Geography of Canada
CGC 1DI (Academic)

SCALE

One of the basic map requirements, for any map, is a scale. A map is a way of shrinking the earth's surface so that it fits on a map. The ratio of this reduction needs to be calculated very precisely in order for the map to be of any use. The ratio between the actual size and the map size is known as **MAP SCALE.**

There are three basic methods of showing scale on a map.

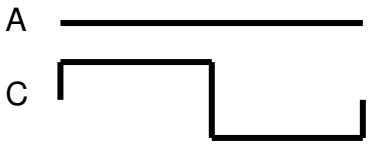
Statement Scale	Line Scale	Representative Fraction
This scale is written in words: **1cm=1km** This means that every centimeter on the map represents on kilometer on the ground. If the map is reduced or enlarged this scale is *no longer accurate!!*	This scale is shown as a line divided in various ways:  **0 1 2 3 km** You can use a ruler or the edge of a piece of paper to measure with this scale. If the map is reduced or enlarged, this scale *remains accurate!*	This scale is written in ratio form: **1:100,000** This means that 1cm on the map represents 100,000cm on the ground. (1cm = 1km!!) If the map is reduced or enlarged this scale is *no longer accurate!!*

Each of the scales shown above says the same thing. They can be converted to another type through a process called **SCALE CONVERSION**.

Using scale to Measure Distances on a Map

1. Imagine that the following diagrams show the roads between towns. Use the following scale to find the road distances (in km.) between the towns.

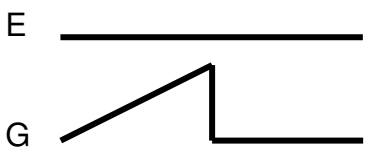
a) Statement Scale 1cm=1km



_____ km

_____ km

b) Linear Scale



_____ km

_____ km

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c) Representative Fraction (RF) 1:100,000

This scale has traditionally been the most difficult for people to work with. It helps to put into the form of a statement scale as a first step.

Therefore, think of **1:100,000** as **1cm = 100,000 cm**

There is also a simple rule to help in dealing with RF scales. Remember, 1km is equal to 100,000 cm!. When converting from RF to statement, ***MOVE THE DECIMAL PLACE FIVE PLACES TO THE LEFT.***

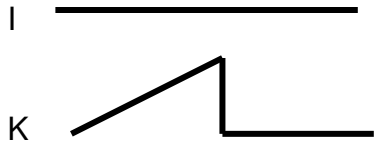
For example, **1:100,000** is the same as saying **1cm = 1km**

1:50,000 is the same as saying **1cm = _____ km**

1:25,000 is the same as saying **1cm = _____ km**

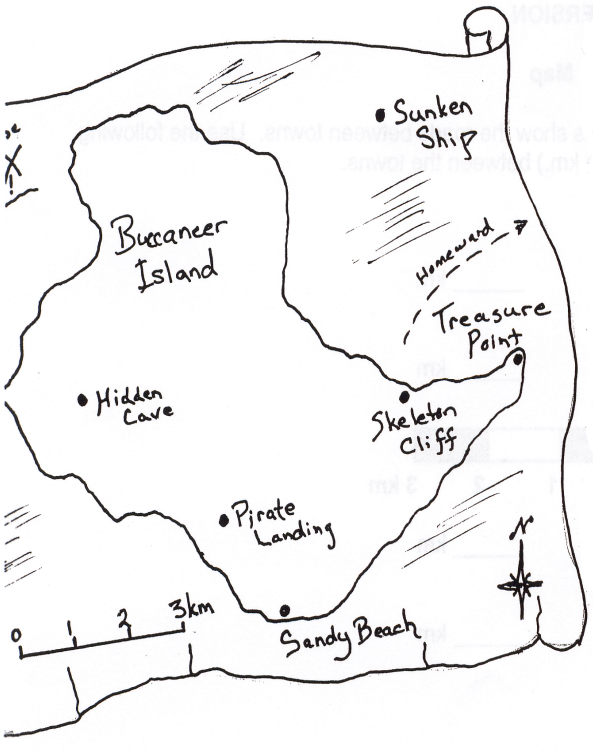
1:200,000 is the same as saying **1cm = _____ km**

Using a scale of 1:100,000, find the distance along the lines below.



_____ km

_____ km



Use the given scale to determine the distances between the following points:

Pirate Landing to Treasure Point _____Km

Hidden Cave to Sandy Beach _____Km

Skeleton Cliff to Pirate Landing _____Km

Treasure Point to Hidden Cave _____Km

Sandy Point to Skeleton Cliff _____Km

If you could carry a treasure chest at an average speed of .5km/hr, how long would it take to carry the treasure to Treasure Point from Hidden Cave?

_____minutes