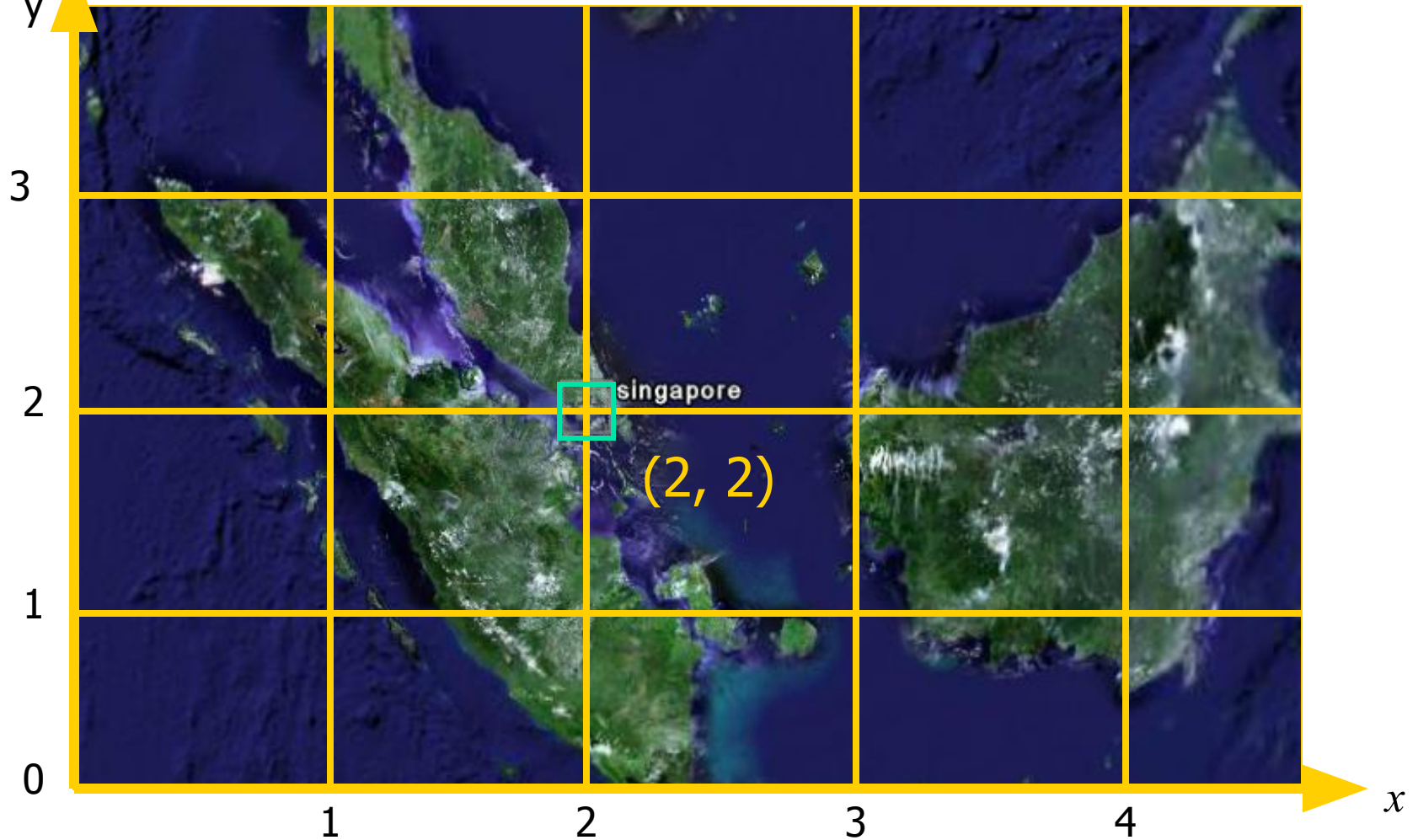




Coordinate Geometry

Location of Singapore





Objectives

- describe Cartesian coordinates in two dimensions (x, y)
- finding the distance and midpoint when given two Cartesian coordinates



History



- Developed by a sick mathematician, Rene' Descarte.
- As he lay in bed sick, he saw a fly buzzing around on the ceiling. His ceiling was made of square tiles. As he watched, he realized that he could describe the position of the fly by the ceiling tile he was on.



Uses

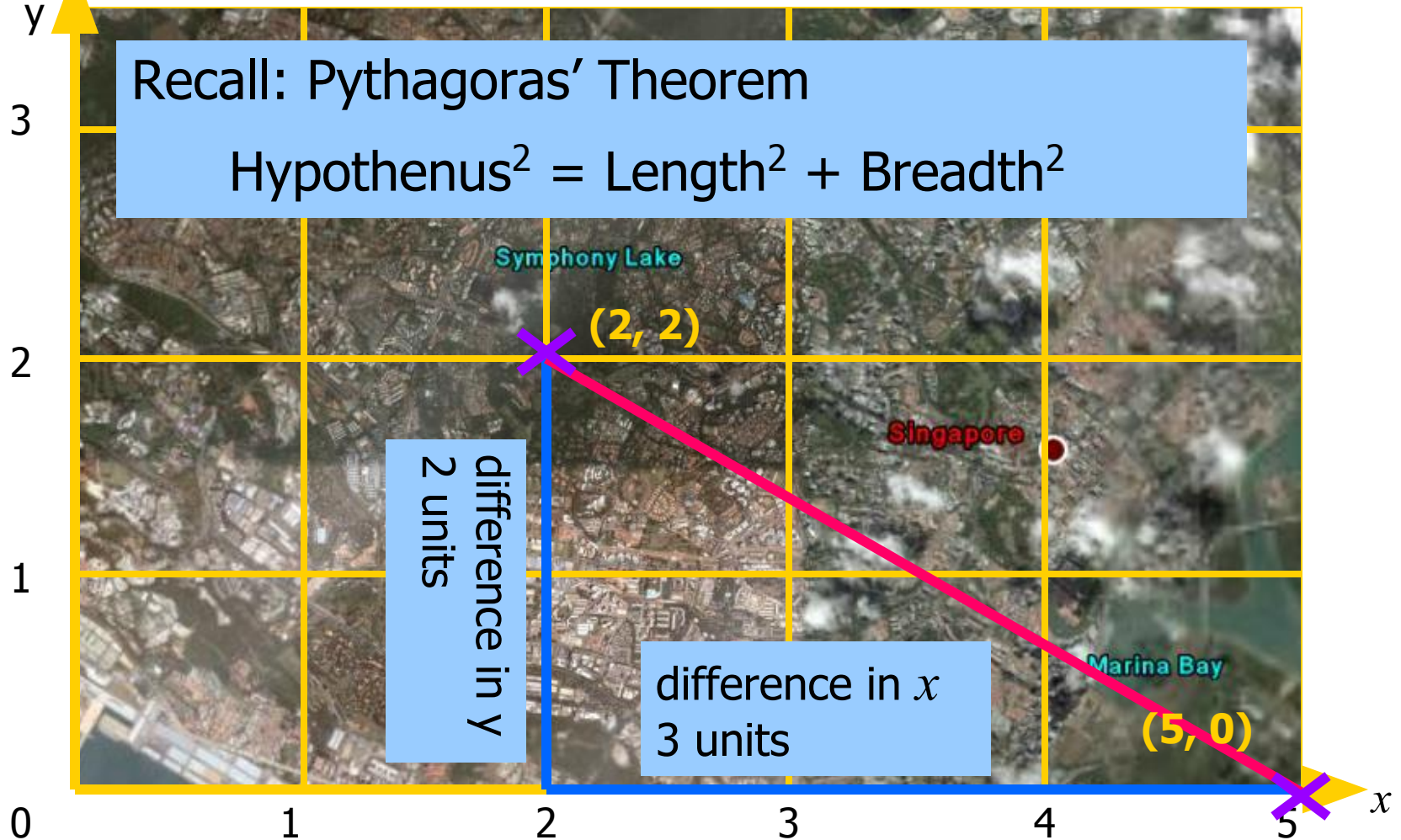
- Cinema tickets
- Street directory
- Latitudes and longtitudes
- Maps in shopping centres
- Labels of HDB blocks

Distance

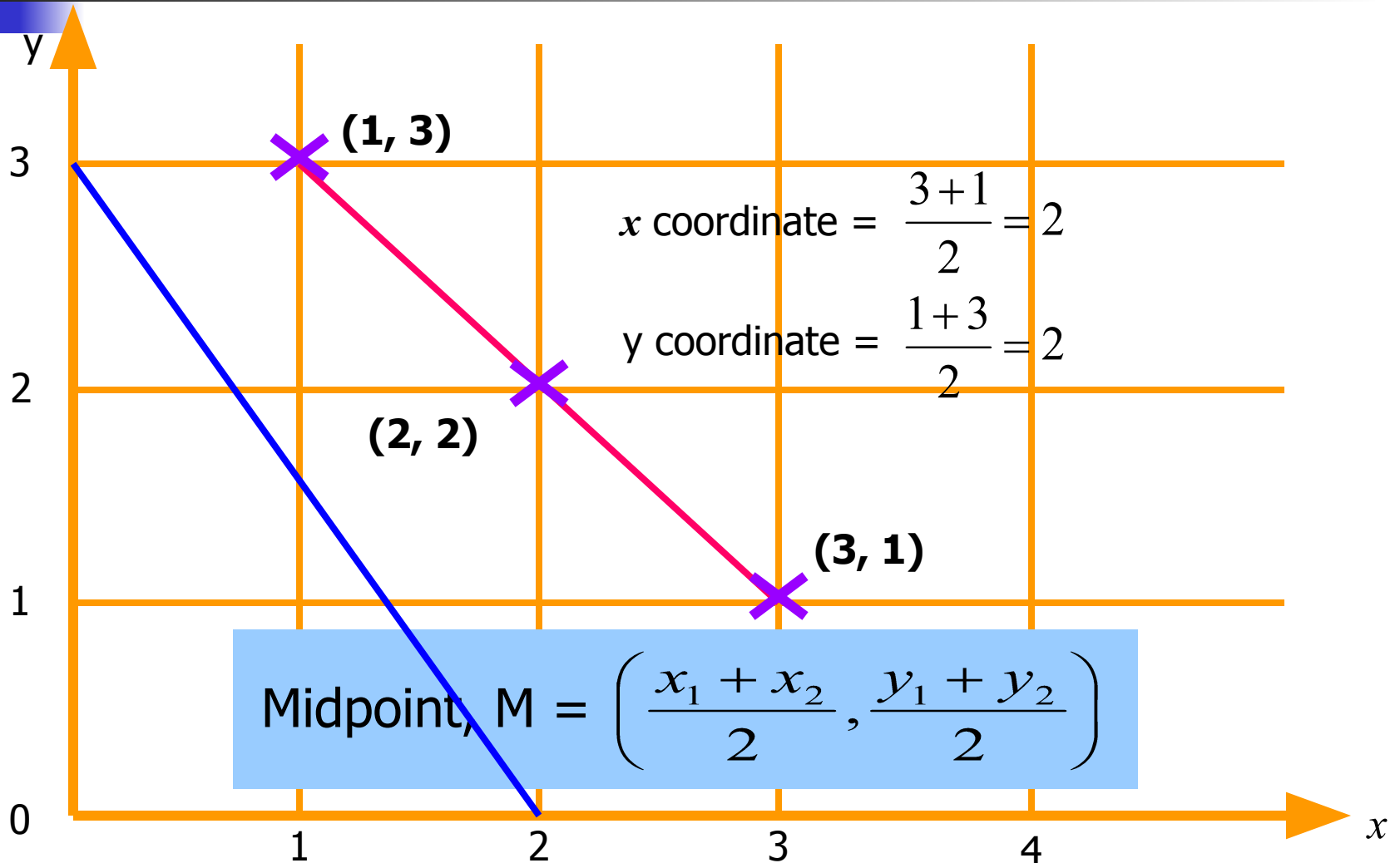
$$= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Recall: Pythagoras' Theorem

$$\text{Hypotenuse}^2 = \text{Length}^2 + \text{Breadth}^2$$



Finding Midpoint





Conclusion

- able to identify Cartesian coordinates in two dimensions
- calculate the distance and midpoint when given two Cartesian coordinates