



2024 United States Geography Championships – Free Response Examination Scoring Guide

Section 1 - [20 points]

Use the image in section 1 to complete the following.

1. Identify the landforms indicated by numbers 1-5. [5 points]
2. Briefly describe the formation of a tarn lake in a glacial landscape. [4 points]
3. Identify whether each of these glacial landforms is caused by erosion or deposition – moraine, drumlin, fjord, ribbon lake, hanging valley [5 points]
4. Briefly define the term moraine and explain its formation. [6 points]

1. 1 – tarn; 2 – arete; 3 – corrie; 4 – hanging valley; 5 – u-shaped valley
2. A tarn is a small mountain lake that forms in the hollow left behind by a melted glacier
3. moraine – deposition; drumlin – deposition; fjord – erosion; ribbon lake – erosion; hanging valley – erosion
4. A moraine is a ridge or mound of rock, sand, and sediment that has been carried and deposited by a glacier.

Section 2 - [20 points]

Use the image in section 2 to complete the following. This image shows immigrant populations in the US by country of origin.

1. Rank these countries in order from largest number of immigrants living in the US to smallest – Iceland, Russia, China, Mexico, Australia [5 points]
2. Given the information in the table below, construct a graph that shows the number of immigrants living in the US from each of these countries. Make sure to label your graph clearly. [10 points]

Country	Brazil	UK	Iraq	Indonesia	Colombia
Immigrants in the US	518,000	674,000	256,000	106,000	818,000

3. Briefly explain THREE reasons why migrants might leave their home country to come to a place like the US. [3 points]
4. Briefly explain TWO factors that might explain why immigrants choose to settle in a particular city or region within the US. [2 points]

1. Mexico, China, Russia, Australia, Iceland
2. Graphs constructed for this part could take many forms. Points were awarded for readability, accuracy, and proper labeling.
3. Push factors like lack of jobs, persecution, violence, poverty, etc., or pull factors like job or educational opportunities, safety, freedom and liberty, family connections, etc.
4. Many of the pull factors like family connections (chain migration) or job or educational opportunities, along with existing communities from home countries, proximity to home countries, etc. can also play a part.

Section 3 - [15 points]

Use the images in section 3 to complete the following. The image on the left shows a satellite image of Florida. The image on the right shows the same area with a projected 5 foot sea level rise.

1. In the space provided, briefly explain why this area of South Florida is so vulnerable to sea level rise. [4 points]
2. Calculate the distance between points 1 and 2 on the second map. [2 points]
3. Briefly explain TWO ways that the US government, states or cities could protect against this type of climate disaster. [4 points]
4. Would New York City or New Orleans be more at risk for a sea level rise of this magnitude? Explain your choice in the space provided. [5 points]

1. Low elevation: much of this area sits only a few feet above sea level, so even small rises can lead to flooding; Porous limestone bedrock: this allows seawater to seep through the rock, not just over the surface, this makes it hard to block flooding with levees or seawalls; Flat coastal landscape: Because the land is very flat, rising water spreads inland easily, increasing the risk of storm surge, tidal flooding, and saltwater intrusion into drinking water supplies.
2. 50 miles (distances of +/- 7 miles were accepted)
3. Strengthen coastal defenses like seawalls and storm surge barriers; improve drainage and water management; elevate infrastructure and buildings; limit development in high-risk areas; plan long-term adaptation strategies like flood-resistant architecture and climate adaptation.

4. New Orleans is more physically vulnerable because of its low elevation and subsidence, while New York City is more economically and infrastructurally vulnerable because of its huge population and dense shoreline; students could justify either choice as correct with reasonable evidence.

Section 4 - [15 points]

Use the image in section 4 to complete the following.

1. Identify the geographic features that would be formed at 1 and 2 on the diagram. Identify the layers of the earth a 3 and 4 on the diagram. [4 points]
2. Is this diagram illustrating a divergent or convergent plate boundary? In the space provided, briefly explain the difference between convergent and divergent plate boundaries. [5 points]
3. Identify one area of the United States where a boundary like the one illustrated here exists. [2 points]
4. What type of fault is the San Andreas Fault that runs through much of California? What two plates meet at the San Andreas Fault? [4 points]

1. 1 – trench; 2 – volcanic arc; 3 – lithosphere, 4 – asthenosphere [1 point per answer]

2. convergent; Convergent plate boundaries are places where two tectonic plates move toward each other. This can cause mountains to form, one plate to sink under another (subduction), and powerful earthquakes or volcanoes. Divergent plate boundaries are places where two plates move away from each other. As they separate, magma rises to fill the gap, creating new crust—often forming mid-ocean ridges or rift valleys.

3. the Pacific Northwest

4. transform fault; Pacific and North American

Section 5 - [10 points]

1. In the space provided, discuss how developments in transportation have changed major cities in the US since 1950. In your answer you should reference public transportation, highways and interstates, and suburbs.

1. Since 1950, transportation developments have significantly transformed major U.S. cities. The most influential change was the construction of the Interstate Highway System, which connected cities nationwide and made automobile commuting faster and more convenient. Highways built into and around cities often led to the demolition of older neighborhoods, while also making it easier for people—especially middle-class families—to move to new suburbs. This contributed to rapid suburbanization and the decline of many urban cores.

Public transportation experienced mixed effects. In some cities, streetcar networks disappeared as buses and cars became dominant. Many transit systems lost funding and ridership as suburban areas expanded in ways that were difficult to serve with public transport. However, some cities later invested in new rail systems (like Washington, D.C.'s Metro or San Francisco's BART) in an attempt to reduce traffic congestion and revive downtown areas.

Overall, post-1950 transportation changes created more sprawling metropolitan regions, increased reliance on automobiles, and reshaped the economic and social patterns of American cities.

Answers will vary but should include details like those above. Generous partial credit awarded for incomplete or underdeveloped answers.