

The file `Constellations.csv` contain a list of the 88 constellations in the sky. The 5 columns in the files are `Name`, `Symbol`, `RA of center`, `Dec of center`, `Flag`. The `Flag` column letters are Z = Zodiacal constellation, A = Ancient Name, M = Modern Name (after 1603).

1. List the Zodiacal constellation in order of increasing RA.
  2. List the constellations that are circumpolar as seen from Seattle ( $\theta = +47.6$ ).
  3. List the constellation that can **never** be seen from Seattle.
  4. What is the percentage of constellations, with  $\delta > 0$ , that have modern names?
  5. What is the percentage of constellations, with  $\delta < 0$ , that have modern names?
  6. What constellation is closest to the Zenith, as seen from Seattle, on midnight on the first day of Autumn?
  7. What constellation is closest to the north celestial pole?
  8. What constellation is closest to the south celestial pole?
  9. What time of year (approximate date) is the best time to observe Orion?
  10. What time of year (approximate date) is the best time to observe Andromeda?
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Write your answers to a plain text file (do not use WORD) and name it: `FirstLast_HW1.txt` .

For Example: `TobySmith_HW1.txt`

Copy this file to the class homework directory:

```
%cp FirstLast_HW1.txt ~pikaia/HOMEWORK/
```

**Deadline: Tuesday Jan 12 - 5pm (-10% for each 30 minutes late)**

If you want to update your answers just recopy with a new name (i.e. `TobySmith2_HW1.txt`).

As always, feel free to work with other people, but make sure to turn in your own assignment. Do not just turn in one group assignment.