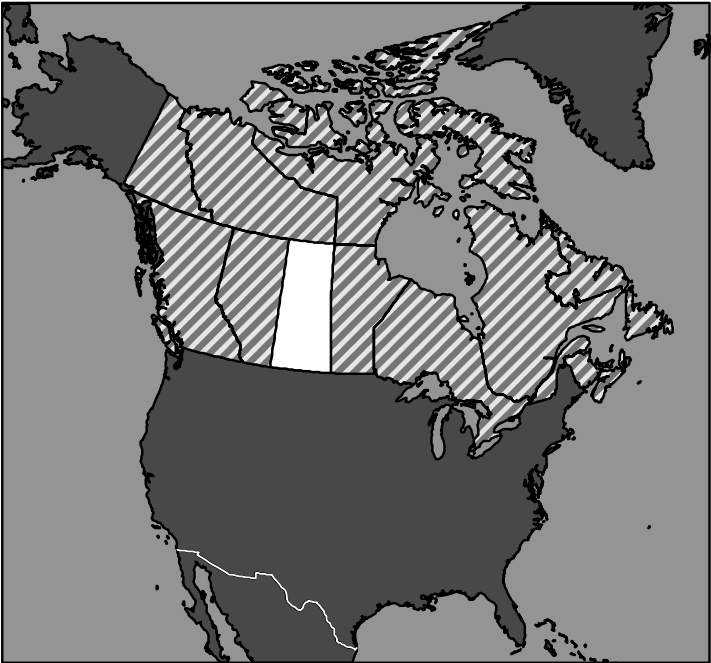
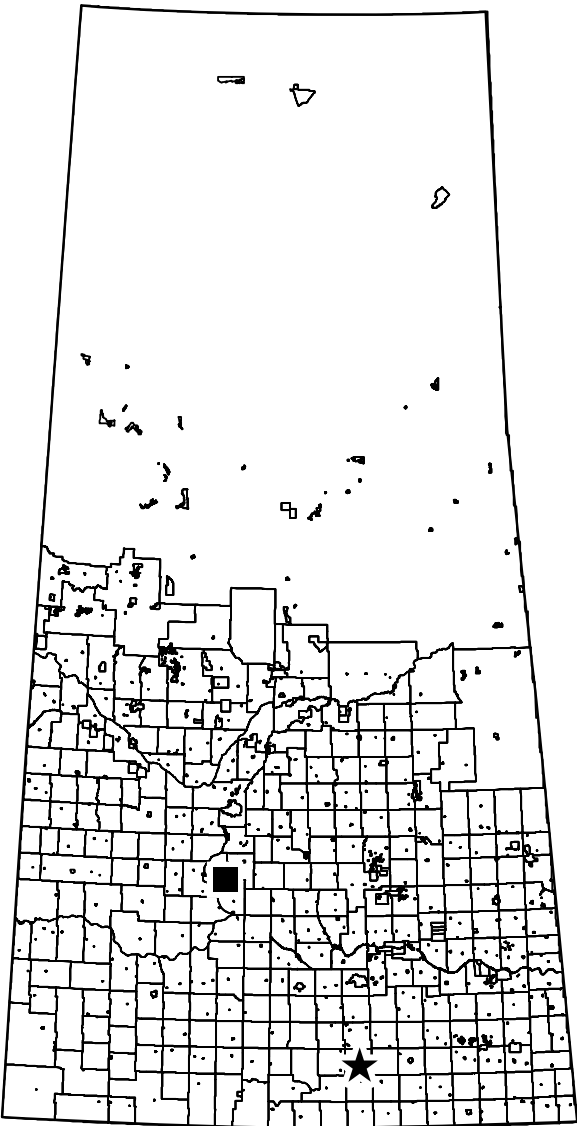


Map 1: Political Divisions in Saskatchewan, Canada



- Saskatchewan
- Other Canadian provinces and territories
- Other countries

0 100 miles

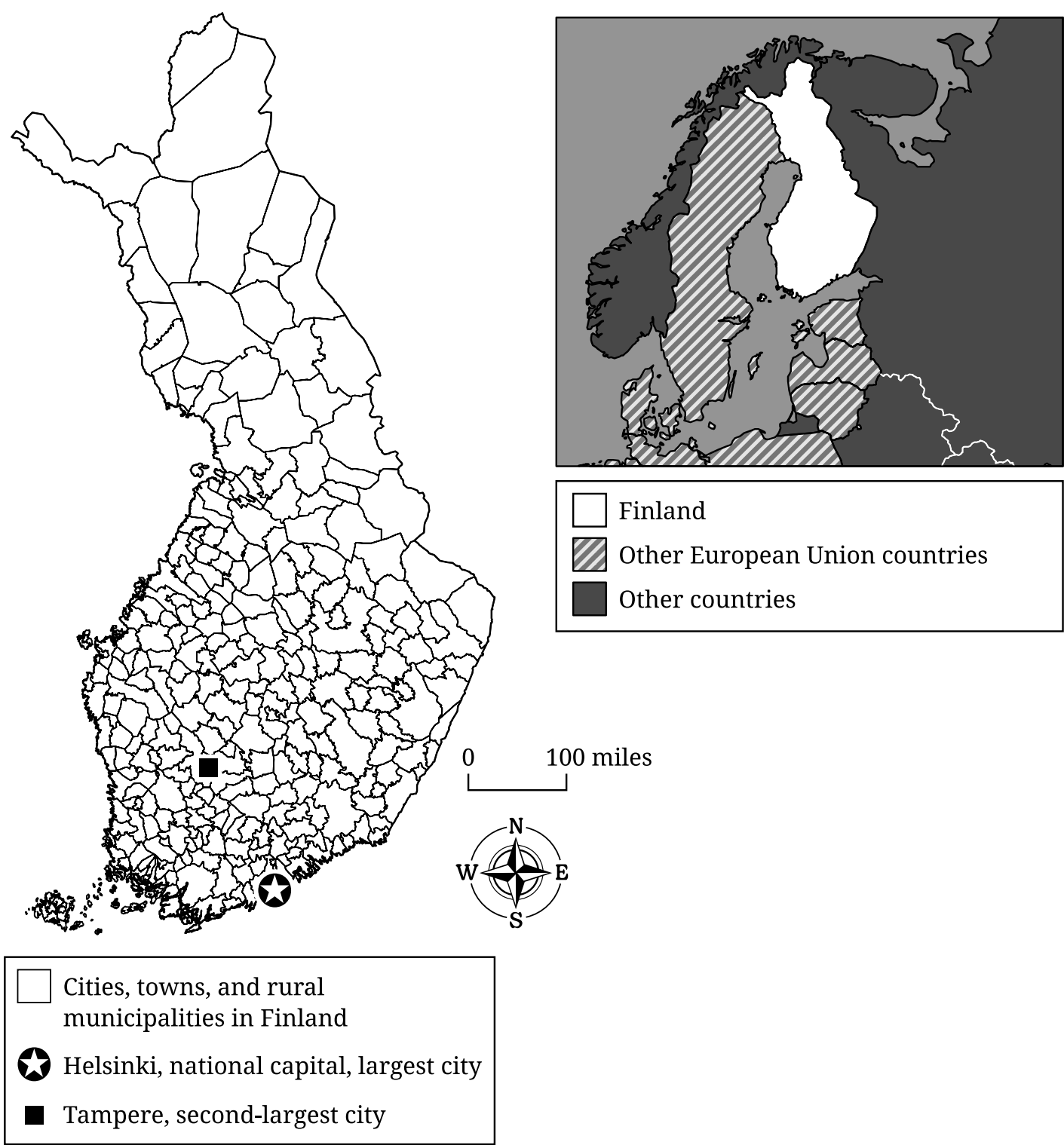


- Cities, towns, and rural municipalities in Saskatchewan
- ★

 Regina, provincial capital, second-largest city
- Saskatoon, largest city

Source: Statistics Canada

Map 2: Political Divisions in Finland



Source: ESRI Data Partners

3. The two maps show political boundaries in Saskatchewan, Canada, and in Finland. Both Finland and Saskatchewan are home to populations of indigenous peoples with a significant amount of political autonomy. Finland is a member state of the European Union.

Respond to parts A, B, C, D, E, F, and G.

- A. Identify the scale of analysis used for Finland's political divisions in Map 2.
- B. Define geometric boundaries as shown in Map 1.
- C. Describe one function of internal boundaries.
- D. Explain how the spatial organization of a country such as Canada is affected by a federal system of governance.
- E. Explain how the supranational organization shown in Map 2 may limit the actions of Finland as a member state.
- F. Describe one characteristic of a cultural landscape that may reflect cultural beliefs and identities.
- G. Explain how communication technologies may affect the cultural patterns of indigenous languages.

**STOP**

**END OF EXAM**

**SELECTED TECHNOLOGY RESEARCH AND DEVELOPMENT AREAS  
IN THE MEDICAL FIELD**

| Category               | Product or Service                                                                                                                                                                                              |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Biotechnology:</b>  | <ul style="list-style-type: none"><li>• Genetic engineering research</li><li>• Biochemistry research</li><li>• Diagnostic and testing science</li></ul>                                                         |
| <b>Gene therapies:</b> | <ul style="list-style-type: none"><li>• Cancer treatments</li><li>• Neurological treatments</li><li>• Rare and genetic disease treatments</li><li>• Antiviral treatments and vaccines (e.g., Moderna)</li></ul> |

3. Since the 1980s, the northeastern United States has developed into a major global center of high-technology industry that specializes in the medical field.
- A. Describe the spatial pattern of the companies and institutions shown in the inset map.
  - B. Describe the concept of a growth pole.
  - C. Explain ONE way education infrastructure affects a region's potential for high-technology development.
  - D. Explain how the pattern shown on the map resembles the galactic city model.
  - E. Explain ONE way local economic changes may be a result of deindustrialization.
  - F. Explain how the products and services listed in the table demonstrate that this economy has moved into the quaternary sector.
  - G. The map focuses on a regional scale. Explain a possible limitation of drawing country scale conclusions from a regional scale map.

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**Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.**

**STOP**

**END OF EXAM**

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