Township Range Lab
GEOGRAPHY 137
FALL 97

If you would like to "run through" an interactive Township/Range Activity, before working through this Lab, then CLICK HERE.

A world-wide geographical grid of parallels and meridians has been introduced in an earlier exercise. It is the basis for the area constituting a USGS quadrangle. Using the grid of latitude and longitude, a map user can pinpoint any location on the earth.

Another type of system, one particularly useful to geographers is the United States Public Land Survey. This "township-range" system of land measurements is used in most areas of the US with principle exceptions in the original 13 states and Texas.

A. Using your copy of the Columbia, MO quadrangle, find the following locations on the map and fill in the blank with the correct township/range information.

1. Woodhaven Children's Home (south-central)
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2. Hickman High School (north city)
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3. Blue Ridge School (north-central)
   -----------------------------------------------

4. University Hospital
   -----------------------------------------------

B. Correct notation of the USPLS location of a parcel of land is written beginning with the most specific information to the most general:

Example: NE 1/4, SE 1/4, S.1, T5N, R3W is read: the northwest quarter of the southeast quarter of section one, tier five north, range three west.

1. Write in standard notation:

   "the northwest quarter of the southeast quarter of the southwest quarter of section six, tier twenty-seven north, range
ten east.

"the southern half of the southeast quarter of section thirty-six, tier twelve south, range fourteen west."

2. Correct the following: (when applicable, use any arbitrary notation that will make the description correct)

S.4, N 1/2, NE1/4, SE 1/4, R7E T6N

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NE 1/2, NW 1/4, S.42, R13N T48W

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C. Ideally, a township contains 36 sections. Beginning in the northeast corner, the sections are numbered beginning with 1, continuing to the left. One square mile contains 640 acres and ideally a section is one square mile.

1. In a typical township, what sections are in the four corners?

2. How many acres are in a quarter section?

3. How many acres are in the parcel described in B1?

4. If a township is imagined as being divided into quadrants, which quadrant contains:
   a. section 5?
   b. section 22?
   c. section 18?
   d. section 29?

D. The ruled graph area on the linked page (click here then print it out) represents a government survey township of 36 sections. Section lines appear as heavy lines. Division lines within each section are drawn as lighter lines. Answer all of the
following questions in terms of the township diagram. The USGS topographic symbols will aid you in using correct symbolization.

1. Number the sections of this township lightly.

2. Place a swamp in the SW 1/2 of section 20. __ [swamp]

3. Show a school in the NE 1/4 of section 6. __ [school]

4. Place a church in the NW 1/4 of the SE 1/4 of section 15. __ [church]

5. Draw a single track railroad following a straight course from the SW corner of section 7 to the NE corner of section 3. __ [railroad]

6. Draw a light duty road starting in the NE corner of section 24, extending SW for 2.5 miles, then due W until it leaves the diagram. __ [road]

7. Mr. Jones farm is found with this township and includes the following parcels of land:

    SE 1/4 of section 10
    all of sections 14, 23, 26, 27
    E 1/2 of the SE 1/4 of section 28
    SW 1/4 of SE 1/4 of section 29
    NE 1/4 of section 32
    S 1/2 of SW 1/4 of section 11
    N 1/2 of section 33

    a. Enclose Mr. Jones' farm area with a heavy black line and shade the areas with a green colored pencil.
    b. What is the total size of this farm in acres?
    c. How many miles of fence are needed to completely enclose Mr. Jones' farm?

Answers will be posted --> here <-- Wednesday afternoon.
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