

For 274: Forest Measurements and Inventory

Lab 2: Compass Skills and Surveying

Objectives of this laboratory exercise:

- Be able to use your compass and tape to shoot bearings and distance to objects
- Be able to set declination on your compass
- Use tapes, trigonometry, and clinometers to measure the heights of objects and slope

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

Materials and Supplies:

- Clipboard + Pencils
- This Field Sheet – Please bring with you
- Loggers Tape (provided)
- 100 foot tapes (supplied)
- 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

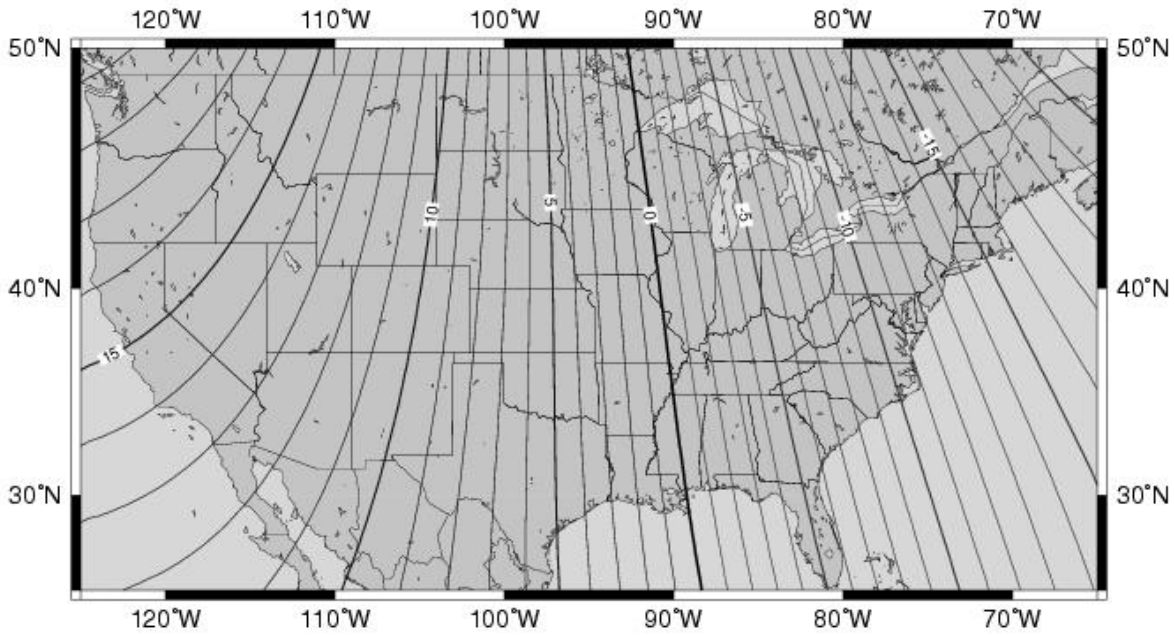
Average of the two: _____ average paces

Calculate how many paces are in:

100 feet = _____ paces

1. Setting Declination on your compass

Based on this figure below identify the appropriate declination for Moscow, Idaho:



2. From the identified plot center. First face north and then by moving clockwise, use your compass and tapes/paces to measure the bearing and distance to all of the flagged trees.

Tree Number	Azimuth	Bearing	Distance (Feet)	Distance (Meters)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

3. For the identified starting point and using only your paces and a protractor estimate the heights of a series of flagged objects:

Object Number	Horizontal Distance	Angle	Estimated Height (Feet)
1			
2			
3			
4			