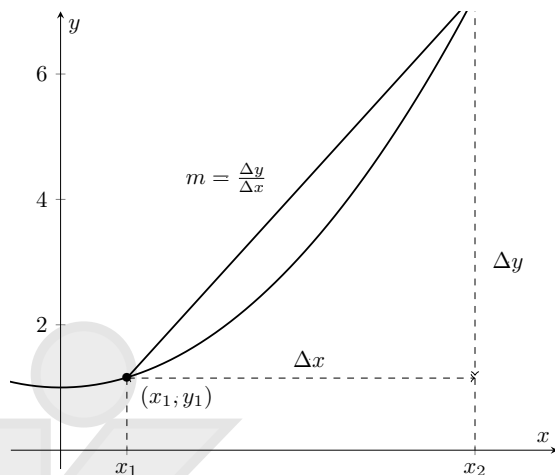
11.1 WORKED EXAMPLE

Billy throws a boomerang. Its displacement is graphed below. At what time(s) was the boomerang:

a) Moving away from Billy?

b) Moving toward Billy?

c) Not moving?

11.2 WORKED EXAMPLE

A car moves at a constant speed of $60 km/hr$. What is its acceleration?