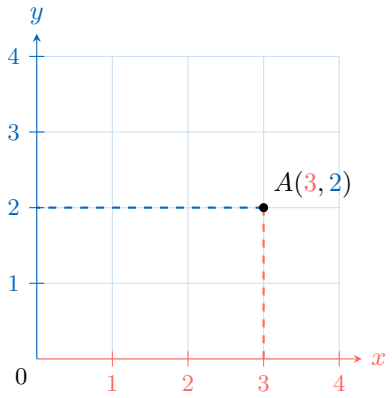
COORDINATE GEOMETRY

A COORDINATE PLANE

Definition Coordinate Plane

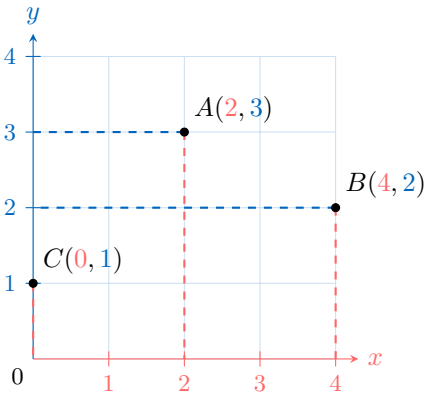
A **coordinate plane** is a grid formed by two number lines that intersect at zero, called the **origin**. The horizontal line, called the **x-axis**, extends left and right. The vertical line, called the **y-axis**, extends up and down.
The **coordinates of a point** are a pair of numbers, like $A(2, 3)$. The first number (the **x-coordinate**) tells you how far to move right from the origin, and the second number (the **y-coordinate**) tells you how far to move up.



Ex: Plot these points on a coordinate plane: $A(2, 3), B(4, 2),$ and $C(0, 1)$.

Answer:

- For $A(2, 3)$: Move 2 units right, then 3 units up.
- For $B(4, 2)$: Move 4 units right, then 2 units up.
- For $C(0, 1)$: Stay at 0 units right, move 1 unit up.



B TABLE OF POINTS

Definition Table of Points

A **table of points** lists the coordinates of points in a coordinate plane. In such a table:

- The first row represents the **x-coordinates**.
- The second row represents the **y-coordinates**.

Each column pairs an x-coordinate with a y-coordinate to form a point, such as (x, y).

Ex:

x	1	2	3
y	3	2	4

$\rightarrow (1,3),\ (2,2),\ (3,4) \rightarrow$