

For 274: Forest Measurements and Inventory

Lab 3: The Old Arboretum Treasure Hunt - Orienteering

Objectives of this laboratory exercise:

- Be able to use your compass and paces to find old survey markers, plot centers, monitoring trees
- Be able to convert between feet and meters
- Demonstrate ability to set declination on your compass

Location: Meet at the **Gold Fire Hydrant beside the Old Arboretum**

Materials and Supplies:

- Clipboard + Pencils
- This Field Sheet – Please bring with you
- Compass (provided)
- Flags (supplied)
- Calculator (this will help!)

Before you Begin: Pace your Chain

A 100ft measuring tape will be laid out on flat ground, with a flag placed at the beginning and at 66 feet. The goal of this first task is for **you** to determine how many of your paces are in a chain and how many of your paces are in 100m. Remember a pace is every 2nd step.

Walk 66 feet and count how many paces you take: _____ paces

Walk the 66 feet again and count your number of paces: _____ paces

Average of the two: _____ average paces

Calculate how many paces are in:

100 feet = _____ paces

In a group, using only your pace and compasses find an aluminum tag via (2) of the following set of directions:

1. The marker lies in Moscow, at the University of Idaho campus, at the base of an ~8 inch (DBH) deciduous tree, 84 feet at 260 degrees from a spruce tree, 128 feet at 172 degrees from a gold fire hydrant, on a hill south east of the southwest corner of the Physical Education Building.
2. The marker lies in Moscow, at the University of Idaho campus, at the base of a ~20 inch (DBH) PIPO, 66 feet at 146 degrees from an ~18" (DBH) PSME, 140 feet at 182 degrees from a ~7 inch (DBH) THPL, 100 feet at 232 degrees from a grey rock at the southwest corner of the Administrative Building parking lot.
3. The marker lies in Moscow, at the University of Idaho campus, in a container on the ground, 9 meters at 300 degrees from a spruce tree, 10 meters at 254 degrees from a PIPO with a multi-forked crown, 27 meters at 222 degrees from a leaning cottonwood tree, 25 meters at 180 degrees from a National Geodetic Survey benchmark (BM-49) on a hill 18 meters south of the tennis courts at the southwest corner of the Physical Education Building.
4. The marker lies in Moscow, at the University of Idaho campus, in a rock wall 159 feet at 195 degrees from a trees, 55 meters at 90 degrees from a PIPO, 271 feet at 277 degrees from a light pole with a large cylindrical base, 50 meters south of the southwest corner of the tennis courts at the southwest corner of the Physical Education Building.

Next each group set up a new marker with instructions (please limit the number of twists and turns to 4) – We will provide you with new aluminum tags to leave at the final location.

Next each group will be asked to find one of these new marker locations.