

MEASURING DISTANCE ON THE GROUND

Pacing, timing (Naismith's rule)...



INTRODUCTION

Before using these methods, you have to measure the distance to travel on the map. There are different ways of doing it, but it is easiest to use a roamer. A lot of compass have a roamer printed on the base-plate and millimetres or inches along the side.

There are two main methods to measure the distance on the ground:

- PACING: used for short distances (up to 500m)
- TIMING: used for longer distances (+ 600m)

You can use both methods between 500m and 1km.



PACING

« *Pacing is the counting of double paces to determine the distance covered* »



To know how many paces you have to do for 100m, measure 100m on the ground and count how many paces you do to travel this distance. An average person is about 50 – 70. If you lead with your right foot, the pace counting starts with each placement of the left foot.

The total will be your control number for that distance. It can change according to the terrain, up or downhill etc. If you travel more than 100m, always count to your control number and start at 0 again each 100m traveled.

Example:

- 500m to travel
- 60 paces to do 100m
- $60 \times 5 = 300$ paces. Instead of counting until 300, count 5 times until 60, it's easier.



TIMING (Naismith's Rule)

« Naismith's rule is a formula calculating how long it will take to walk a certain distance, including the extra time taken when walking uphill »

- The average walking speed is 5km per hour
- One hour for every 5km walked on the flat
- Plus one minute per 10m contour line gained in height

Example: you have to travel 1km and to climb 70m with a speed of 5km/h

1km = 12 minutes

70m climbing = 7 minutes

→ So you will travel this distance in 19min

HORIZONTAL SPEED	
DISTANCE	TIME
5km	1 hour
1km	12 min
100m	1.2 min
VERTICAL SPEED	
HEIGHT	TIME
300m	30 min
100m	10 min
10m	1 min
1 contour	1 min