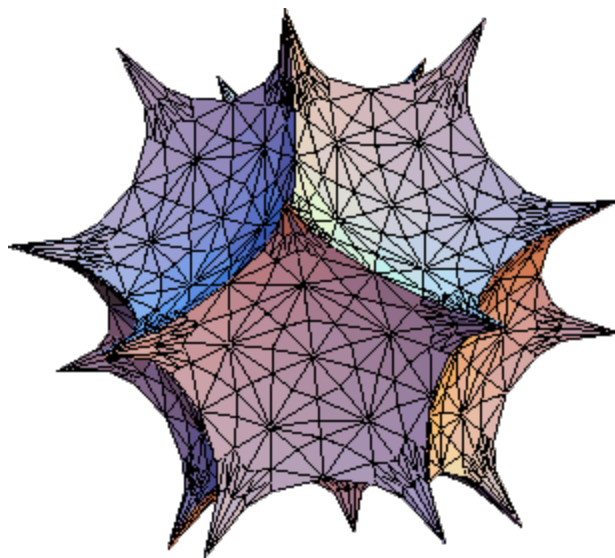


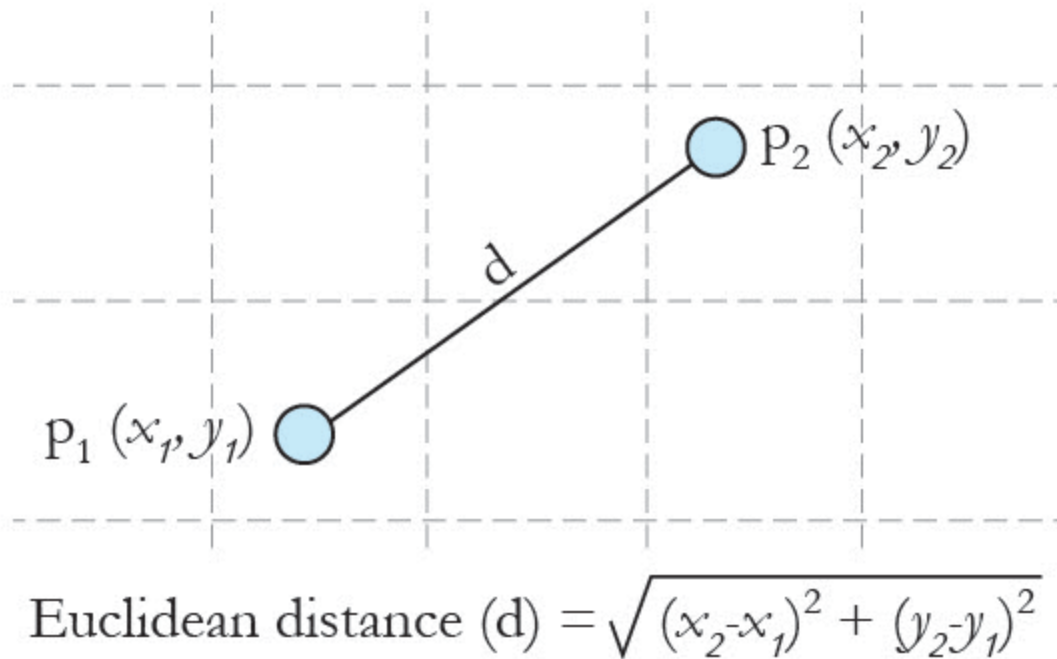
Geometry – Part II

Feb 2nd , 2017



- Quickly recall some important properties of geometry that we have discussed so far.

Euclidean distance between two points



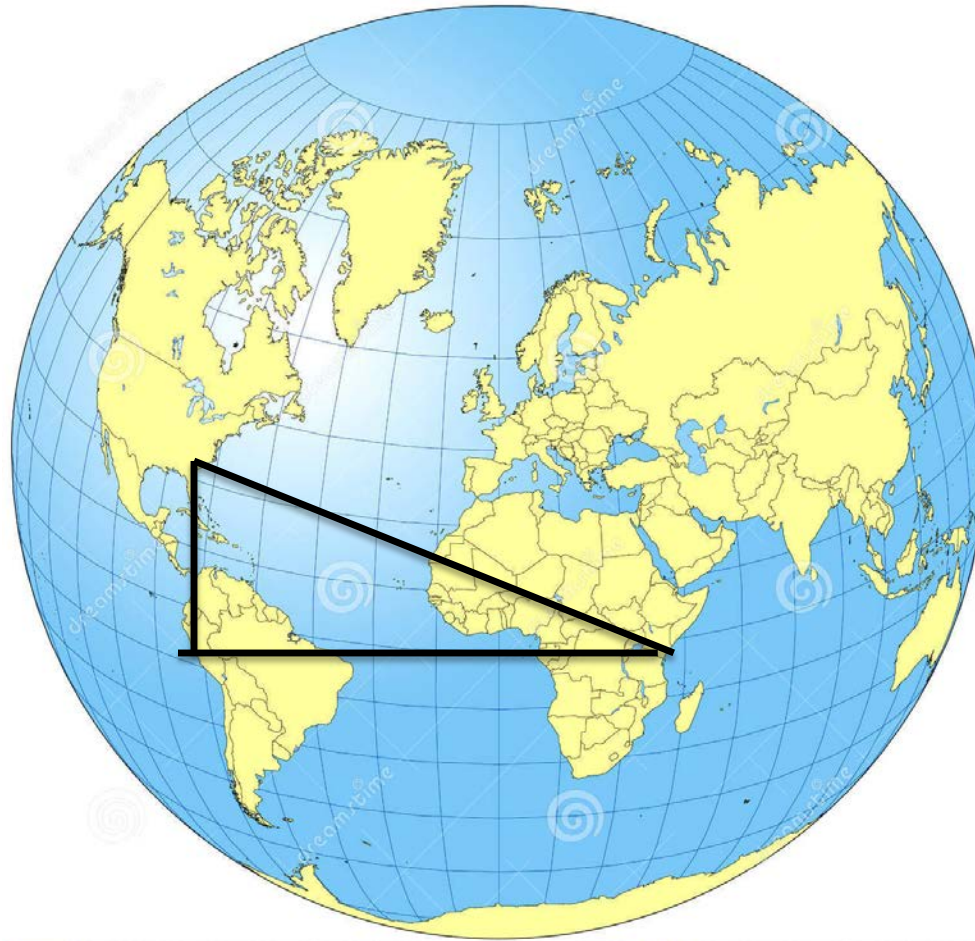
Class exercise 1



Find the distance between **Buffalo (NY, USA)** and **Nanyuki (Kenya)** using the information provided on the map.

- Compare with the real distance between these two cities (look online)?
- What might be the reason for any differences you found?

Consider the triangle on a world map



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Or, should it look like...



- What is the sum of the interior angles in this triangle?

Compare these two triangles



Exercise 2



- Identify different triangles on this surface.

Consider the following questions

- If S refers to the sum of the all the interior angles in a triangle on a sphere, what is the maximum value S can be ?
- What is the minimum value of S ?
- How many different values of S can you have?
- What do you infer from this exercise?

History

- Carl Fredrich Gauss (1813)
- Janos Bolyai (1840s)
- Nikolai Lobachevsky (1830s)

