

Assignment 1: Getting Started with GIS

Answers to these questions can be found in the course notes, in the guided tutorial, and / or online.

1. What is the difference between geographical information systems and geographical Information science? **2 marks**
2. What are the 3 basic spatial entities? How are these used to portray geographic features on paper maps and in a GIS? **5 marks**
3. Explain the differences between geographic and rectangular coordinate systems. What are their relative advantages and disadvantages? What is the location of the CN Tower, Toronto in a geographic coordinate system? **5 marks**
4. What is the coordinate system used on Canadian topographic maps. List any five Canadian land mark structures along with their geographical coordinates? **6 marks**
5. Topology is a special way of describing the geometric relationships between spatial entities. In a GIS we usually think of topology in terms of entity adjacency, containment, and connectivity. Draw simple diagrams to illustrate these 3 topological relationships. **5 marks**
6. What are Features and Attributes in the context of a GIS? **3 marks**
7. What are Layers and Feature Classes in the context of ArcGIS? **2 marks**
8. Describe the three primary functions of a GIS? **3 marks**
9. Describe the five steps of the Geographic Inquiry process? **5 marks**
10. In ArcGIS, what is the difference between a vector and a raster data? **3 marks**