Estimation Skills

Introduction

The ability to estimate heights, distance and width is a useful ability for people to acquire. It is needed for pioneering, tramping, making sketch maps for directions, describing people and for camping, particularly in respect to safety and hazards.

Test of reasonable-ness

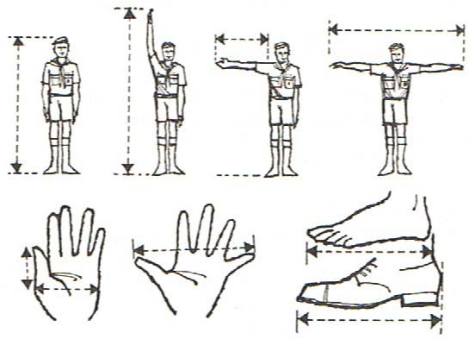
When you estimate a distance or height, you have to do two things. First you have to attempt to work out the distance by looking at or inspecting the objects. Then you attempt to measure it using your pace, personal height and other methods.

Once you have done this, compare the two and apply the test of reasonableness. Are your calculations somewhere near your original thoughts when just looking? If so, the measurements are probably correct. If not, check your measurements again.

Personal measure-ments

It's helpful to know your personal measurements, but Scouts or Venturers need to update them often to allow for growth:

Hand span	
Nose to fingertips	
Foot length	
Pace – one step	
Shoe length	
Feet to your head	



Other measure-ments

There are other measurements that once you learn them can be quite useful for comparing distances and heights. Examples are:

- Length of a standard swimming pool = usually 33 metres
- Length of a Rugby or Soccer field = usually 100 metres
- Length of a cricket pitch = usually 20 metres
- Height of a wall in a house usually 2.4 metres.
- Sound (travels at about 1 kilometre per 3 seconds, or 335 metres per second).

Practise

Practise pacing a known distance and work out how many paces. E.g. 50 metres may be 60 of your paces.

Once you have a measurement you are confident of estimating correctly, you can estimate longer distances by dividing them into distances you do know and adding them up to get the answer. e.g. Three lots of 50 metres are 150 metres and so on.

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Estimation Skills, Continued

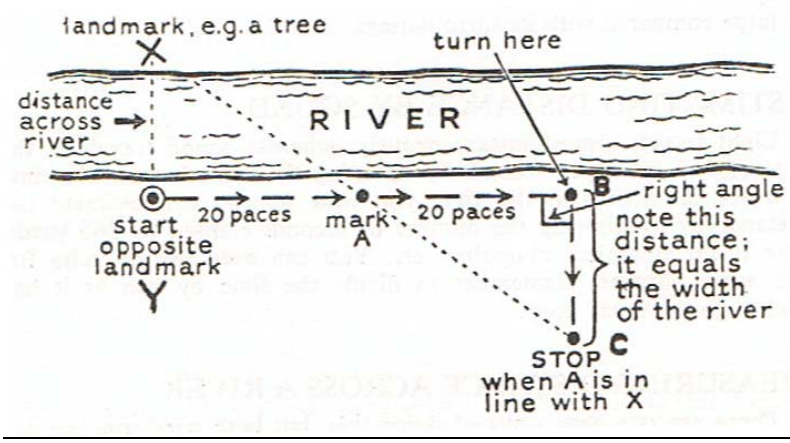
Traps to be aware of

A number of things can throw your judgement out without you at first being aware of it. Examples would be:

- The sun shining from behind the distance or object, or in front.
- Kneeling or lying down instead of standing will upset your estimating ability.
- Light and shade on hills will make them appear closer or more distant.
- Looking up a slope as opposed to looking down it.

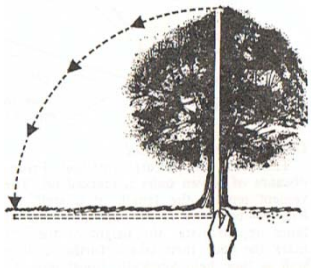
Width of a river

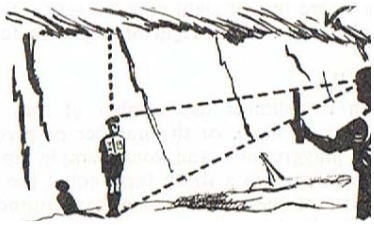
Want to build a rope bridge across a river or stream? Have you got enough rope and timber?
Here's how you find out.



Heights

Here are two methods for estimating heights of trees, cliffs, flag poles or buildings etc. In the tree example, rotate the stick left and have someone pace out the distance from the left arrow head to the base of the tree. That equals the height of the tree. In the cliff example use the stick to measure the height of the Scout and then apply it to the rest of the cliff.





Numbers of objects

This can be a challenge to say the least. The most effective way of estimating a crowd or a flock of sheep, is to:

- Count a group of say 10 or 20 people or animals on the crowd,
- Work out as best you can, how many groups of that number are in the crowd.
- Multiply it out and you have an estimate of the total number in the crowd.

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