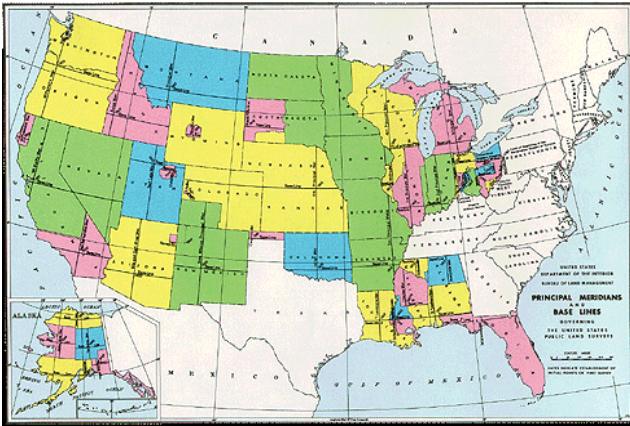


## Module 3 – MAPS AND NAVIGATION

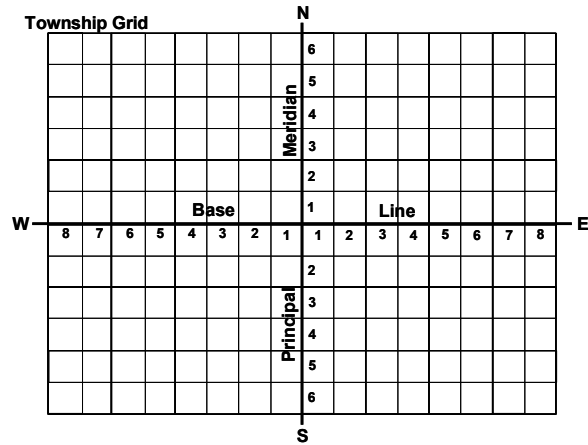
1. Public Land Survey System (PLSS)
  - a. Read “Intro to PLSS”
  - b. Watch “USPLSS” (7:37)  
[https://www.youtube.com/watch?v=nvf\\_dUS4B\\_A](https://www.youtube.com/watch?v=nvf_dUS4B_A)
  - c. Watch “Understanding the Public Land Survey System” (7:46) <https://www.youtube.com/watch?v=ZIRamhEx3Rc>
2. Topographic Maps
  - a. Read “Intro to Topo Maps”
  - b. Read webpage “How to Read a Topo Map”:  
<https://www.rei.com/learn/expert-advice/topo-maps-how-to-use.html>
  - c. Watch “How to Read a Topo Map”(3:47)  
[https://www.youtube.com/watch?v=CoVcRxza8nl&feature=emb\\_logo](https://www.youtube.com/watch?v=CoVcRxza8nl&feature=emb_logo)
  - d. Watch “Rules of Contour Lines” (8:57)  
<https://www.youtube.com/watch?v=v1-S-ED2Fa4&feature=youtu.be>
3. Navigation
  - a. Pacing
    - i. Watch “VCV – Pacing” (1:42)  
<https://www.youtube.com/watch?v=JtP7IdP7ARg&feature=youtu.be>
  - b. Compass
    - i. Read “Reading a Compass to Get a Directional Heading”
    - ii. Watch “VCV – Compass” (1:05)  
<https://www.youtube.com/watch?v=PhScQ3EO6rQ&feature=youtu.be>

## The Public Land Survey System

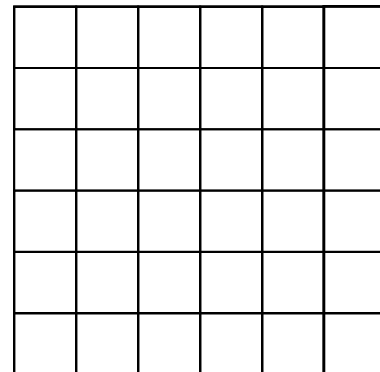
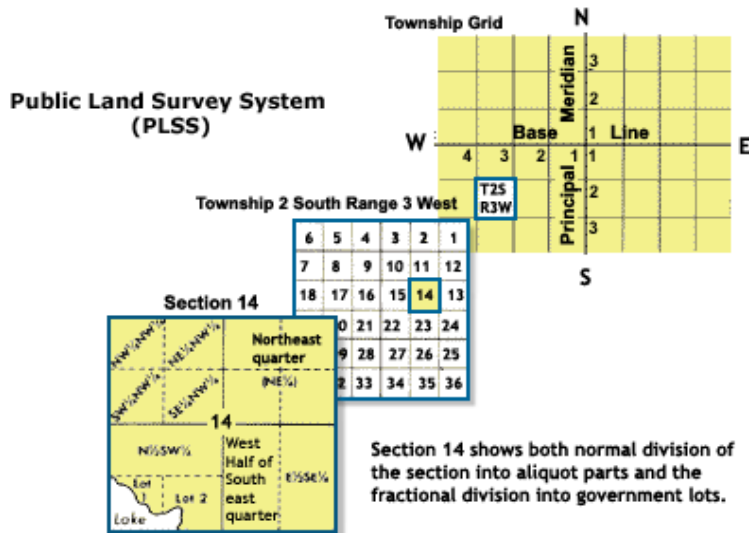
The Public Land Survey System (PLSS) is a way of subdividing and describing land in the United States. All lands in the public domain are subject to subdivision by this rectangular system of surveys, which is regulated by the U.S. Department of the Interior, Bureau of Land Management.



Principal Meridians and Base Lines, Bureau of Land Management



The PLSS typically divides land into 6-mile square townships. Townships are divided into 36 one-mile square sections.



Practice filling in the section numbers on this township grid

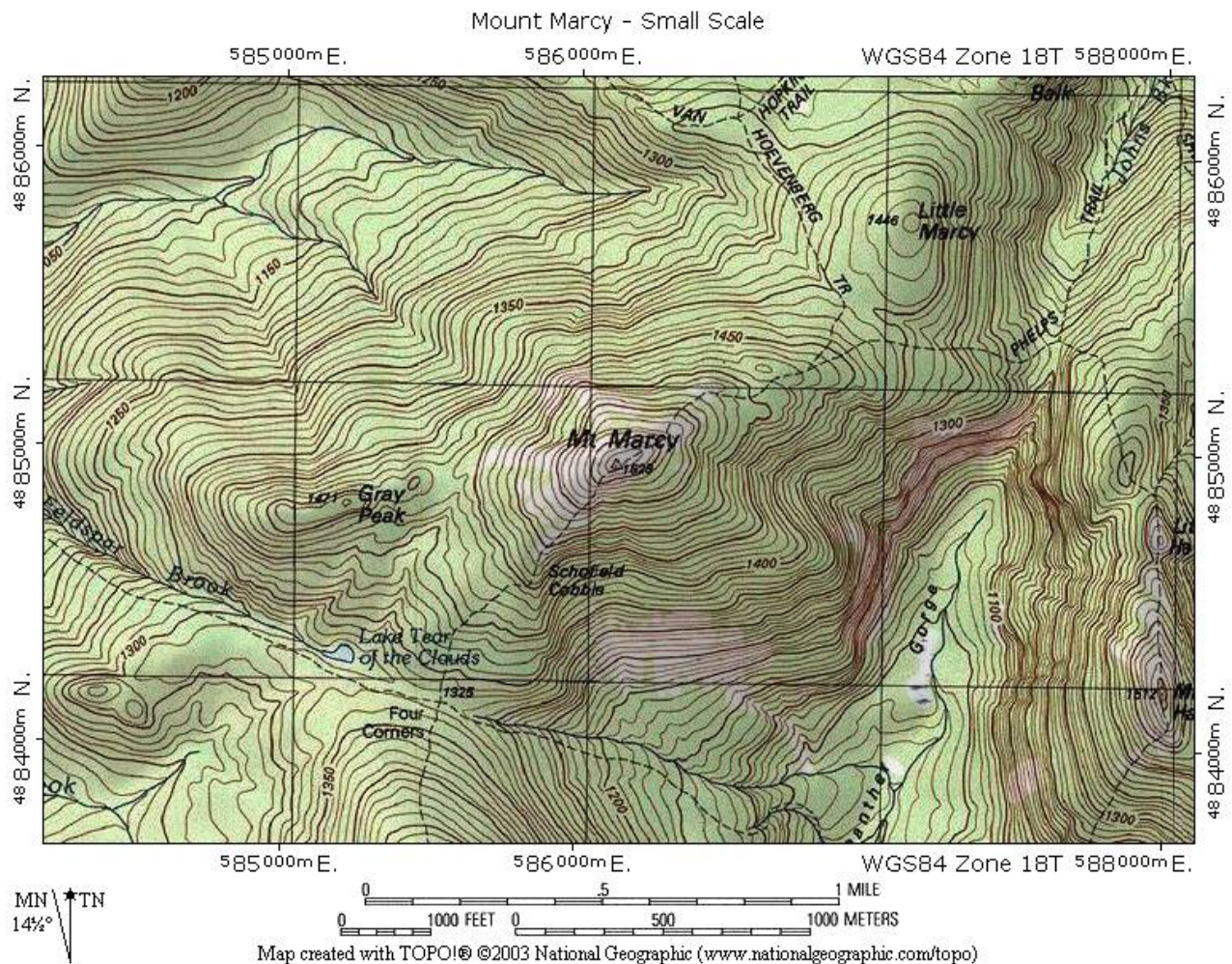
Legal land descriptions include the section, township and range numbers, and the name of the principal meridian. For example, Green Valley Lake Christian Camp is located in Sections 28 and 33, Township 2 North, Range 2 West, of the San Bernardino Base and Meridian.

## Topographic Maps: Key Components

**Contour Lines:** Contour lines indicate a constant elevation as they follow the shape of the landscape. Generally, every fifth contour line is printed on the map in a darker color and marked with the elevation. The contour interval, which is the difference in elevation between one contour line and the one next to it, varies for different maps, so look at the map's key or in its margin to read what it lists as the contour interval for the particular map you're using.

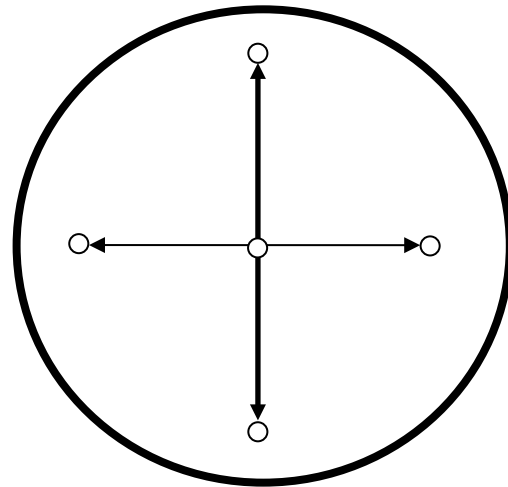
Hilly areas are depicted by closely spaced contour lines, and flat areas have few--or no--contour lines. To determine whether a potential route of travel ascends or descends, look at the elevation numbers. If the route crosses contour lines marked with increasing elevations, the route goes uphill; conversely, if the elevation markers decrease, the route goes downhill.

**Scale:** Look to the margins of a map or to the map's key for its scale, which gives you information about the ratio between measurements on the map and the landscape's actual measurements. For example, one inch of map space may represent one mile across the land.



## Reading a Compass to Get a Directional Heading

Following a bearing refers to setting a bearing on the compass and then following that bearing along a line to the destination.



Turn the dial of the compass to the direction you want to go (for example, east is 90 degrees.) Turn your body until the red arrow lines up with the white outline underneath. Use the mirror to see the arrows. Sight over the top of the compass through the notch and find an object in the distance to walk towards to go in the desired direction.

For the test, you will need to be able to do this in reverse. If you are given a direction to walk, look in that direction while holding the compass in front of you. Then, using the mirror while holding the compass flat, turn the dial until the arrows line up. Then look at the compass face to see what direction you are facing.