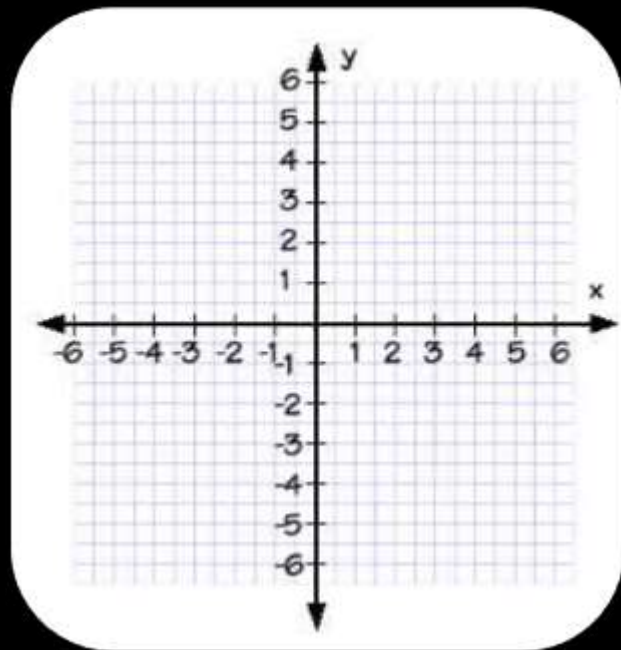


CO-ORDINATE GEOMETRY





RENE DESCARTES

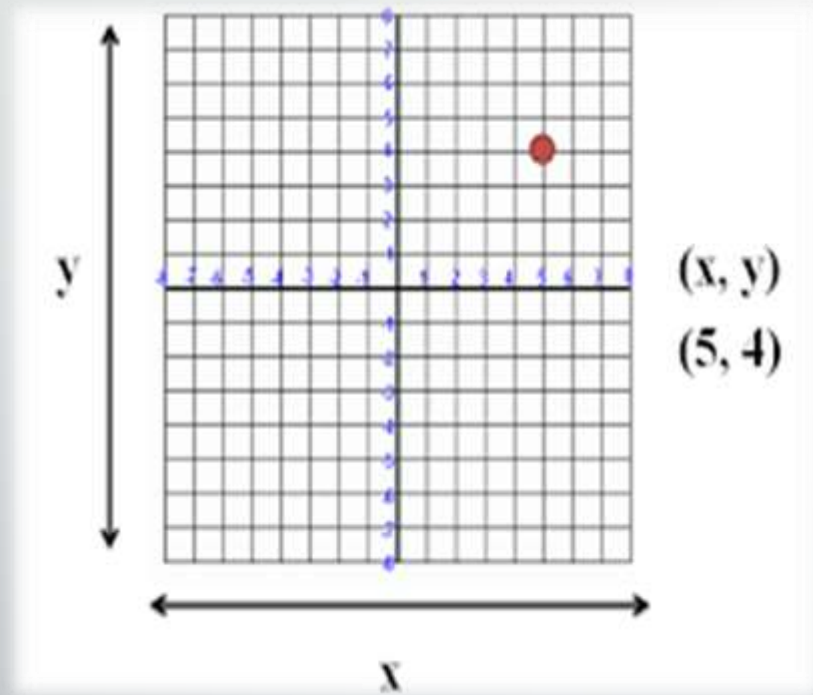
Born: March 31, 1596,

Died: February 11, 1650

René Descartes was a French philosopher, mathematician, and scientist. Dubbed the father of modern western philosophy, much of subsequent Western philosophy is a response to his writings, which are studied closely to this day.

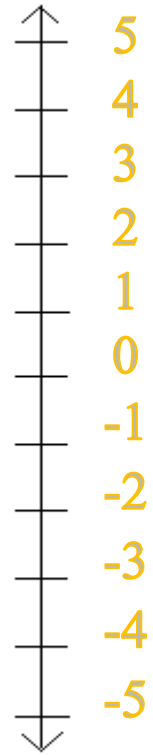
- 
- ∂ French Mathematician
 - ∂ First published *La Géométrie'* in 1637
 - ∂ Used Algebra in study of Geometry
 - ∂ Cartesian Co-ordinate
 - ∂ Represented Lines & Curves by Algebraic Equation
 - ∂ Branch : Co-ordinate Geometry

Cartesian co-ordinate System



The position of a point in a plane is determined with reference to **TWO** fixed mutually perpendicular lines, called "**Co-ordinate Axes.**"

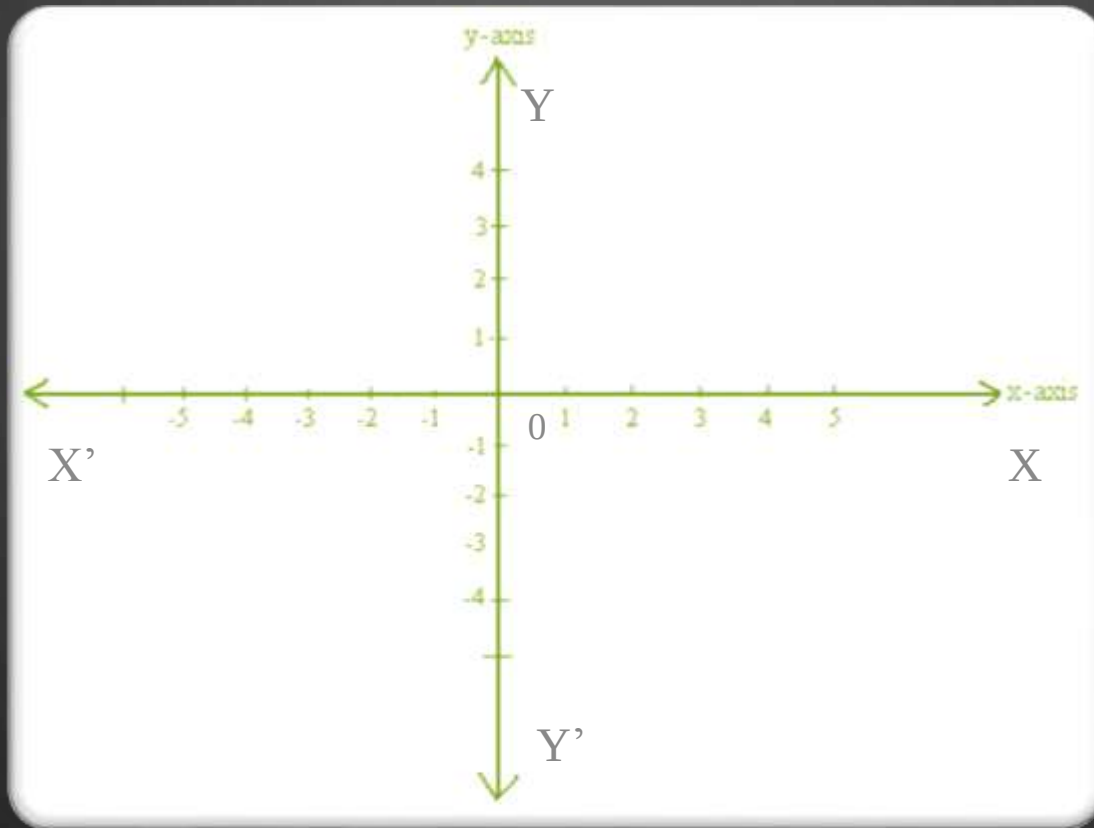
There are 2 Axis



LINE YY' = Y Axis

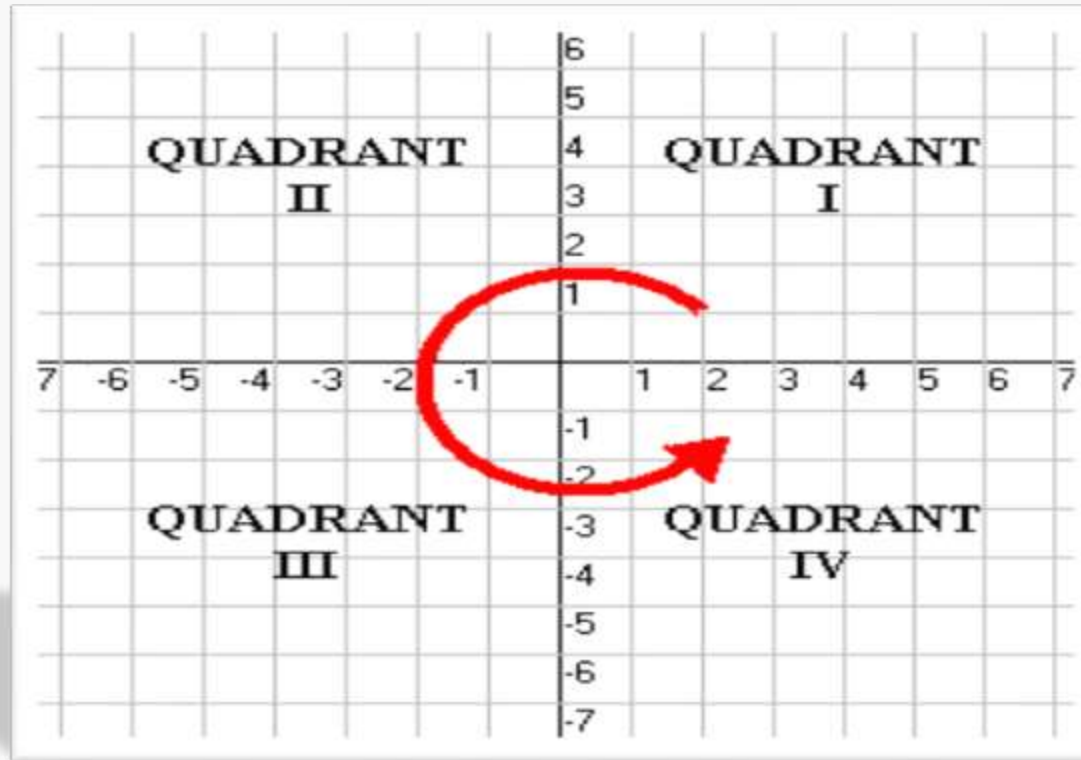


LINE XX' = x Axis



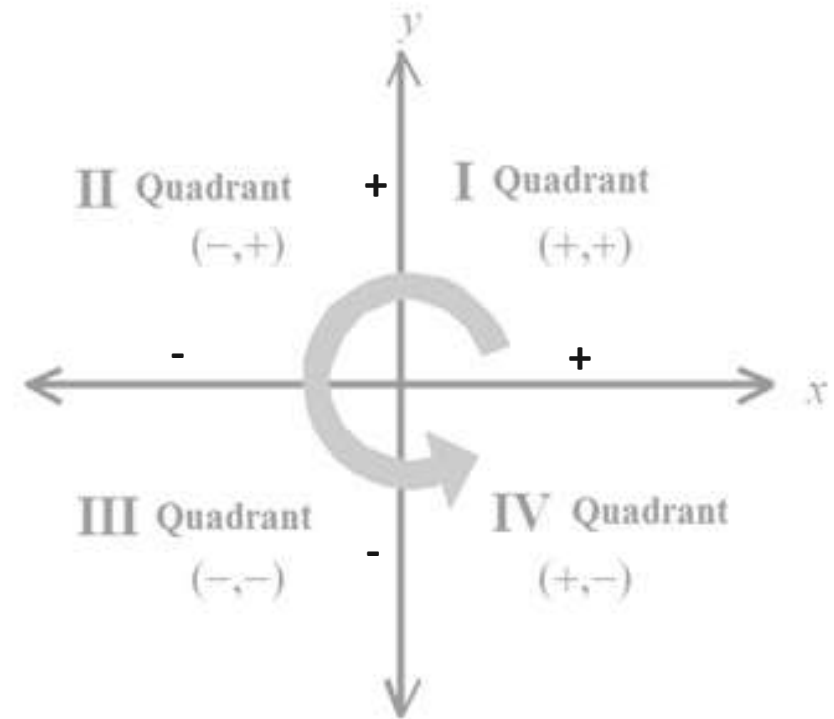
- ✓ Line $XX' = X\text{-Axis}$
- ✓ Line $YY' = Y\text{-Axis}$
- ✓ Intersection = Origin [0]

QUADRANTS

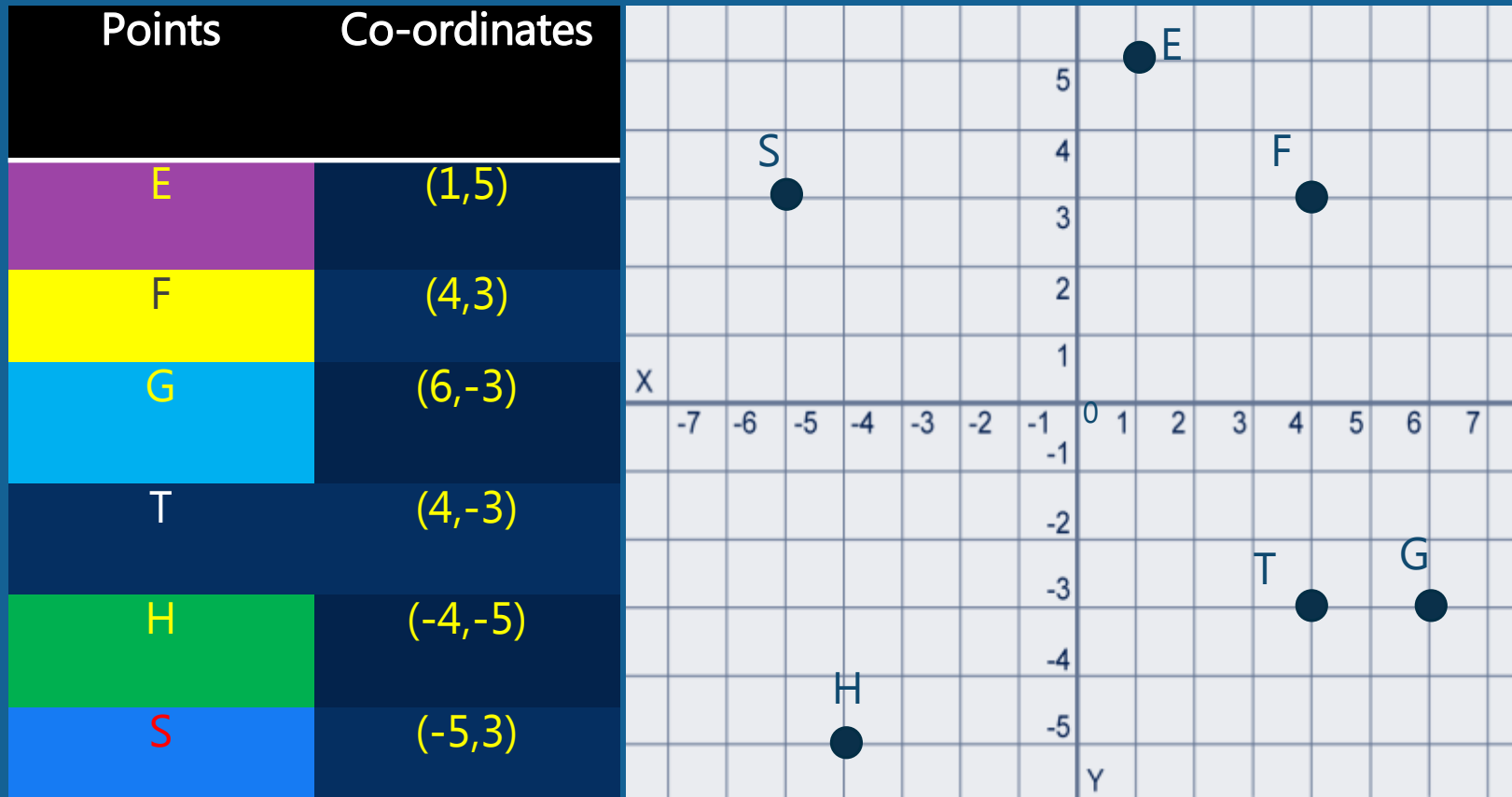


Sign Convention

Quadrant	x Co-ordinate	y Co-ordinate
Ist Quadrant	+	+
IInd Quadrant	-	+
IIIrd Quadrant	-	-
IVth Quadrant	+	-



■ CO-ORDINATE OF EACH POINTS E,F,G,H & T FROM THE FIGURE.



- For X-Axis (x,0)
- For Y-Axis (y,0)
- At Origin (0,0)

QUESTION

On which Quadrant or on Axis do the following points Lie?

$(5,3)$, $(-2,4)$, $(-3,-6)$, $(2,-5)$, $(0,4)$, $(-3,0)$

Co-ordinates	Position
$(5,3)$	In Ist Quadrant
$(-2,4)$	In IInd Quadrant
$(-3,-6)$	In IIIrd Quadrant
$(2,-5)$	In IVth Quadrant
$(0,4)$	On Y-Axis
$(-3,0)$	On X-Axis