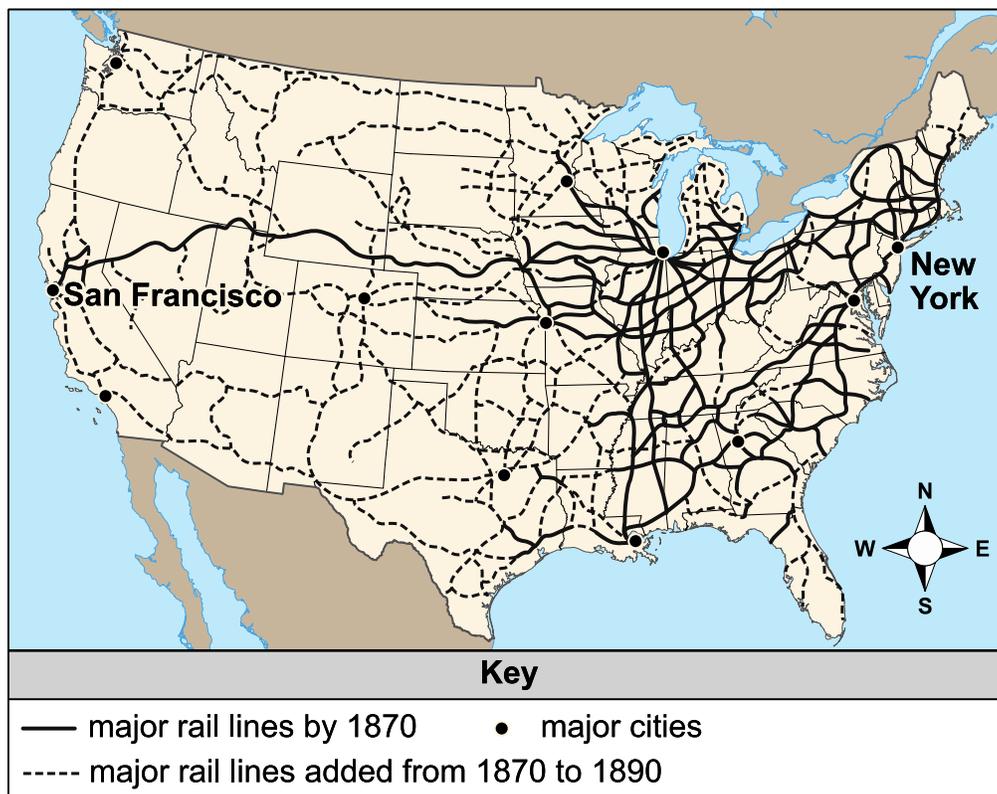


Read and study the sources about the American transportation system in the late nineteenth and early twentieth centuries. As you read the four sources, think about how the development of the transportation system in the United States affected the country economically and culturally. After you read the sources, answer the questions.

Source 1

Railroad Networks (1870–1890)



Source: *America: A Census History, 3rd Ed.*; Bedford/St. Martin's.

Source 2

Excerpt from *Facing Aviation's Critics* (August 1928)

by Richard E. Byrd

This excerpt is from an essay that appeared in the magazine The Forum, in response to the proposition "Has aviation a commercial future?" It was written by Rear Admiral Richard E. Byrd, an American naval officer, aviator, and polar explorer.

We are in a seventh heaven of self-esteem over this thrilling matter of human flight which the Wrights—our countrymen—have made possible. Again, being an imaginative people, we cannot resist the temptation to speculate extravagantly about the future of aviation. . . .

Probably the strongest argument wielded by critics of aviation is that which defines the limits of flying from the viewpoint of the railway and automobile. A common formula is this: "The railway and the automobile outgrew the period of danger to their passengers. Therefore, if flying is ever to replace them, it must likewise emerge from its present hazards." It is true that in 1845 the railway was viewed much as the layman looks on flying today. . . .

The American citizen of 1839 did not picture the gigantic engineering machinery that would make it possible to build our transcontinental roadbeds . . . nor the tumultuous rush of twentieth-century existence that necessitates high-speed transportation.

In the same way, early critics could see no future for the automobile. . . . The American of 1897 did not foresee an automobile tire that would last for 20,000 miles, an engine that would go 150,000 miles, nor a public opinion that would support a budget of \$200,000,000 for good roads. . . .

However, it is not profitable to meet critics of aviation simply by declaring that their arguments are behind the times. . . .

It may seem . . . that the plane can never compete with the ship or train as a carrier of passengers or freight. Possibly so. . . .

"Fanatic" they call us today for warmly supporting aviation. But . . . I am confident that flying has a future as yet undreamed of, and that in a few years these hot blasts now issuing against it will read as foolishly as do the original arguments against the railway and the automobile. . . .

The greatest progress and the development that will mean most to aviation must come from banking support. So far this support has been very limited, but it is increasing markedly as more successful flying is done. When American business joins hands with American aviation, the future of flying is assured.

Source: *Becoming Modern: America in the 1920s*. Copyright © 2012 National Humanities Center. All rights reserved.

Source 3

Excerpt from *The Story of My Life* (1932)

by Clarence Darrow

This excerpt is from the memoir of Clarence Darrow, a lawyer associated with many high-profile cases of the early twentieth century.

The day of the horse is gone. The automobile has driven him from the roads. The boys and men and women of this generation must have automobiles. Those who manufacture them and sell them have made fortunes unknown in any former age. Every automobile costs more to sell than to make. No one can even guess at the cost of this new invention to the country or the change that it has brought to life. New roads have been built at great expense so men may ride quickly to some point so they can ride back more quickly if possible. Finance companies have helped the poor to get further into debt; an automobile complex . . . has taken possession of mankind. . . .

These machines have been used to make a quick trip to the doctor to save human life, to make a long trip to a bank or store . . . all in order to keep up with the progress and process of a moving world. The automobile symbolizes both good and evil. The organism of man is not so adjustable and changeable as his inventions. It will take him a long time to accustom himself to the automobile age.

Source: *Becoming Modern: America in the 1920s*. Copyright © 2012 National Humanities Center. All rights reserved.

Source 4

Transportation Industry Statistics (1910–1940)

Railroad Industry Statistics

Year	Number of Railroad Employees	Number of Passengers Carried	Tons of Freight Carried
1890	749,000	492,431,000	76,207,000,000
1900	1,018,000	576,831,000	141,597,000,000
1910	1,699,000	971,683,000	255,017,000,000
1920	2,076,000	1,269,918,000	413,699,000,000
1930	1,517,000	707,987,000	385,815,000,000
1940	1,046,000	456,088,000	375,369,000,000

Source: U.S. Census Bureau.

Automobile Industry Statistics

Year	Number of Passenger Cars Produced	Number of Manufacturing Employees
1900*	2,000	4,192
1910*	76,000	181,000
1920*	343,000	1,905,560
1930	323,000	2,784,745
1940	465,000	3,717,385

*Information for employees is taken from previous year

Source: Automobile Manufacturers Associations.

Domestic Airline Industry Statistics

Year	Number of Airline Employees	Number of Passengers Carried
1930	2,778	384,506
1932	4,020	476,041
1934	4,201	475,461
1936	7,079	931,683
1938	9,008	1,197,100
1940	15,984	2,802,781

Source: U.S. Census Bureau.

1. Using Source 1, which conclusion can **best** be reached about the development of railroad networks between 1870 and 1890?
 - A. The Midwest experienced a dramatic increase in the size of its railroad network.
 - B. The Northwest experienced little growth in the size of its railroad network.
 - C. The Southeast experienced a decline in the size of its railroad network.
 - D. The Northeast experienced rapid expansion in the size of its railroad network.

2. Based on Source 2, which statement about the aviation industry would Richard Byrd **most likely** have supported?
 - A. The aviation industry would have significant difficulty being profitable in the future.
 - B. The aviation industry would be a vital component of the transportation system in the future.
 - C. The aviation industry would need minimal investment to grow quickly as an industry.
 - D. The aviation industry would require large subsidies from the federal government to survive.

3. Based on Source 3, how did the automobile **most** affect the lives of people in the United States in the 1920s?
 - A. It led to a decline in the number of families taking summer vacations.
 - B. It led to an increase in the number of immigrants moving to rural areas.
 - C. It led to an increase in the number of people buying cars on credit.
 - D. It led to a decline in the number of workers participating in labor unions.

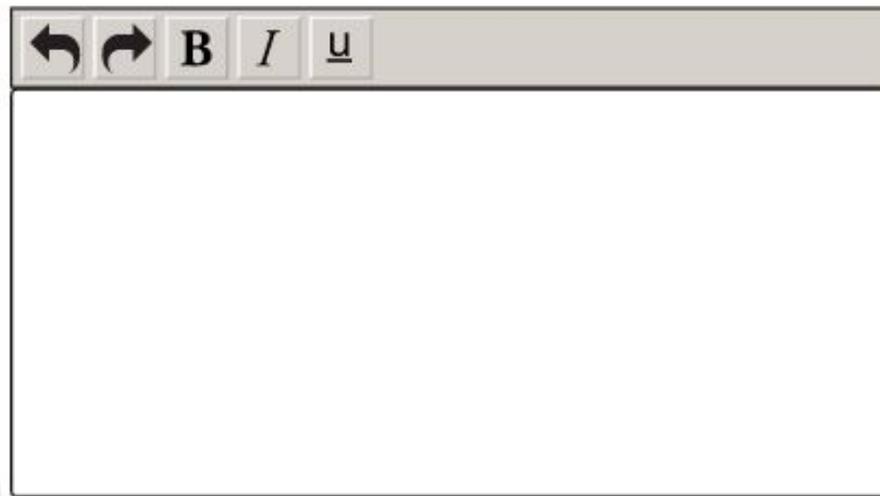
4. Based on Sources 1 and 4, which statements **best** describe the impact of the railroad industry in the late nineteenth century?

Select the **two** correct answers.

- A. The railroad industry employed few workers.
- B. The railroad industry limited railroad construction to urban areas.
- C. The railroad industry influenced the economy of every state.
- D. The railroad industry served as a major form of transportation for people.
- E. The railroad industry declined in importance for freight transportation.
- F. The railroad industry focused much of its growth in the northeastern states.
5. Based on the sources and your knowledge of U.S. history, analyze how the development of the transportation system in the United States affected the country economically and culturally in the late nineteenth and early twentieth centuries.

As you write, follow the directions below.

- Address all parts of the prompt.
- Include information and examples from your own knowledge of U.S. history.
- Use evidence from the sources to support your response.



A text input box with a toolbar at the top. The toolbar contains five icons: a left-pointing arrow (undo), a right-pointing arrow (redo), a bold letter 'B', an italic letter 'I', and an underlined letter 'u'. Below the toolbar is a large, empty rectangular area for writing the response.

Answer Key

Item Number	Item Type	Key	Primary Alignment
1	Multiple Choice (MC)	A	US.2.2
2	Multiple Choice (MC)	B	US.4.3
3	Multiple Choice (MC)	C	US.4.3
4	Multiple Select (MS)	C, D	US.2.4
5	Extended Response (ER)	See Rubric and Scoring Notes	US.4.3

Extended-Response Rubric and Scoring Notes

The response should be scored **holistically** on its adherence to two dimensions: Content and Claims. Each response should be given the score that corresponds to the set of bulleted descriptors that **best** describes the response.

Dimension: Content	
Score	Description
4	The student's response: <ul style="list-style-type: none"> Reflects thorough knowledge of how the development of the transportation system in the United States affected the country economically and culturally in the late nineteenth and early twentieth centuries by incorporating ample, focused factual information from prior knowledge and the sources; Contains accurate understandings with no errors significant enough to detract from the overall content of the response; Fully addresses all parts of the prompt.
3	The student's response: <ul style="list-style-type: none"> Reflects general knowledge of how the development of the transportation system in the United States affected the country economically and culturally in the late nineteenth and early twentieth centuries by incorporating adequate factual information from prior knowledge and the sources; Contains mostly accurate understandings with minimal errors that do not substantially detract from the overall content of the response; Addresses all parts of the prompt.
2	The student's response: <ul style="list-style-type: none"> Reflects limited knowledge of how the development of the transportation system in the United States affected the country economically and culturally in the late nineteenth and early twentieth centuries by incorporating some factual information from prior knowledge and the sources; Contains some accurate understandings with a few errors that detract from the overall content of the response; Addresses part of the prompt.
1	The student's response: <ul style="list-style-type: none"> Reflects minimal knowledge of how the development of the transportation system in the United States affected the country economically and culturally in the late nineteenth and early twentieth centuries by incorporating little or no factual information from prior knowledge and the sources; Contains few accurate understandings with several errors that detract from the overall content of the response; Minimally addresses part of the prompt.
0	The student's response is blank, incorrect, or does not address the prompt.

Dimension: Claims	
Score	Description
4	<p>The student's response:</p> <ul style="list-style-type: none"> • Develops a valid claim that effectively expresses a solid understanding of the topic; • Thoroughly supports the claim with well-chosen evidence from the sources; • Provides a logically organized, cohesive, and in-depth explanation of the connections, patterns, and trends among ideas, people, events, and/or contexts within or across time and place.
3	<p>The student's response:</p> <ul style="list-style-type: none"> • Develops a relevant claim that expresses a general understanding of the topic; • Supports the claim with sufficient evidence from the sources; • Provides an organized explanation of the connections, patterns, and trends among ideas, people, events, and/or contexts within or across time and place.
2	<p>The student's response:</p> <ul style="list-style-type: none"> • Presents a claim that expresses a basic understanding of the topic; • Includes limited support for the claim by using some evidence from the sources; • Provides a weak explanation of the connections, patterns, and trends among ideas, people, events, and/or contexts within or across time and place.
1	<p>The student's response:</p> <ul style="list-style-type: none"> • Presents a claim with little or no evidence from the sources; • Provides a vague, unclear, or illogical explanation of the connections among ideas, people, events, and/or contexts within or across time and place.
0	<p>The student's response is blank, incorrect, too brief to evaluate, or lacks a claim that addresses the prompt.</p>

Characteristics of a Strong Response

A strong response is logically organized into several paragraphs. Any errors in spelling, punctuation, grammar, or capitalization do not interfere with the ability of the reader to understand the ideas presented.

A strong response may develop one or more lines of reasoning to support the claim. Here are some examples.

- The development of the railroad, the automobile, and the airplane as part of the transportation system in the United States transformed the economy and the culture of the country. The development of the railroad industry in the late nineteenth century influenced the growth of an interdependent national economy. Railroads stretched across the country and connected every region and major city. They moved goods and people throughout the country and helped link businesses to customers. Railroads also affected other industries. The steel and coal industries grew in response to the needs of the railroad industry for more rails, steam engines, and railroad cars, and for a source of power to move the trains. As railroads grew in size, they hired large numbers of workers, many of whom supported the formation of labor unions. The automobile had a similar effect on other industries and laborers. The steel, glass, petroleum, and railroad industries benefited from the demand for materials used to build the cars and trucks. Likewise, the automobile industry experienced the rise of an increasingly large organized labor movement in the first half of the twentieth century. The aviation industry began making contributions to the growth of the economy in the first half of the twentieth century. Similar to the railroad and automobile industries before it, the aviation industry influenced other industries. Planes needed aluminum, glass, rubber, and aviation fuel. Industries developed or expanded to provide these products, particularly as a result of World War II. As the number of planes being built increased, the industry expanded and hired more employees. Similar to the automobile industry, the aviation industry adopted the assembly line to build its planes. The automobile industry also affected the economy by transforming ways in which people bought consumer goods. Prior to the early twentieth century, most people bought goods with cash, except for the wealthy, who had access to credit. The automobile industry gave the middle class an opportunity to buy goods with credit. Automobile companies established financing companies to help people who could not afford to buy cars with cash. The success of the model inspired other industries to follow that example. The aviation industry also became associated with luxury that was attainable to the middle class. For those who could afford an airplane ticket, flying opened up vacation possibilities across the country.

The culture of the United States was affected by the growth of the transportation system. Just as the country became more economically interdependent, it also became more cohesive culturally, as ideas and cultural values could be communicated more quickly and easily. The railroad allowed people to travel quickly between rural and urban areas and between regions of the country. Immigrants arriving in the United States were able to migrate easily to the interior of the country and incorporate their cultural values into the broader American culture. The automobile became the leading symbol of the new consumer-based culture of the 1920s and 1930s. For many people, it was a symbol of affluence. Unlike the railroad, the automobile symbolized personal freedom. People were not restricted by timetables and predetermined tracks. The automobile also changed leisure patterns throughout the country. People took to roads to travel on vacations, such as exploring national parks. Like automobiles, aviation created a new sense of freedom and adventure. Although there were a small number of passengers at first, the number of people traveling by airplane increased significantly before World War II. Aviation shows and the achievements of individuals such as Charles Lindbergh and Amelia Earhart made the airplane industry seem exciting. Airplanes allowed people to quickly move across the country to see new sights.

- The development of the railroad, the automobile, and the airplane as part of the transportation system of the United States had a significant effect on the economy and culture of the United States. In the late nineteenth century, the railroad industry connected regional economies into a more cohesive national economy. Railroads became the primary method of transporting goods across regions and throughout the country. Their impact was great enough to dictate transportation fees for various groups and industries, resulting in farmers protesting against what they believed to be unfair fees. The railroad industry also affected the economy in other ways. As the railroad companies grew in size, they formed the first modern corporations. Their size and their dominance of the economy caused the federal government to label many as monopolies and force them to be broken up. Similarly, the growth of the automobile industry significantly affected the economy. The automotive industry competed with the railroad industry to move consumer goods and people throughout the country. To accommodate the growing desire for automobile travel, federal, state, and local governments made significant investments in road construction projects. This encouraged more people to buy cars and to buy companies to acquire trucks for shipping goods. Although it was initially much smaller than the railroad and automobile industries, the aviation industry also contributed to the growth of the economy. By the first half of the twentieth century, airplanes were used by the federal government for transporting mail. It also began to transport commercial

goods and passengers. The automotive industry was one of the first industries in the country to take advantage of the assembly line. Although it was not the first, it became the model industry in the adoption of assembly-line functionality. Henry Ford's success in producing cars quickly and cheaply demonstrated to other industries that they should use the assembly line to make their products as well. The aviation industry also used assembly-line techniques to build its airplanes, and, in turn, furthered the industrialization of the country. Railroads, automobiles, and airplanes also transformed the culture of the nation. By connecting regions more closely, railroads broke down cultural barriers between regions. Rural areas became more closely linked to urban centers, and there were significant shifts in the populations of both rural and urban communities. This led to the spread of cultural ideas from one region to another, such as the spread of different types of music from the South to the Northeast. Many people, including European immigrants in the United States, moved halfway across the country to the Great Plains and incorporated their cultural values into the larger American society. The automotive industry had a similar geographic impact on the culture, and not just between regions. The automobile contributed to the growth of suburbs, particularly in the 1920s and 1930s. Just as the railroad allowed people to move people to and from urban and rural areas, the automobile allowed people to move from urban communities to suburban communities. People recognized that they could live farther away from their work than they had before. The automobile represented freedom to many people, who used it as a way of traveling and seeing the country. It was seen as a symbol of middle-class status. The emergence of the airline industry in the 1920s and 1930s stirred the imagination of the people. Like the automobile, it symbolized freedom and adventure to many people. It also symbolized technological progress and contributed to the cultural development of the 1920s. In that period, people looked with optimism toward the future of the United States. The ability to conquer flight suggested that the American people could do anything. The marvel of Charles Lindbergh and Amelia Earhart making long-distance flights suggested that Americans could accomplish anything they wanted to.

A strong response shows understanding of the topic by analyzing the required sources and including well-chosen evidence from the sources, such as:

- The national railroad network linked all of the regions of the United States together (Source 1).
- The aviation industry was seen as an important transportation industry, one that would rival the railroad and automobile industries in future (Source 2).
- Byrd’s statement, “I am confident that flying has a future as yet undreamed of, and that in a few years these hot blasts now issuing against it will read as foolishly as do the original arguments against the railway and the automobile,” demonstrates that the aviation industry was in its infancy and that, like the railroad and automobile industries, it would overcome challenges to become an important component of the transportation system in the United States (Source 2).
- The automobile replaced the horse as the modern symbol of individual transportation in the twentieth century (Source 3).
- The automobile inspired the use of credit to buy goods through the actions of finance businesses (Source 3).
- Darrow’s belief that “Finance companies have helped the poor to get further into debt” and that “an automobile complex . . . has taken possession of mankind” demonstrates the power of the automobile industry to convince people to buy goods on credit and increase their personal debt (Source 3).
- The railroad industry carried approximately one billion tons of freight every year between 1915 and 1940 (Source 4).
- The railroad industry was a major source of transportation for people (Source 4).
- The railroad industry saw declining numbers of passengers and freight in the 1930s (Source 4).
- The production of automobiles exceeded 1,900,000 every year after 1920 (Source 4).
- The increased number of passenger cars being produced in the decade leading up to 1920 was likely a contributing factor in the decline in the number of passengers carried on railroad networks in the decade following the 1920s (Source 4).
- The decreases in the numbers of employees and passengers, and amounts of freight, carried by the railroads in the 1930s were partially a result of the Great Depression (Source 4).

- The increases in the number of cars produced and the number of automobile manufacturing employees demonstrated the growing importance of the automobile industry in the American economy (Source 4).
- The increase in the number of passengers flying on commercial planes demonstrated the growing popularity of flight as a means of travel for people (Source 4).
- Passenger service in the airline industry exceeded 2.8 million people in 1940 (Source 4).

A strong response also includes important information beyond what is presented in the sources, such as:

- Describing the assembly-line process for building automobiles and its inspiration to other industries.
- Describing the importance of the railroad industry to the growth of the steel industry and the coal industry.
- Describing the importance of the automobile industry to the growth of the steel, glass, chemical, petroleum, and rubber industries.
- Describing the popularity of automobile vacations, such as trips to national parks.
- Describing how the public was captivated by depictions of automobiles in popular culture, such as movies.
- Describing the roles of Charles Lindbergh and Amelia Earhart in promoting the airline industry.
- Describing the aviation industry carrying mail for the U.S. Postal Service and how that was an important step for the industry to become economically viable.