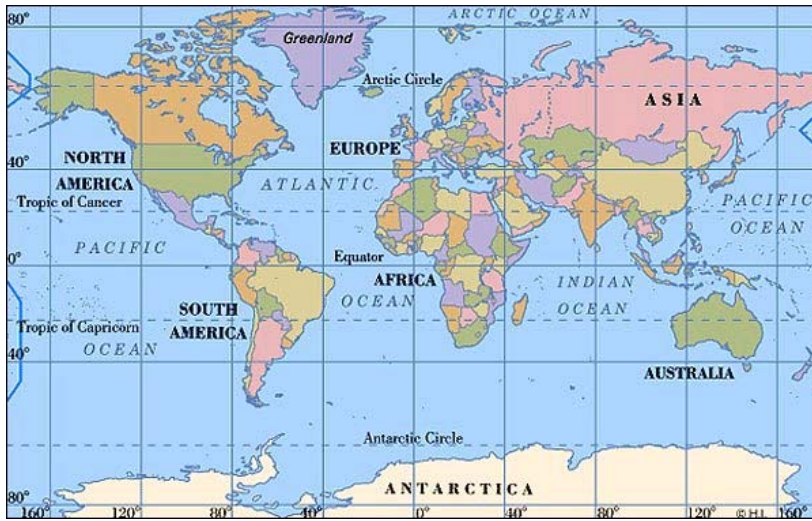


# MAPS & SCALE



A map is always much smaller than the area it represents!

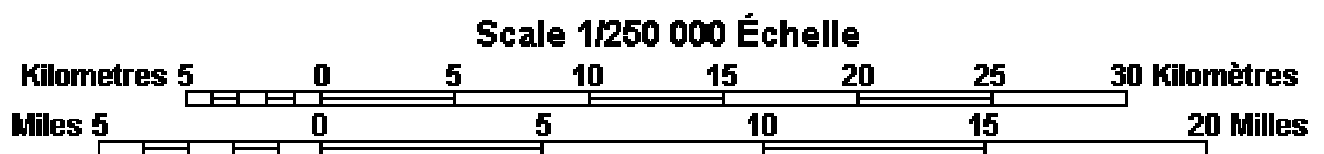
- Maps are made to *scale*.
- The scale represents the ratio of a distance on the map to the actual distance on the ground.

## TYPES OF MAP SCALE

### 1. Written / Verbal Scale:

- The simplest form of map scale
- E.g.  
1 cm = 1 km  
Or  
“One centimeter on the map represents one hundred kilometers on the earth’s surface”

### 2. Line / Graphic Scale:



- Uses a ‘ruler’ that is divided into units of distance.
- You would compare the distances on the map to the distances shown on the ruler.

### 3. Representative Fraction (Rf) Scale or Ratio Scale:

Uses a fraction (or a ratio) to show the relationship between units on a map and units on the earth's surface:

E.g.

1:50000 or 1/50000

1 km = 1000 m = 100,000 cm

With a scale of 1:50000

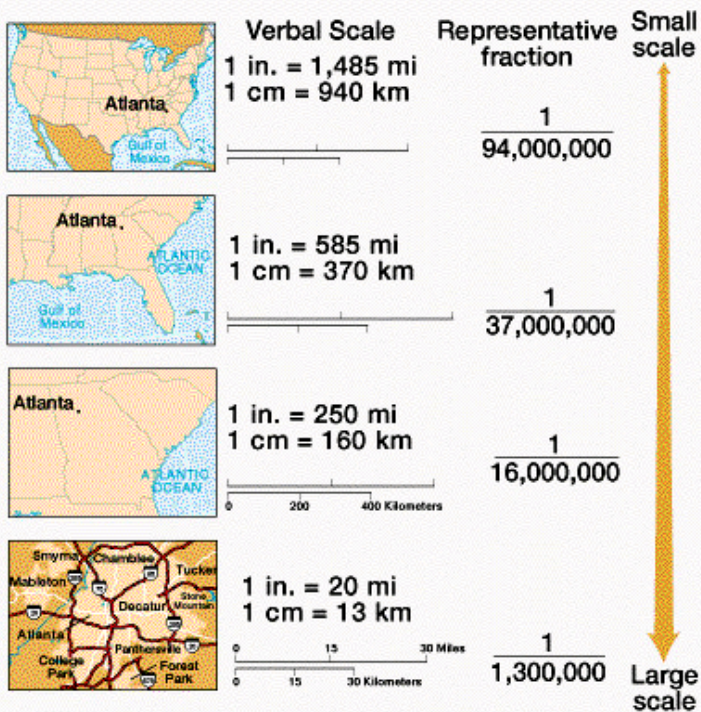
÷ 50,000 by 100,000 .....  $50,000/100,000 = 0.5 !$

\* Therefore a map using the scale of 1:50,000 has a scale of 1 cm = to 0.5 km or 500m

## Rule of 5

1:50000  
 5 4 3 2 1 ← Count back 5 decimal places

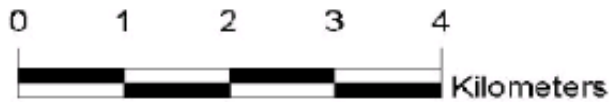
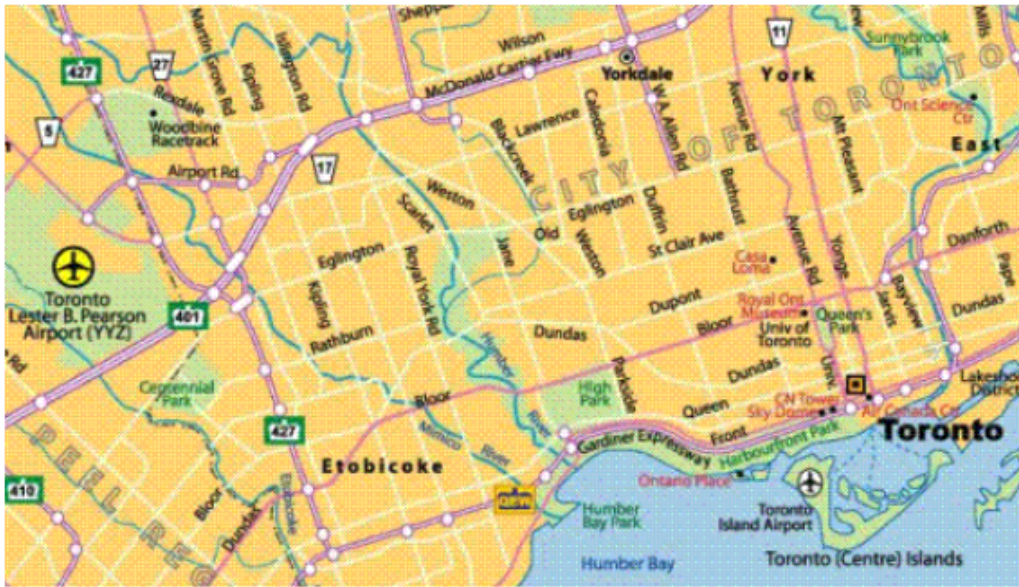
### SMALL SCALE VS. LARGE SCALE



A **small scale** map shows a large area with a small amount of detail.

A **large scale** map shows a small area with a large amount of detail.

## HOW TO FIND A DISTANCE ON A MAP:



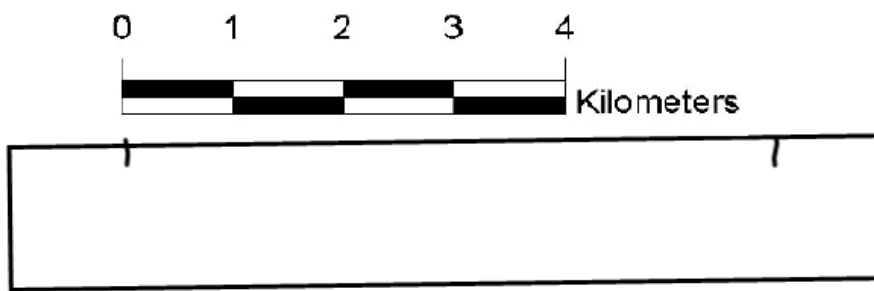
What's the distance in km between Toronto Pearson Airport and the CN Tower?

### Using the Line / Graphic Scale:

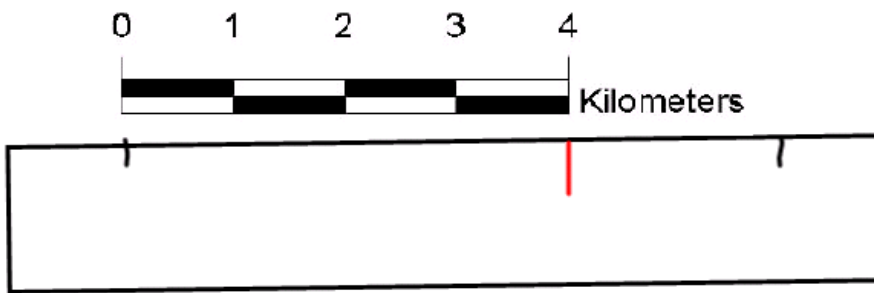
#### STEP 1



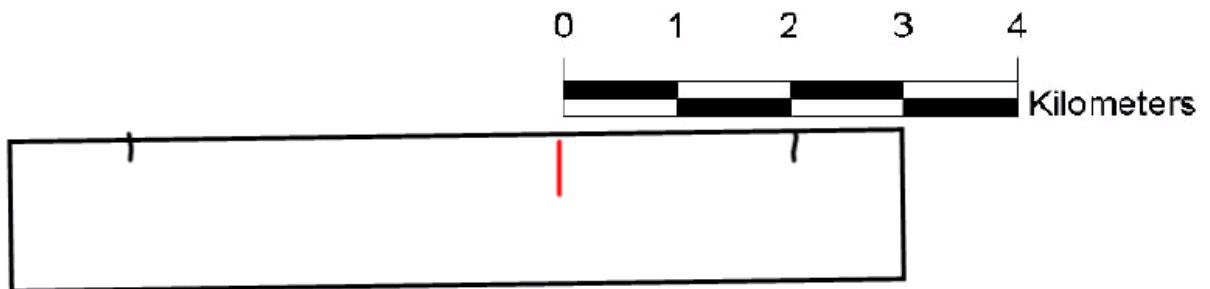
STEP 2



STEP 3



STEP 4



ANSWER: 6 km separated Toronto Pearson Airport and the CN Tower !



## Using the Verbal or Rf Scale:

### Verbal:

1 cm equals 1 km

1 cm : 1 km

### Rf:

1:100000 or  $\frac{1}{100000}$  ... using the rule of 5, we get 1 cm = 1 km



Knowing that 1 cm = 1 km

Then ... 6 cm = 6 km

Same answer!

6 km separated Toronto Pearson Airport and the CN Tower.