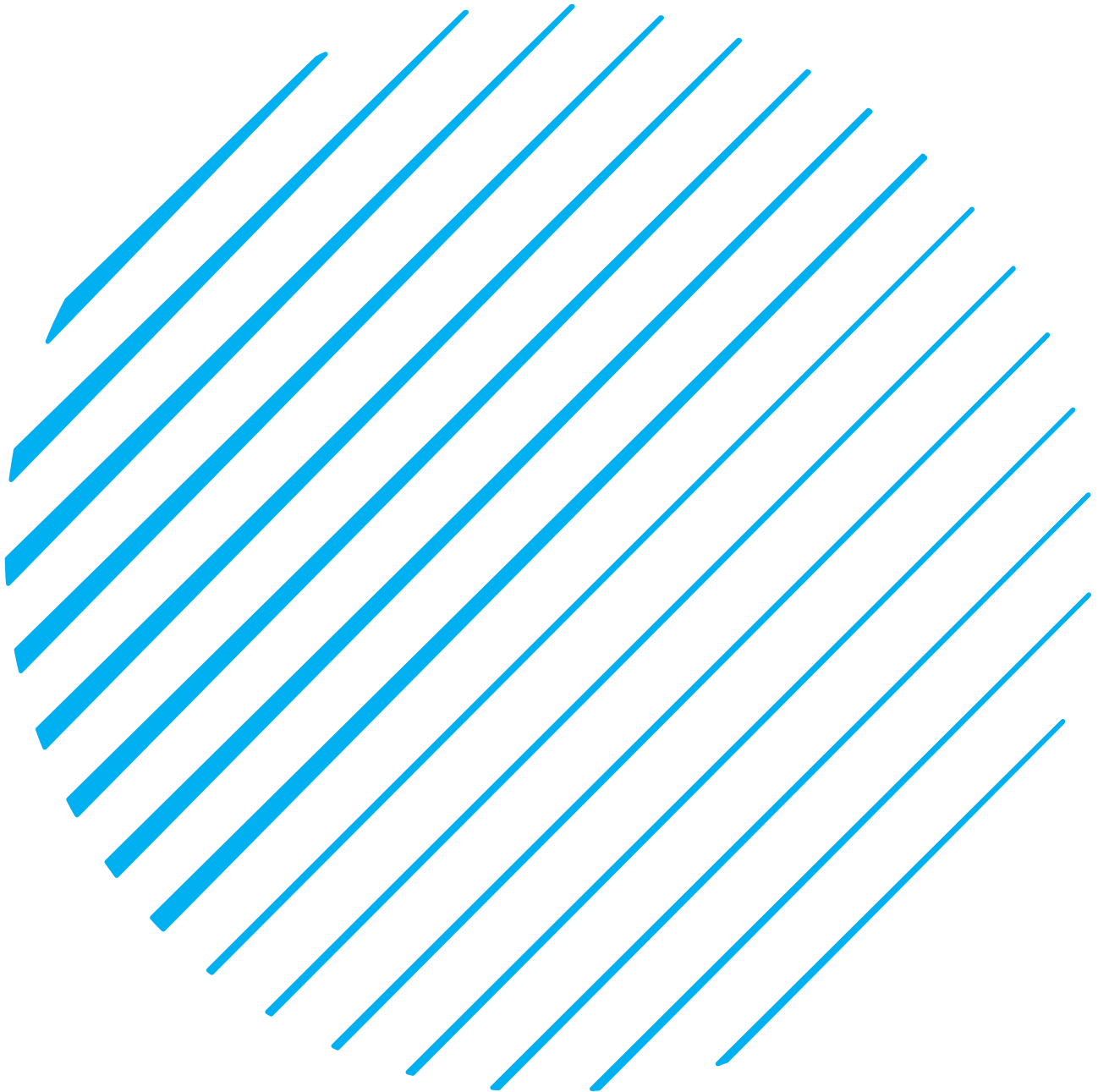


# VITAL MATHEMATICS



ALGEBRA

CARTESIAN COORDINATE SYSTEM

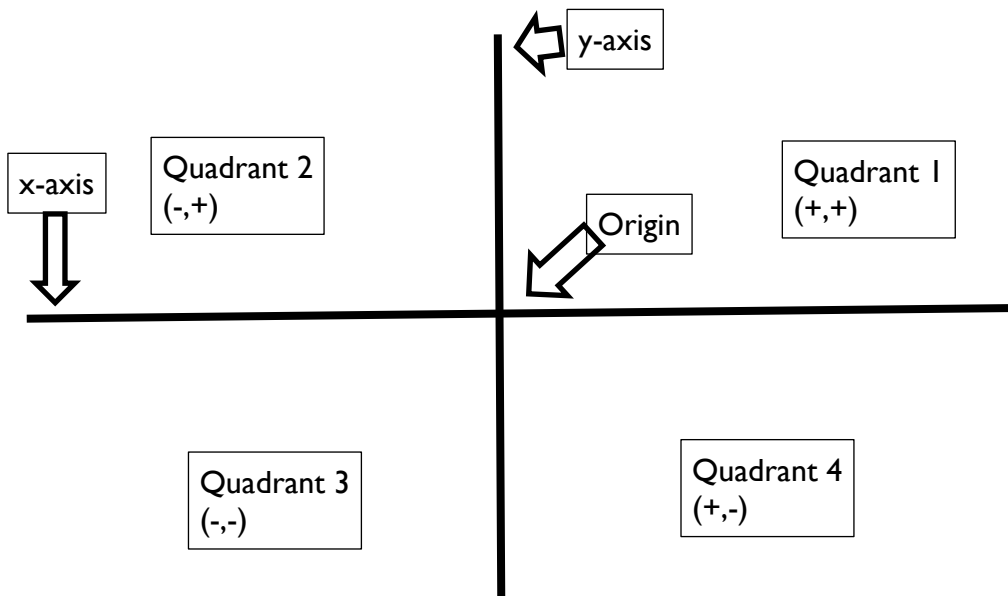
STEVIE CARPENTER

## INTRODUCTION

The Cartesian coordinate system is a graphing system that depends on two coordinates, in order to establish a point on the graph. The two coordinates are known as the x-coordinate and the y-coordinate. On the Cartesian coordinate system, the vertical line represents the y-axis and the horizontal line represents the x-axis. The numbers on the vertical line or y-axis represents different values for the y-coordinate; vice versa for the x-axis. One x-coordinate and one y-coordinate makes one Point, which is written in this format called an ordered pair

*(value of x – coordinate, value of y – coordinate)*  
 $(x, y)$

Multiple Points  $(x, y)$  on a Cartesian coordinate system makes a visual graph.



## **SOLVING LINEAR EQUATION IN ONE VARIABLES**

**STEP 1)** Identify your ordered pair, which should have a structure similar to  $( , )$

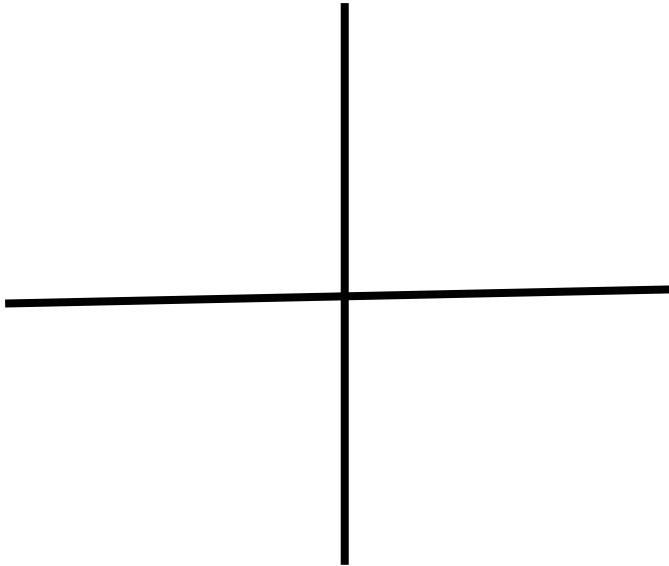
**STEP 2)** Identify your x-coordinate, which is the first value in parentheses. This value indicates how far left or right to move on the x-axis. Find that value on the x-axis of the Cartesian coordinate system.

**STEP 3)** Identify your y-coordinate, which is the second value in parentheses. This value indicates how far up or down to move on the y-axis. Find that value on the y-axis of the Cartesian coordinate system.

**STEP 4)** Find where both the x-coordinate and the y-coordinate intercepts. The location at which both points intercepts, becomes your Point on the Cartesian coordinate system.

## LINEAR EQUATION IN ONE VARIABLES EXAMPLE

Example 1) Plot  $(3,4)$ ;  $(0,1)$ ;  $(4,0)$ ;  $(-1,2)$ ;  $(2,-2)$ ;  $(-4,-3)$ ;  $(0,0)$



Example 2) Determine which points belong in which quadrant:  $(4,5)$ ;  $(1,0)$ ;  $(-1,-3)$ ;  $(1,-3)$ ;  $(2,5)$ ;  $(-4,3)$ ;  $(1,1)$ ;  $(-1,-1)$

Quadrant 1			
Quadrant 2			
Quadrant 3			
Quadrant 4			



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**BY**

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