

Chief Reader Report on Student Responses: 2022 AP[®] Human Geography Set 2 Free-Response Questions

• Number of Students Scored	221,815		
• Number of Readers	796		
• Score Distribution	Exam Score	N	%At
	5	32,971	14.9
	4	41,463	18.7
	3	43,513	19.6
	2	33,260	15.0
	1	70,608	31.8
• Global Mean	2.70		

The following comments on the 2022 free-response questions for AP[®] Human Geography were written by the Chief Reader, Lisa Benton-Short, Professor of Geography at George Washington University. They give an overview of each free-response question and of how students performed on the question, including typical student errors. General comments regarding the skills and content that students frequently have the most problems with are included. Some suggestions for improving student preparation in these areas are also provided. Teachers are encouraged to attend a College Board workshop to learn strategies for improving student performance in specific areas.

Question 1

Task: Free-response Question without Stimulus

Topic: Women in the Formal and Informal Economy

Max Score: 7

Mean Score: 3.87

What were the responses to this question expected to demonstrate?

For content, Question 1 drew on two major units of the course: Industrial and Economic Development and Patterns and Processes, and Population and Migration Patterns and Processes. For skills, it focused on Skill Categories 1 and 2: Concepts and Process, and Spatial Relationships. One section required use of Skill Category 5 Scale Analysis.

Part A asked that students use the skill of describing a geographic concept to define the informal economy. part B moved to have students describe a relevant geographic concept in a specified context, in this case, describing cultural attitudes or social norms in the context of obtaining employment in the formal economy.

In part C students needed to explain a limitation of the theory of gross national income in a specified context, with the context being how well women’s contributions to economic productivity in less developed countries were reflected in GNI. Part D challenged students to explain spatial relationships in a specified region of the world (less developed countries) using geographic concepts (2.B), and the content was the relationship between women’s economic empowerment and the rate of natural increase (IMP-2.A.2).

In part E students were required to explain a likely outcome in a geographic scenario using geographic processes (2.C). The process was rural-to-urban migration and the geographic scenario was as women gained greater access to education. The corresponding EK was SPS-2.B.2 which includes changing social roles for females have influenced patterns of migration, as illustrated by Ravenstein’s laws of migration.

Part F asked students to use the same skill as in part E but changed the scenario to obstacles faced by highly educated women in the formal economy. The content connection was to SPS-7.D.2 which focuses on wage equity and employment opportunities for women.

Part G jumped to a scale analysis skill: explain the degree to which a geographic concept (microloans) effectively explains geographic effects across various geographic scales. In this section, students were asked to explain how microloans (from EK SPS-7.D.3) given to individual women can impact economic development at the country scale. A large majority of students did not seem to recognize the need to “explain the degree to which” in this question.

Overall, the seven parts of this question challenged students to be able to describe and explain women’s working conditions in formal and informal economies throughout the world, whether in developing or developed countries and whether or not the women themselves are educated. Within this discussion they needed to demonstrate an understanding of measures of economic development (GNI) and measures used to understand population change (rate of natural increase). Students also needed to show relationships between concepts (e.g., economic empowerment leads to jobs; jobs lead to lower birth rates) which demanded an ability to synthesize content.

How well did the responses address the course content related to this question? How well did the responses integrate the skills required on this question?

Student responses addressed content regarding cultural attitudes and social norms for women, the relationship between women’s economic empowerment and the rate of natural increase, the relationship between women’s education and rural-to-urban migration, and likely obstacles for highly educated women employed in the formal economy. While the responses were relatively strong on these aspects of the content, responses were less strong in terms of defining the informal economy, how the gross national income is determined, and how microloans can impact a country’s level of economic development. Many responses reflected knowledge of microloans but did not reflect the higher-level thinking required to connect microloans at the individual level to how these microloans together might impact a whole country’s level of economic development. Specifically, parts A, C, and G were the lowest scoring part of this question. It is surprising that part A was a lower scoring part because it had an emerging-level task (define). In parts C and G, many students did not provide a thorough explanation.

Regarding the skills, responses were varied in their demonstration of the skills. Skill 5.D, which is an “explain the degree to which” skill was problematic. Students often did not state, either in specific or general language, the “degree to which” aspect of this skill. The second most problematic skill was Skill 1.E, which requires students to explain a limitation of a geographic theory, which in this case was a measure of development, specifically gross national income. The other skills of this question, which were all in Concepts and Processes and Spatial Relationships, were less problematic than “explain the degree to which” or “explain a limitation.” In parts D, E, F, and G, the task verb includes “explain.” When the task verb involves explain, responses should be well-formulated and generally should be more than one sentence.

What common student misconceptions or gaps in knowledge were seen in the responses to this question?

<i>Common Misconceptions/ Knowledge Gaps</i>	<i>Responses that Demonstrate Understanding</i>
<ul style="list-style-type: none"> Part A: students commonly incorrectly defined informal economy as “the government runs the economy; informal economies only occur in less developed countries; informal economies consist only of primary jobs; the informal economy does not involve high income jobs; the informal economy includes jobs that pay very low wages; informal economies have different employment for men and women.” 	<ul style="list-style-type: none"> Part A: responses that earned a point defined the informal economy as not controlled or regulated by the government, so it includes untaxed jobs and illegal economic activity.
<ul style="list-style-type: none"> Part C: often students did not understand how the gross national income (GNI) per capita is configured. This included not knowing that the informal economy does not impact the GNI. 	<ul style="list-style-type: none"> Part C: responses that earned a point described how contributions from women are in the informal market. Additionally, GNI per capita does not account for gender differences, as the GNI does not break down whether the income comes from men or from women.

<ul style="list-style-type: none"> • Part D: students did not always understand the concept of natural increase rate (RNI). In addition, some did not understand that many women in a formal economy choose jobs and careers over having children. Lastly, students often provided a relationship between increased empowerment and total fertility rate (TFR) rather than RNI. 	<ul style="list-style-type: none"> • Part D: those responses that earned a point explained that highly educated women working more in the formal economy or paid labor force may lead to these women having fewer children, which lowers the RNI; also, when women have more access to contraceptives and family planning, allowing them to choose paid employment.
<ul style="list-style-type: none"> • Part E: students would state that women are moving to urban areas for jobs or education. Others explained that women are already educated in rural areas and migrate to urban areas, but they did not give a reason for the migration. 	<ul style="list-style-type: none"> • Part E: effective responses explained that women increasingly move to urban areas for jobs and education.
<ul style="list-style-type: none"> • Part F: many student responses discussed a gender wage gap as a barrier to women obtaining employment rather than an obstacle, which occurs after women are employed. Further, there was a perception that parts B and F were the same question and, therefore, responses were repetitive: women cannot work, so they have to stay at home. 	<ul style="list-style-type: none"> • Part F: students who performed well explained that women are prohibited from acquiring a job in the formal market by traditional views of being the homemaker and providing childcare.
<ul style="list-style-type: none"> • Part G: a majority of responses did not provide a statement or indication of the “degree to which” granting microloans to individual women in less developed countries may be an effective strategy for economic development. These responses limited their explanations to the concept of microloans (helps women start businesses); therefore, they did not earn the point. 	<ul style="list-style-type: none"> • Part G: quality responses were able to explain that granting women microloans is a highly effective strategy for economic development within less developed countries. Microloans to women in LDCs are intended to help women develop small businesses. As these small businesses grow, regional economic development is expected to occur.

Based on your experience at the AP Reading with student responses, what advice would you offer teachers to help them improve the student performance on the exam?

- Create lessons on gender throughout the course. Gender is a topic that appears throughout multiple units of the course, including population, culture, and economic development. This question demonstrates the necessity of students engaging with geographic content regarding gender multiple times throughout the course. In addition, case studies on gender can enhance students’ ability to synthesize information about this topic, as with any topic.
- Teach concepts, such as barriers, obstacles, and limitations. For example, explaining limitations is part of three APHG skills: 1.E, 3.F, and 4.F. Meanwhile, an example of obstacles in the APHG content

is found in EK IMP-2.C.2 regarding migration. Lastly, a barrier is a concept that should be understood by students in APHG.

- Emphasize vocabulary. Students' entry point into each section of the question was based in vocabulary from the Course and Exam Description. An understanding of informal economy, gross national income (GNI), rate of natural increase, and microloans were all necessary for success on this question. Equal to vocabulary are geographic processes, such as rural-to-urban migration.
- Encourage students to label the sections of the questions (A, B, C, D, E, F, and G) as it makes it much easier for the reader to see the earned points.
- Teach the difference between "describe" and "explain." Reinforce that "describe" must include a rich description, and "explain" must encompass how and/or why. Restating the question prompt does not count towards earning a point.
- Teach students how to effectively "explain the degree to which." In order to earn the part G point (the degree to which) students must indicate whether it is a high or low degree and then support that with an explanation. Like other aspects of the course, when students see a skill demonstrated more than once and on a continual basis, they will gain fluency with that skill. Back up the demonstrations with free-response questions that are scored by you and/or by students, which include "explain the degree to which." Search AP Classroom for questions that are based on Skills 2.E and 5.D in order to show and use examples that match these skills as they appear on the APHG exam.
- Teach limitations of geographic data: In this question, teach not only what general economic measures are (e.g., gross national income or GNI) but also what limitations are inherent in each. For example, after introducing a concept, such as GNI, ask a question like, "What does this measure NOT tell us?"
- Encourage students to provide examples even if the prompt does not require examples. This technique can help to clarify students' overall understanding. Part E does not specifically say "and provide an example." The explanation in E might be: "Women are likely to move from rural to urban areas to seek job opportunities, contributing to an increase in rural-to-urban migration." An example that clarifies that explanation might be: "Young women in rural areas, mostly teenagers, are being recruited to work in factories in India's megacities in order to meet the global demand for products made in the factories located in the urban area."

What resources would you recommend to teachers to better prepare their students for the content and skill(s) required on this question?

- The Course and Exam Description provides a section on "Developing the Course Skills" on pages 143–151. This section provides examples of questions and instructional strategies for incorporating the course skills into classroom instruction.
- The following resources are available in AP Classroom to provide instructional support for a free-response question on the topic of "Women in the Formal and Informal Economy":
 - Unit 7 addresses topics relating to "Women and Economic Development" and includes resources, such as AP Daily videos and topic questions that serve as formative assessment tools.
 - There are 15 AP Daily videos that cover every Topic within Unit 7.
 - There is also a Unit 7 University Faculty Lecture that explains the different classifications of economic development on national, regional, and global scales.
 - AP Classroom contains review videos for both 2022 and 2021 that have helpful information for students and that review key concepts, theories, and skills.
 - Specifically, AP Live Review Session 7 "Common Mistakes and Misunderstandings," AP Live Review Session 3 "Spatial Relationships with Emphasis on Geographic Patterns," and AP Live Review Session 6 "Honing Scale Analysis Skills" could be

useful videos as they show students examples of common mistakes made on the AP exam and how to succeed with spatial relationships and scale analysis type questions. These videos may be accessed in AP Classroom under the “Review” tab.

- AP Classroom has Progress Checks for each unit that includes free-response questions and scoring guidelines that will allow students to practice the required skills needed to successfully answer an AP Human Geography free-response question.
- The Question Bank within AP Classroom contains examples of AP exam questions, both multiple-choice questions and free-response questions, that can be used to assess student understanding and allow for further practice of the required skills.
 - Using AP Classroom, teachers may assign multiple-choice questions and free-response questions specific to Skills 2.E and 5.D in the Question Bank feature. These skills can be selected in the “Skill Category and Skill” tab located within the Question Bank tab.
- Additional classroom resources with links to articles relating to AP Human Geography and pedagogy can be found on AP Central here: <https://apcentral.collegeboard.org/courses/ap-human-geography/classroom-resources?course=ap-human-geography>
- The Online Teaching Community (OTC) for AP Human Geography Community is another great resource as it includes materials and resources posted not only by the College Board but also by other teachers. The link is here: <https://apcommunity.collegeboard.org/web/aphumangeo>

Question 2

Task: Free-response Question with One Stimulus

Topic: Forest Cover Change for Selected Countries

Max Score: 7

Mean Score: 2.79

What were the responses to this question expected to demonstrate?

This question was expected to demonstrate students' abilities across several aspects of the course, requiring students to draw from two units of the course—agriculture and economic development. In terms of skills, responses required students to make use of four skill areas, with Skill Category 3 Data Analysis used the most.

In part A responses required students to describe one reason why forest cover may change. While many students responded by describing forest cover loss, fewer students realized that in some countries forest cover had increased.

In part B responses required students to use data analysis to compare patterns in quantitative data to draw a conclusion, again with content from environmental consequences of land cover change.

In part C students were expected to explain trends (the global trend) in quantitative data to draw a conclusion about environmental consequences of land cover change. In this case, students needed to explain the global trend line in the graph (rather than a generalized global trend), explain whether the global forest cover has remained steady or has declined slightly and provide an explanation for that trend that speaks to both forest cover gain and loss.

In part D students needed to explain the degree to which a geographic model, in this case Wallerstein's world system theory, effectively explains geographic effects in different regions of the world. The different regions in this case were core, semi-periphery, and periphery countries. Many students were unable to indicate the degree to which Wallertstein's world system theory explained forest cover change in different regions of the world.

In part E students were expected to demonstrate the ability to explain what data implies about geographic principles. In this section, the focus was on what the data shown implies about sources of energy in less developed countries. In other words, what does the type of energy use say about levels of development? In part F students were asked to move to Skill Category 5 Scale Analysis to explain spatial relationships across various geographic scales using geographic concepts. The geographic scales in this section were global demand and local changes while the geographic concept was land cover change (i.e., changes in forest cover). Students who focused their answers on soybeans or beef did better than those students that focused on palm oil, revealing some misconceptions about the relationship between palm oil and forest cover change.

In part G students were challenged to shift back to Skill Category 2 Spatial Relationships to explain a likely outcome (a consequence of forest cover change) in a geographic scenario (more developed countries) using geographic concepts (environmental sustainability). Students were generally successful in linking environmental sustainability to forest cover change.

The seven parts of this question combined to ask students to complete data analysis as they interpreted a graph showing forest cover as a percentage of total land area from 1990 to 2015 for selected countries and the world. In addition to interpreting the graph, students were asked to explain reasons for the forest cover change, both when forest cover change increased as well as when it decreased. Further, they were asked to

apply world system theory to the trends seen in the graph. Lastly, they needed to be able to explain how global demand for one of three commodities (palm oil, soybeans, or beef) drives change in forest cover at the local scale, which was not shown in the graph. Thus, they needed to apply economic understanding within the context of environmental sustainability.

How well did the responses address the course content related to this question? How well did the responses integrate the skills required on this question?

Students performed effectively in part A, E and G. However, parts of the question based on data analysis skills were weaker areas of the responses, particularly in the ability to use data from the graph.

Both parts B and C required students to use the data shown in the graph, which was the stimulus for the question. Most students could describe the trend but not support the trend with evidence, which is required for both the “compare” and “explain” task verbs. Thus, answers did not rise to the level expected for explain or compare patterns and trends in quantitative data to draw conclusions.

In part D students were expected to apply Wallerstein’s world system theory to explain changes in the pattern of forest cover since 1990. However, while it was evident that students generally knew about Wallerstein’s world system theory, many struggled to “explain the degree to which” Wallerstein’s theory explained the changes in the pattern of forest cover since 1990. Some students confused Wallerstein’s world system theory with the theories of Malthus or Rostow.

What common student misconceptions or gaps in knowledge were seen in the responses to this question?

<i>Common Misconceptions/ Knowledge Gaps</i>	<i>Responses that Demonstrate Understanding</i>
<ul style="list-style-type: none"> Part B: students often did not use data from the graph in their answer, meaning that they did not use countries depicted in the graph or use specific numbers from the graph to illustrate and argue their point. 	<ul style="list-style-type: none"> Part B: students that earned a point correctly compared how developing countries, such as Honduras and Indonesia, lost forest cover while developed countries like Germany and Japan remained stable or slightly increased forest cover. <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> Compared the fact that developing countries lost forest cover while developed countries remained stable or slightly increased forest cover. For example, Honduras changed from over 70% to approximately 40% forest cover, while Germany remained relatively stable at approximately 30% forest cover.
<ul style="list-style-type: none"> Part C: students often did not describe or summarize the global trend seen in the graph. At times, they also did not describe how both more developed and less developed countries are contributing to the trend. In other words, they described the global trend as being impacted by only one of these two types of countries. 	<ul style="list-style-type: none"> Part C: students that performed well on this part explained that global forest cover has remained steady or has declined only very slightly because forest cover losses in some regions or countries have been offset or mitigated by forest cover gains in other regions or countries.

<ul style="list-style-type: none"> • Part C: many students assumed global tree cover was declining because of continuous, unchecked deforestation worldwide because of growing populations and increasing levels of development. 	<ul style="list-style-type: none"> • Part C: responses that did earn a point in part C were able to explain that global forest cover is pretty stable because while there are areas that continue to decrease their forest cover due to deforestation for agriculture, there are conscious conservation efforts in other regions of the world that are mitigating the overall trend and improving sustainability.
<ul style="list-style-type: none"> • Part D: many students did not convey the “degree to which” Wallerstein’s world system theory explains changes in the pattern of forest cover since 1990. Students need to indicate a high or significant degree, a moderate degree, or a slight or no degree; or, students need to use a quantifying adjective or expression that connotes the same idea as one of the levels of the “degree to which.” 	<ul style="list-style-type: none"> • Part D: quality responses explained that the degree to which Wallerstein’s world system theory explains the pattern of forest cover since 1990 is high. This theory states that production and extraction in peripheral and semiperipheral countries support the core, which explains why countries, such as Honduras, Brazil, and Indonesia, are decreasing in forest cover and countries, such as Germany, the United States, and Japan, are not. Conversely, other students who performed well indicated that Wallerstein’s world system theory explains changes to a low degree because this theory does not account for international agreements, efforts, or programs to protect forest cover in developing countries.
<ul style="list-style-type: none"> • Part E: some students thought high levels of forest cover in less developed countries in the 1990s meant that they were NOT taking advantage of their resources for energy OR thought that trees had to be cleared in order to access fossil fuels under the ground beneath the trees. 	<ul style="list-style-type: none"> • Part E: many students earned a point explaining that the data in the chart indicates that less developed countries rely more heavily on wood for heating and cooking rather than electricity produced by other non-wood and/or more sustainable means.
<ul style="list-style-type: none"> • Part F: many students thought deforestation is done to harvest palm oil from trees within the forest rather than replacing the forest with oil palm plantations so that palm oil can be extracted from plantation trees. 	<ul style="list-style-type: none"> • Part F: student responses that earned a point explained that because there is high or growing global demand for palm oil used in foods and for other purposes, forests in some countries are being destroyed and replaced with oil palm plantations.

Based on your experience at the AP Reading with student responses, what advice would you offer teachers to help them improve the student performance on the exam?

- The topic of sustainability is an underlying course theme that connects across all units. Sustainability provides the foundation for this entire question, and is not simply part of part G, which asks specifically about environmental sustainability. For example, in Unit 1 of the course in Topic 1.5 on Human Environmental Interaction, sustainability is introduced. A lesson synthesizing a discussion of types of maps and geospatial technologies, how satellite imagery is used, and sustainability concepts draws on student interest and allows them to see how human geography will connect to environmental topics. Then, as the course progresses, specific topics of sustainability issues, such as deforestation, can be reemphasized in the agriculture unit.

- Examine the verbiage of all the skills in the Course and Exam Description (page 14) and working to add as many of those skills to multiple-choice and free-response questions as you can. Students need practice with all of the skills. Use the skills page to design seven-part free-response questions. Notice that this question alone was based on seven different skills across four skills categories. One specific strategy is to print out page 14 to use as you design questions for your classroom. Which skills are targeted? Highlight them on your printout. Show this to students as you give them feedback after scoring a free-response item. As students gain content knowledge and fluency with the skills, be certain to utilize skills at the bottom of each skill category column as those are the ones with “explain the degree to which” and other more challenging skills. Even giving students a copy of page 14 is a handy instructional tool.
- Teach the difference between “describe” and “explain.” Reinforce that “describe” must include a rich description, and “explain” must encompass how and/or why. Restating the prompt does not count towards earning a point.
- Teach students to analyze data: parts of the question based on data analysis skills were weaker areas of the responses, particularly in the ability to use data from the graph. Thus, it is recommended that when using AP Classroom, search for questions that utilize skills from Skill Category 3 Data Analysis (3.A, 3.B, 3.C, 3.D, 3.E, and 3.F). Practice with students on all forms of data analysis, from identify and describe to explain and compare, and finally to explain possible limitations. Another effective way to practice data analysis is with bellringers, if you use them. Use a bellringer graph to walk students through the data analysis skills from A–F. Also, have chats with your math colleagues to see if they have recommendations about teaching data analysis or ask them what it looks like in their classrooms.

What resources would you recommend to teachers to better prepare their students for the content and skill(s) required on this question?

- The Course and Exam Description provides a section on “Developing the Course Skills” on pages 143–151. This section provides examples of questions and instructional strategies for incorporating the course skills into classroom instruction.
- The following resources are available in AP Classroom to provide instructional support for an free-response question on the topic of “Forest Cover Change for Selected Countries” and the concept of “sustainability”:
 - Unit 5 addresses topics relating to “Agriculture and Rural Land-Use Patterns and Processes” and includes resources, such as AP Daily videos and topic questions that serve as formative assessment tools.
 - There are 18 AP Daily videos that cover every Topic within Unit 5.
 - There is also a Unit 5 University Faculty Lecture that explores research in Burkina Faso regarding food security
 - AP Classroom contains review videos for both 2022 and 2021 that have helpful information for students and that review key concepts, theories, and skills.
 - Specifically, AP Live Review Session 7 “Common Mistakes and Misunderstandings” and AP Live Review Session 4 “Everything You Need to Know About Data Analysis” could be useful videos as they show students examples of common mistakes made on the AP exam and how to succeed with data analysis type questions. These videos may be accessed in AP Classroom under the “Review” tab.
 - Other topics within the Course and Exam Description touch on the concept of “sustainability,” and the corresponding sections within AP Classroom contain additional resources that teachers may find useful:
 - Topic 1.5: Human-Environmental Interaction

- Topic 6.8: Urban Sustainability & Topic 6.11: Challenges of Urban Sustainability
 - Topic 7.8: Sustainable Development
- AP Classroom has Progress Checks for each unit that includes free-response questions and scoring guidelines that will allow students to practice the required skills needed to successfully answer an AP Human Geography free-response question.
- The Question Bank within AP Classroom contains examples of AP exam questions, both multiple-choice questions and free-response questions, that can be used to assess student understanding and allow for further practice of the required skills.
 - Using AP Classroom, teachers may assign multiple-choice questions and free-response questions specific to Skills related to Skill Categories 2, 3, and 5 in the Question Bank feature. These skills can be selected in the “Skill Category and Skill” tab located within the Question Bank tab.
- Additional classroom resources with links to articles relating to AP Human Geography and pedagogy can be found on AP Central here: <https://apcentral.collegeboard.org/courses/ap-human-geography/classroom-resources?course=ap-human-geography>
- The Online Teaching Community (OTC) for AP Human Geography Community is another great resource as it includes materials and resources posted not only by the College Board but also by other teachers. The link is here: <https://apcommunity.collegeboard.org/web/aphumangeo>

Question 3

Task: Free-Response Question with Two Stimuli

Topic: Cultural and Political Differences in Northern Ireland

Max Score: 7

Mean Score: 2.86

What were the responses to this question expected to demonstrate?

Students were expected to interpret a map of the Republic of Ireland and the United Kingdom and a second map of West Belfast showing peace lines and neighborhoods to explain cultural, political, and economic geographical factors. Thus, it was a two-stimuli question. Specifically, the question used 1) a map showing the political boundaries of the two states of the Republic of Ireland and the United Kingdom of Great Britain and Northern Ireland (the map also showed the four constituent parts of the U.K. as well as major cities) and 2) a map of West Belfast at the neighborhood scale showing the central business district (CBD) and residential neighborhoods, which neighborhoods were mainly Catholic in population, mainly Protestant, or were integrated, and peace lines constructed to separate neighborhoods.

In part A students were asked to identify different types of information presented in visual sources by noting a type of cultural difference shown on Map 2. Part B focused on the student's ability to describe a relevant geographic concept in a specified context, in this case describing a multinational state in the context of the United Kingdom. Students had more difficulty with this part than we expected, given that the task was to "describe."

In part C students were expected to explain a benefit of devolution for Northern Ireland. In part D students were expected to explain one way the cultural pattern shown on Map 2: Neighborhoods in West Belfast, may act as a centrifugal force within Belfast. In this question students were asked to take two steps: be able to correctly define/identify what is meant by the concept "centrifugal," and then apply it to the spatial patterns found on Map 2.

In part E students needed to explain how Map 2 reflects Hoyt's sector model of urban form. Part F challenged students to explain a likely outcome in a geographic scenario using a geographic concept, by explaining why peace lines in urban areas may cause migration within a city. While there were a number of different answers, many students earned points in this part by answering that people of one religious group might be separated from other members of their group by a peace line and would move to be on the side with members of their group.

In part G students were asked to explain possible limitations of visual sources provided by explaining the limitation of Map 1 to describe the political conflict on the island of Ireland. Along with part A, this was the part of the question that students were most successful. While there were a number of possible correct answers, many students explained that the scale of Map 1 was too broad to be able to examine the island of Ireland in detail.

Combined, the seven parts of the question utilized skills from three of the five APHG skills categories, namely Concepts and Processes, Spatial Relationships, and Source Analysis. Meanwhile, students were expected to demonstrate knowledge from three different units of the course: Unit 3: Cultural Practices and Processes, Unit 4: Political Patterns and Processes, and Unit 6: Cities and Urban Land Use Practices and Policies.

How well did the responses address the course content related to this question? How well did the responses integrate the skills required on this question?

Overall, students were able to read the cultural landscape patterns presented on the map but were less able to explain how the cultural patterns on the map could represent centrifugal forces on the ground, which could lead to or perpetuate sectarian division and/or conflict. Parts A and G were where students performed the strongest.

Parts A and B had two of the easier skills (identify and describe), and many responses were able to meet the standard adequately for these task verbs. Part A was the easiest part of the question, and most students correctly identified a type of cultural difference (religious or sectarian difference or Catholic and Protestant).

Part B tasked students to describe the concepts of a multinational state; however, many students had trouble differentiating a nation (i.e., a cultural group of people with a shared history, culture, and/or values) from a state (e.g., an internationally recognized sovereign territory); they often conflated the two. Students also had trouble differentiating the concept of a nation from the U.K. constituent parts (i.e., the English are a nation while England is a constituent part of the U.K.).

Part C focused on the impact of devolving control from a central government to a regional assembly (PSO-4.B.2). While students did reasonably well on this part, a significant number of responses conflated devolution with sovereignty, that is, devolution would allow Northern Ireland to become independent or to unite with the Republic of Ireland (whereas devolution is a strategy used by the state to try meet concerns of regions and to discourage movements towards independence).

In part E, while oftentimes students could explain the Hoyt sector model, they had trouble applying it to discuss the distribution of Catholic and Protestant neighborhoods in West Belfast. In part F, students had an easier time explaining how peace lines could influence migration within the city.

Part D asked students to explain patterns and trends in visual sources to draw conclusions. In this case, students were asked to explain how the patterns in Map 2 might act as a centrifugal force. While students could correctly define “centrifugal,” many had trouble explaining and drawing conclusions about how that concept might impact the patterns found in Map 2. Some students did not earn a point because they did not understand the “centrifugal” concept. Others did not earn a point because while they understood the concept of “centrifugal,” they did not apply it to the spatial patterns found on Map 2 (i.e., they applied it in a non-spatial context).

Part F asks about migration *within* a city rather than *to* a city or *to or from elsewhere*. The most common way that students missed this part was to not read the question carefully enough. Many students missing this question talked about urban to rural, rural to urban, or Northern Ireland to/from Ireland migration, rather than migration within a city.

In part G, most students correctly identified why this map was not appropriate or useful to describe the conflict. Students did well in this part of the question.

What common student misconceptions or gaps in knowledge were seen in the responses to this question?

<i>Common Misconceptions/ Knowledge Gaps</i>	<i>Responses that Demonstrate Understanding</i>
<ul style="list-style-type: none"> Part B: many students did not understand the difference among a state, nation, and multinational state and that political divisions to do always equate to separate nations (e.g., Scotland does not necessarily equate to the Scottish people). 	<ul style="list-style-type: none"> Part B: responses that earned a point described the United Kingdom as populated by multiple different cultural groups of people or nations. Examples include people who see themselves as part of an English, Scottish, or Welsh nation, as well as some people in Northern Ireland who may see themselves as part of an Irish nation.
<ul style="list-style-type: none"> Part C: many students did not understand that devolution, in and of itself, does not necessarily lead to sovereignty. 	<ul style="list-style-type: none"> Part C: responses that earned a point explained that devolution provides Northern Ireland with a degree of autonomy from the United Kingdom, giving Northern Ireland more power to govern themselves while still remaining within the United Kingdom.
<ul style="list-style-type: none"> Part D: many students did not know that centrifugal forces are forces that divide while centripetal forces are forces that unite 	<ul style="list-style-type: none"> Part D: quality responses explained that peace lines may act as centrifugal forces within Belfast as they may emphasize or reinforce sectarian and/or class-based divisions and/or conflicts.
<ul style="list-style-type: none"> Part E: many students could not apply the Hoyt sector model. 	<ul style="list-style-type: none"> Part E: responses that earned a point explained that the Catholic and Protestant neighborhoods form separate V-shaped sectors that extend or radiate from the central business district and the harbor.

Based on your experience at the AP Reading with student responses, what advice would you offer teachers to help them improve the student performance on the exam?

- Emphasize vocabulary. Students' entry point into each section of the question was based in vocabulary from the Course and Exam Description. An understanding of multinational state, devolution, and centrifugal force were all necessary for success on this question. Use case studies from human geography textbooks to focus students on specific regions of the world where the concepts of multinational states, devolution, and centrifugal forces are at work.
- Have students practice describing spatial patterns. They can begin by describing spatial patterns in places that are familiar to them—in their classrooms, schools, and community—and then work to build skills to describe spatial patterns in places less familiar and in an array of maps. This is a skill to practice from the beginning until the end of the course.
- Teach the difference between “describe” and “explain.” Reinforce that “describe” must include a rich description and “explain” must encompass how and/or why. Restating the prompt does not count towards earning a point.

- Work with students on exam taking strategies:
 - Make sure that students know to bubble in correctly at the top of the page which free-response question they are responding to on that page. Doing so helps to ensure correct scoring of their response.
 - Work with students on time management during the free-response portion of their exam. Practicing with free-response questions in the allotted time from the beginning of the year helps to build fluency in the kind of timed, structured writing necessary to be successful on the APHG free-response questions.

What resources would you recommend to teachers to better prepare their students for the content and skill(s) required on this question?

- The Course and Exam Description provides a section on “Developing the Course Skills” on pages 143–151. This section provides examples of questions and instructional strategies for incorporating the course skills into classroom instruction.
- The following resources are available in AP Classroom to provide instructional support for a free-response question on the topic of “Cultural and Political Differences in Northern Ireland”:
 - Unit 3 addresses topics relating to “Cultural Patterns,” Unit 4 addresses topics related to “Political Patterns and Processes,” and Unit 6 addresses topics related to “Cities and Urban Land-Use Patterns and Processes,” and all three include resources, such as AP Daily videos and topic questions that serve as formative assessment tools.
 - There are 17 AP Daily videos that cover every Topic within Unit 3.
 - There are 16 AP Daily videos that cover every Topic within Unit 4.
 - There are 18 AP Daily videos that cover every Topic within Unit 6.
 - There is also a Unit 3 University Faculty Lecture that analyzes cultural landscapes using monuments in Mexico City as a case study, a Unit 4 University Faculty Lecture that explores the use of humor as it relates to geopolitics, and a Unit 6 University Faculty Lecture that explains the use of public space and the urban cultural landscape of Washington D.C.
 - AP Classroom contains review videos for both 2022 and 2021 that have helpful information for students and that review key concepts, theories, and skills.
 - Specifically, AP Live Review Session 7 “Common Mistakes and Misunderstandings” and AP Live Review Session 5 “Source Analysis with Special Focus on Landscapes” could be useful videos as they show students examples of common mistakes made on the AP exam and how to analyze and interpret geographic information represented in maps and other visual sources. These videos may be accessed in AP Classroom under the “Review” tab.
 - AP Classroom has Progress Checks for each unit that includes free-response questions and scoring guidelines that will allow students to practice the required skills needed to successfully answer an AP Human Geography free-response question.
 - The Question Bank within AP Classroom contains examples of AP exam questions, both multiple-choice questions and free-response questions, that can be used to assess student understanding and allow for further practice of the required skills.
 - Using AP Classroom, teachers may assign multiple-choice questions and free-response questions specific to Skills 2.B, 2.C, 4.A, 4.C, 4.E, and 4.F in the Question Bank feature. These skills can be selected in the “Skill Category and Skill” tab located within the Question Bank tab.

- Additional classroom resources with links to articles relating to AP Human Geography and pedagogy can be found on AP Central here: <https://apcentral.collegeboard.org/courses/ap-human-geography/classroom-resources?course=ap-human-geography>
- The Online Teaching Community (OTC) for AP Human Geography Community is another great resource as it includes materials and resources posted not only by the College Board but also by other teachers. The link is here: <https://apcommunity.collegeboard.org/web/aphumangeo>