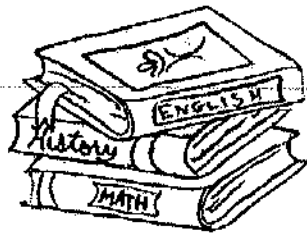

AMI Packet

#2

8th Grade



Day 2

5

A group of 24 students is asked whether or not their family subscribes to NicePix online movie service and whether or not they own a video game console for their television. The results are described below.

- The number of students who have NicePix is less than the number of students who do not have NicePix.
- The number of students who have a game console is equal to the number of students who do not have a game console.
- Students who have NicePix tend to have a game console, while students who do not have NicePix tend not to have a game console.

The table shows an association between subscribing to NicePix and having a game console. Use four numbers from the box to complete the table, making sure the conditions above are met. Use a number only once.

		NicePix	
		Yes	No
Game Console	Yes		
	No		

1
3
5
7
9

6

Consider the equation below.

$$\frac{3}{4}(24 - 16x) = -\frac{2}{3}(18x - 27)$$

How many solutions does the equation have?

- A one, $x = 0$
- B one, $x = -\frac{27}{8}$
- C no solutions
- D infinitely many solutions

7

Which statements are true? Mark all that apply.

- A If $y^2 = 27$, the value of y is 3.
- B If $y^2 = 64$, the value of y is 4.
- C If $y^2 = 1$, the value of y is 1.
- D If $y^2 = 16$, the value of y is 2.

Go On

8

The mass of Earth is 5.97×10^{24} kilograms. The mass of the Moon is 7.34×10^{22} kilograms.

Part A

What is the combined mass of Earth and the Moon? Express your answer in scientific notation.

Show your work.

Answer _____ kilograms

Part B

How many more kilograms is the mass of Earth than the mass of the Moon? Express your answer in scientific notation.

Show your work.

Answer _____ kilograms

Part C

About how many times as great is the mass of Earth as the mass of the Moon? Express your answer in scientific notation.

Show your work.

Answer _____

Adjectives and Articles

11 p. An *adjective* is a word used to modify a noun or a pronoun.

An adjective modifies a word by telling *what kind, which one, how much, or how many*.

EXAMPLES Mr. Cruz collects **Egyptian** art. [What kind of art?]

Sara won **first** prize. [Which prize?]

Do you have **enough** money for the tickets? [How much money?]

Our computer club has **fifty-seven** members. [How many members?]

An adjective may come before or after the word it modifies.

EXAMPLES The **soccer** players, **confident** and **enthusiastic**, were **ready** to begin the game.

The most frequently used adjectives are the *articles* *a, an, and the*.

EXERCISE A In each sentence below, underline all of the adjectives, including the articles *a, an, and the*.

Example 1. Jenny Lind was a popular Swedish singer with a beautiful voice.

- Jenny Lind starred in several operas and gained great renown in European cities.
- At the absolute height of a brilliant career, she stopped performing in operas.
- In 1849, the talented diva gave up an operatic career and began planning a concert tour.
- From 1850 to 1851, Lind gave ninety-three concerts for the American public.
- This extraordinary performer delighted audiences for fifty-three years.

EXERCISE B In each of the following sentences, underline all the adjectives except the articles *a, an, and the*. Then, draw an arrow from each adjective to the word it modifies.

Example 1. President Thomas Jefferson gave two American explorers a difficult assignment.

- These bold explorers were Meriwether Lewis and William Clark.
- They were to explore the uncharted lands to the west of the Mississippi River.
- The long and arduous expedition began in St. Louis, Missouri, in 1804.
- They made their winter camp in what is now North Dakota.
- During that winter a Shoshone woman, Sacagawea, joined the expedition.
- Her name translates into the English language as "Bird Woman."
- Sacagawea and her husband, a French-Canadian trader, accompanied the explorers through a large portion of the West.
- As an interpreter of native languages, Sacagawea was helpful to the expedition.
- The group, daring and resourceful, surmounted many obstacles.
- The two-year journey was successful.

Review C: Nouns and Adjectives

EXERCISE A In the following sentences, underline each adjective once. Then, draw an arrow from each adjective to the word it modifies. Do not include the articles *a*, *an*, and *the*.

Example 1. After he bought the old house, Mr. Blandings repaired the stone wall that surrounded the overgrown garden.

1. The bright banner hung from the underside of the wooden bridge.
2. Our old cat, once energetic, now sleeps all day.
3. The red light on the video camera means that the camera is recording.
4. Dora prefers Chinese soup that is extremely spicy.
5. The quick brown fox jumped over the lazy dog.
6. That book with the blue cover was written by a good friend of ours.
7. Each member of the marching band brought something to sell at the bake sale.
8. Eight boxes of adhesive tape arrived at the central office.
9. The ambitious swimmer hoped to win a gold medal for an Olympic event.
10. The little car is often overshadowed by giant trucks on the highway.

EXERCISE B In each of the following sentences, identify each underlined word by writing above it *N* for noun or *A* for adjective.

Examples 1. I'm looking forward to the ^AFourth of July celebrations this year.

2. I'm looking forward to the ^NFourth of July this year.

11. Would you like to go to the movies Wednesday night?
12. Wednesday is the least crowded night at the theater.
13. Thelonious Monk performed playfully on the piano.
14. Ask the piano player if he knows "As Time Goes By."
15. Please tell the actor that we enjoyed his comedy performance.
16. My brother is writing a comedy for his playwriting class.
17. The chalk broke in two as the teacher wrote on the chalkboard.
18. The children drew a chalk circle on the driveway.
19. The space exhibit was the fair's most popular attraction.
20. The satellite was lost in space and never heard from again.

Name _____

Day 2

Trip Planning

To calculate gas mileage, in miles per gallon (MPG), divide distance travelled by gas used: $\text{gas mileage} = \frac{\text{distance}}{\text{gas used}}$ If you know the average gas mileage and tank size of a car, you can estimate the car's range: $\text{range} = \text{gas mileage} \times \text{tank size (gallons)}$ If the gas mileage and trip distance are known, you can calculate how many gallons of gas you will need for the trip by dividing trip distance by mileage: $\text{gas used} = \frac{\text{distance}}{\text{gas mileage}}$ To estimate the cost of the trip, multiply the gas used by the price of gas.

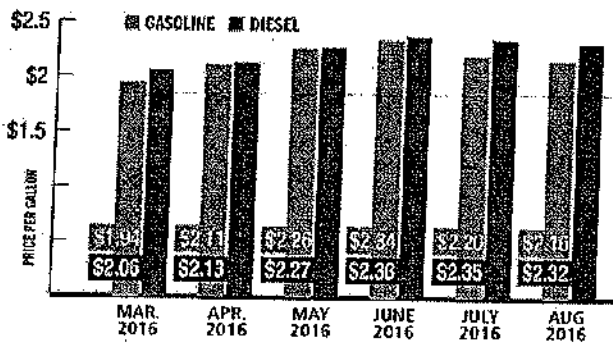
Table 1: Approximate weights of vehicles in pounds.

Small Car	3,000
Sports car	1,350
SUV	6,000
Hybrid Car	3,600
Pickup Truck	10,000
Van	5,800
Motorcycle	400
School Bus	25,000

Figure 1:

Historical Gasoline & Diesel Trends

National Avg. Gasoline & Diesel Price Per Gallon Trend
March 2016 - August 2016



- How many more pounds does a school bus weigh than the SUV? _____
- The weight of the small car and the sports car added together equals the weight of the SUV.
True or false? _____ Explain why. _____
- How much more does the pickup truck weigh than the motorcycle? _____
- About how much would a truck hauling a motorcycle weigh? _____
- If James went on a trip in August and drove a car that took gasoline, what would he expect to pay per gallon of gas? _____
- How much had gasoline prices increased from March 2016 to June 2016? _____
- Typically, in 2016 was gasoline or diesel more expensive? Provide evidence from figure 1 to support your answer. _____
- Which vehicle is the lightest weight? _____

Name _____

Table 2: Vehicle Data

Vehicle	Range (Miles)	Tank Size (gallons)	Approximate Gas Mileage (Miles per Gallon)
Small car	389	11	35
Sports car	320	16	20
Sports Utility Vehicle (SUV)	398	16	25
Hybrid Car	554	12	46
Truck	394	19	21
Van	496	31	16
Motorcycle	250	5	50
School Bus	500	50	10

9. Jeff drove his sports car on a road trip to go see his grandparents. The car uses two full tanks of gas and has about 10 gallons of fuel left in the tank after the third fill up when Jeff arrives at his destination. According to the data in table 2, about how far did Jeff travel? _____

10. How much farther can a school bus travel on one fill up than a sports utility vehicle? _____

11. According to the passage, if car gets 25 miles per gallon. It contains 8 gallons of gas. About how far will the car travel before it runs out of gas?

- a. 25 miles
- b. 100 miles
- c. 200 miles
- d. 400 miles

12. Which car gets better gas mileage?

- a. Sports car
- b. Van
- c. School bus
- d. Hybrid car

13. According to table 2, which vehicle would it be best for you and your family (4 total people) to use for your vacation trip to drive a few hundred miles? Support your claim with evidence from the passage. _____

14. Make a conclusion about a vehicle's tank size compared to the amount of miles they are able to drive in one tank of gas. Use evidence from Table 2 to support your conclusion. _____

15. According to Figure 1 and Table 2, about how much could Amanda expect to pay to drive her small car 778 miles in July 2016. Her small car takes gasoline to run. _____

16. Jack is planning a 1000-mile road trip. He is debating between driving a truck (10 miles per gallon) and a hybrid (50 miles per gallon). Gas costs \$2 per gallon. How much money would David save by driving the hybrid?

- a. \$40
- b. \$80
- c. \$160
- d. \$200

Read the following passage about a monthly magazine written by and for students in grades 7–10 and the accompanying poster. Then go to page 49 of your answer document and answer multiple-choice questions 25 through 32 and open-response item D.

Calling Young Writers and Artists!

Have your friends told you they love to read what you write? Has your English teacher told you you should think about a career as a writer? Do you have a notebook filled with drawings or poems? If so, then you should submit your work to *Connections*, a magazine written by—and for—students in grades seven through ten.

- 2 Why should you submit your work to *Connections*, the best monthly magazine for young people? First, getting published in *Connections* could be a great first step in a career as a writer or artist. Second, you'll love paging through our magazine and seeing your name next to your masterpiece. Any writer or artist will tell you that nothing compares to seeing your work in print. Finally, you can make some cash! We pay for all the submissions we print.

Are you thinking about sending us your work? Before you do, check out our flyer for details on payment amounts, deadlines, and other requirements. We receive many submissions for our magazine, but we make it a priority to send a response to everyone who submits work. Once we accept your submission, we will send payment directly to you.

Remember, no one will be able to appreciate your talent unless they can see or read your work. Submit to *Connections* today!



Student writers are invited to submit their poems, stories, photographs, drawings, and essays to *Connections*, a monthly magazine written by and for students in grades 7–10. Read the following requirements before sending your material. We look forward to hearing from you!

Submission Guide

Connections publishes monthly on particular themes (see table). All material in an issue must relate to that month's theme.

Fiction/Drama

Between 500 and 2,000 words. We want stories and one-act plays with believable and interesting characters. Plots must have a beginning, middle, and end. Please, no "first love" stories. Humorous stories are fine, but they must be more than a series of jokes. Payment: \$25–\$75

Poems

Rhymed or unrhymed, up to 40 lines in length. Original song lyrics acceptable. No limericks or silly poems. Payment: \$10–\$25

Essays

500 to 1,500 words. No formula essays (five-paragraph essays). Use quotations, anecdotes, and personal reflections to make your topic come alive. Payment: 2¢/word

Photographs

Unusual, thought-provoking black-and-white images. No slides, please. Payment: \$50

Drawings

One-color line or charcoal drawings. Originals returned. Payment: \$50–\$100

Send your submission with a self-addressed, stamped envelope (SASE) by the deadline listed in the table. Mail to:

Connections
3825 Buckle Down Blvd.
Iowa City, IA 52241

No submissions will be returned without a SASE. Payment will be made upon acceptance.

Theme	Submission Deadline	Month Featured
Friendship	May 31	September
Possibilities	June 30	October
Reaching Out	July 31	November
Discovery	August 31	December
Responsibility	September 30	January

25. Which question does paragraph 2 of "Calling Young Writers and Artists!" answer?

- A. How should work be submitted to the magazine?
- B. Will contributors be paid if their submissions are printed?
- C. What information is on the flyer?
- D. Who are the readers of the magazine?

26. When the author calls *Connections* "the best monthly magazine for young people," the author is stating

- A. an opinion.
- B. a reasoned judgment.
- C. a fact.
- D. a theme.

27. Read the statement below from "Calling Young Writers and Artists!"

"Finally, you can make some cash!"

This statement is

- A. an opinion.
- B. a reasoned judgment.
- C. a fact.
- D. a theme.

28. According to the flyer, which of the following should a student do before sending in a submission?

- A. Count the number of words in the essay.
- B. Rewrite the essay into a five-paragraph essay.
- C. Collect their payment.
- D. Provide slides.

29. By what date should a student submit his or her essay for the theme "Possibilities"?

- A. May 31
- B. June 30
- C. August 31
- D. September 30

30. How often is *Connections* published?

- A. once a week
- B. once a month
- C. twice a year
- D. every other month

31. How long should a student's fictional story be if he or she wants to submit it to the magazine?

- A. between 500 and 1,500 words
- B. less than 500 words
- C. between 500 and 2,000 words
- D. up to 40 lines in length

32. Why should students provide a self-addressed stamped envelope?

- A. to receive payment for their submission
- B. so the magazine can send letters to other students interested in writing
- C. because they are told to do so in the instructions
- D. to have their submission mailed back to them after it has been printed

8th Grade Writing Alternative Instruction: Day 2

Directions:

Read the article "Should the U.S. buy Alaska from Russia?" Use the information in the article to fill out the information on the rest of this page.

1. List three arguments from the article that are FOR the U.S. purchase of Alaska in 1867.

1. _____

2. _____

3. _____

2. List three arguments from the article that are AGAINST the U.S. purchase of Alaska in 1867

1. _____

2. _____

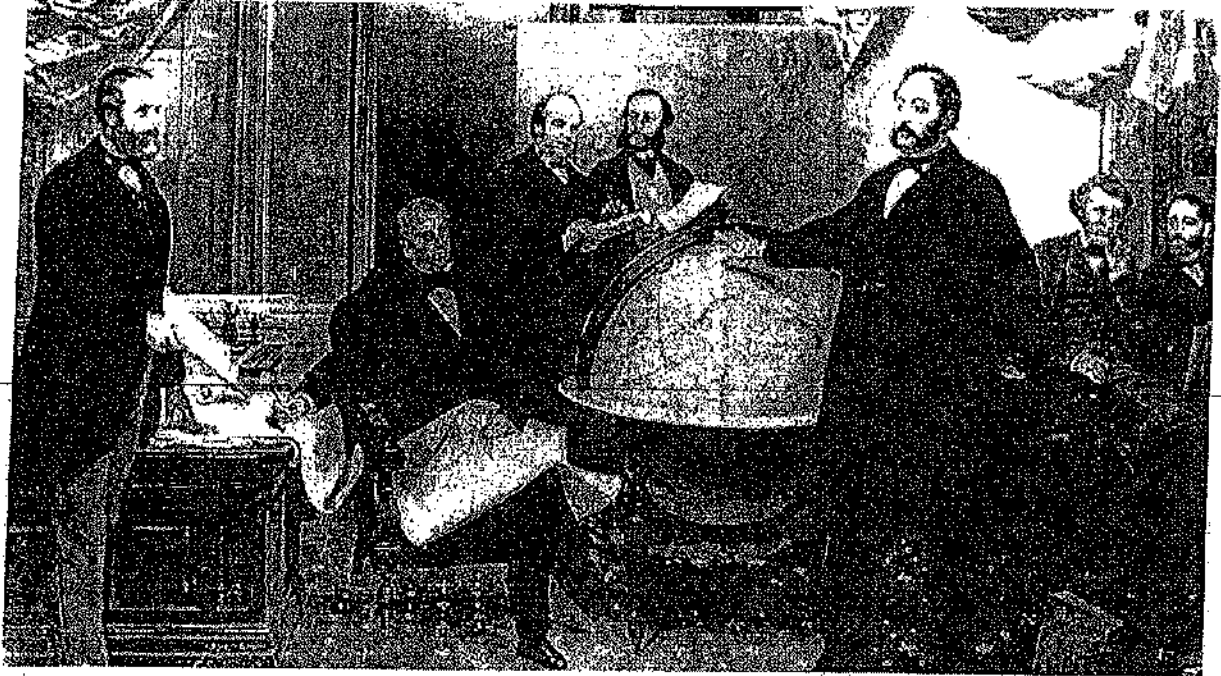
3. _____

3. Choose whether you would have been FOR or AGAINST the purchase of Alaska in 1867. On the back of this page, write a 3 PARAGRAPH essay with an introduction, a body, and a conclusion on which side you support. Use arguments from the article as well as your own arguments to support your opinion.

Blank lined paper with horizontal ruling lines.

Time Machine (1867): PRO/CON: Should the U.S. buy Alaska from Russia?

By New York Times and New York Tribune, adapted by Newsela staff on 04.26.16
Word Count 1,047



The signing of the Alaska Treaty of Cession on March 30, 1867. (From left) Robert S. Chew, William H. Seward, William Hunter, Mr. Bodisco, Eduard de Stoeckl, Charles Sumner and Frederick W. Seward. Emanuel Leutze

Newsela Editor's Note: Here are two articles from 1867. One is in favor of purchasing Alaska from Russia. The other is against. At the time, the \$7 million purchase was controversial. The affair was referred to as "Seward's Folly." U.S. Secretary of State William Seward was the government official who pushed for the purchase.

PRO: The Russian treaty before the Senate

(New York Times, April 8, 1867)

It is not a bad thing that the Russian treaty has been before the Senate for a week without the Senate taking definite action. Hasty legislation on such a subject would be just as bad as a dangerous delay. Senators were as ill-informed as other people in regard to acquiring the territory. All that anyone knew about it was that it was up somewhere near the North Pole. Whether it included the Pole itself was a question that very few would have ventured

an opinion about. Maps had to be studied. Encyclopedias had to be searched, and newspapers scanned for knowledge. Even when all this was done, it was hard for the senatorial mind to come to a conclusion about the measure.

From what we are able to learn, however, we judge that the treaty is likely to be favorably regarded by the Senate. It has come to be understood that while the Russian government is willing to sell the land, there is really no pressure on their part to force the bargain. If it be declined on our side, the Russian treasury will not be appreciably poorer. Russian power will not be materially weakened. Russia will lose no friends. We shall make no enemies. It is also understood that the English government is entirely unconcerned about the matter.

They do not care if we acquire this land. Or they pretend not to care, which is the same thing in this case. If we do acquire it, the English government will not declare war against us. This fact will disappoint those among us who want war with Britain. If after the news of the treaty reached England last week we were told that there was great excitement in Parliament about the matter, it would be different. If Her Majesty's ministers threatened this country in case the treaty went through, we should at once have had a tremendous pressure. But, as things now are, the treaty must stand its chances without this aid.

Simply Put

Senators and others understand that the great territory which Secretary Seward proposes to acquire has real value. Indeed, it has a far greater value than the people against acquiring it say it has.

The argument that acquiring this territory strengthens our national honor is not important. But when its riches of coal, timber and fish are brought to our notice, it is different. These things are as easily appreciated here as on the Pacific coast. In addition, we are reminded that we are developing trade with China and Japan. The Aleutian Islands are included in the proposed land. These islands stand almost as a halfway point between here and there. Plus, they are likely to host the most commanding naval station in that part of the ocean. Certainly senators have weighed these points during the past week.

The gold which Russia has asked for in exchange for giving up her American territory is not excessive. It is a price we can get behind, even of those who have loudly complained that Congress spends too much. We have no doubt that in a very short time the land will pay us back all it may cost us. The developing genius of the American race will soon bring about results in Sitka that will astonish Russia herself.

We enter into no entangling alliances with this treaty. If we were to do so, we should oppose it, whatever might be the promised gains otherwise. It is simple in its provisions, simple in its ends, and final in itself.

CON: What we get by the treaty

(New York Tribune, May 3, 1867)

The Russian treaty has been made public, apparently without authority, and is printed in our column today.

It is at least good to know that the treaty binds our government to no more than a payment of a certain sum of gold. At least any slight value the land may offer is not lessened by treaties that favor British hunters and traders. To have to share the questionable advantages of the territory would be to give them up entirely. Some things are simply too small to divide. But though this is good in theory, in practical terms, it makes no difference. In the deserts of Russian America, laws are not likely to be enforced. The hunters around the Great Bear Lake won't care.

All we get with this treaty is wasteland. This territory is made up of deserts of snow, vast tracts of dwarf timber, frozen rivers, and mountain ranges no one can access. There are a few islands where, when the climate is more moderate, a few people can support themselves by fishing and trading with the Indians.

Absolutely Useless

For spending \$7 million in gold, all we get is the Sitka and the Prince of Wales Islands. All the rest is worthless. No energy of the American people will be enough to make mining there profitable. There is no way to reclaim the wilderness which borders the Arctic Ocean. A glance at the map shows that this mighty tract of land is divided into nearly equal portions by the Arctic Circle. The only exception is a few islands scattered along a mountainous and lifeless shore.

Ninety-nine percent of Russian America is absolutely useless. The remaining percent may be of some value to the Russians who settled it, but certainly not worth \$7 million to a nation that already has more territory than it can decently govern. This is a nation already burdened with debt. On the contrary, the expense and trouble of a territorial government in this distant and inhospitable land would far outweigh any advantage from its codfish or bearskins. To Russia, it was an embarrassment. By the next session of Congress, we trust the folly of the purchase will be made plain and that the House of Representatives will refuse to purchase this land.

Read the following passage about the Mississippi River, go to page 47 of your answer document, and then answer multiple-choice questions 9 through 16 and open-response item B.

A: Mighty River

excerpt from the book, *The Mighty Mississippi*

by Terry Oakley

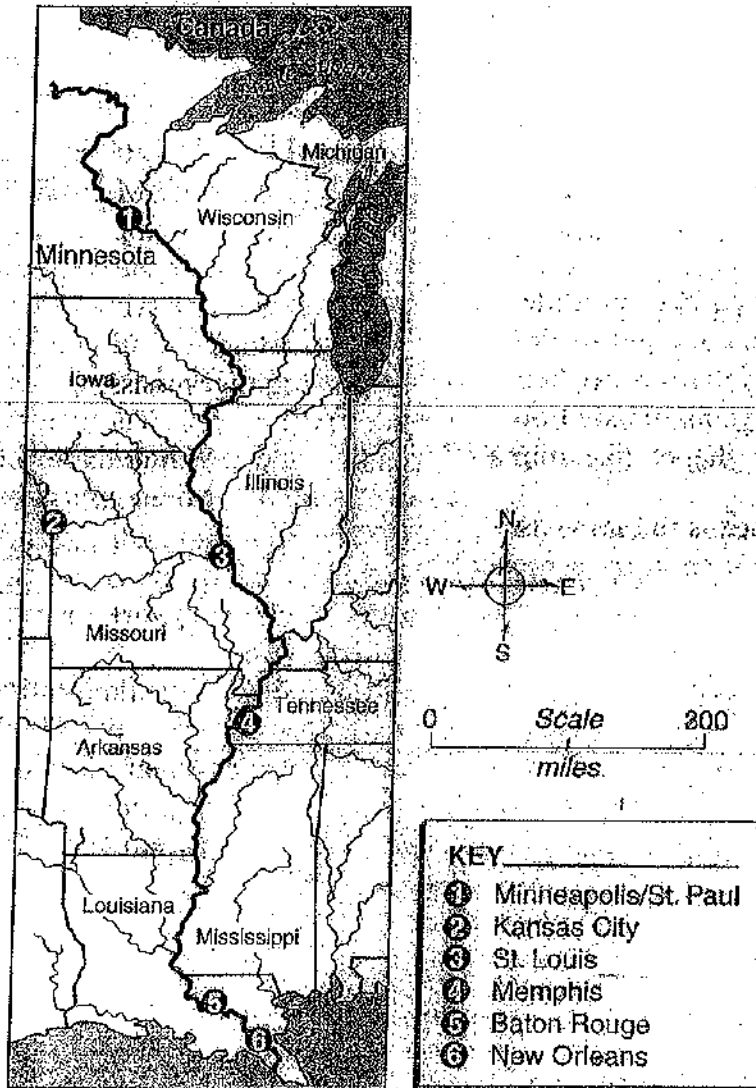
The Mississippi is more than a river; it is a system of rivers. The Mississippi begins in northern Minnesota and travels 2,340 miles before it empties into the Gulf of Mexico in southern Louisiana. An even longer river, the 2,714-mile-long Missouri, meets the Mississippi in St. Louis. Other major rivers that feed the Mississippi system include the Ohio, the Arkansas, the Illinois, and the Red rivers. The river system covers close to half the landmass of the United States, from the Rockies to the Appalachians, and runs through 31 states.

2 History and geography are key to understanding the Mississippi. For thousands of years, Native Americans lived along the rivers of the system. These nations carried on trade with one another and left behind a number of mysterious earthen mounds, massive manmade hills that were often shaped like animals. Some of the largest and oldest examples of earthen mounds can be found at Poverty Point outside Epps, Louisiana. Materials found at the site came from such faraway places as the Ozark Mountains and the foothills of Georgia. These finds suggest a vast trading network operated thousands of years before European explorers arrived in North America.

3 Hernando de Soto was the first European explorer to see the Mississippi in 1541. Later, Jacques Marquette traveled the upper Mississippi in 1673. In 1682, Robert de la Salle became the first European explorer to travel from the Great Lakes to the mouth of the river. The rivers making up the system provided easy travel downstream. But it was not until the invention of the steamboat in the early 18th century that travel upriver was made equally convenient.

Today, the rivers making up the Mississippi are used to transport people and goods. If the river was a highway to Native Americans and the first Europeans, it is now a trade route that brings products and raw materials from the Midwest to the Gulf, where they can be sent to places all around the world. Travel is not just one-way, however, as much of what the Midwest buys from abroad comes to the mainland by boat and travels upriver to the many ports that feed into the Mississippi.

Route of the Mississippi River



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Reading Practice Test, Form A

9. How are the Mississippi and the Missouri rivers alike?
- A. They both begin in Minnesota.
 - B. They both were discovered by de Soto.
 - C. They both run through St. Louis.
 - D. They both are 2,714 miles long.

10. Read this sentence from paragraph 2.

"These nations carried on trade with one another and left behind a number of mysterious earthen mounds, massive manmade hills that were often shaped like animals."

Which word means the same as massive as it is used in the sentence?

- A. major
- B. huge
- C. ancient
- D. puzzling

11. According to the passage, what do artifacts found at earthen mounds suggest about Native Americans?

- A. They did not travel far from their homes.
- B. They believed that animals had great importance.
- C. They did not welcome the European explorers.
- D. They traded with other people across a large area.

12. Which question is answered in paragraph 3?

- A. Which rivers feed the Mississippi River?
- B. In what month did Hernando de Soto visit the Mississippi River?
- C. What made travel upstream more convenient?
- D. What types of boats did the Europeans use when they explored?

13. Which is the best summary of the last paragraph in the passage?

- A. The Mississippi and its tributaries transport people and goods to and from the Midwest and the rest of the world.
- B. The Mississippi acted as a highway to Native Americans, and now it is a trade route from middle America to the world.
- C. The Mississippi allows people to travel and send goods by boat from middle America to the rest of the world.
- D. The Mississippi has many smaller rivers that make it up and they allow people to travel to and from many places.

14. What should appear after the number 2 in this sample outline of the last paragraph?

IV. The Mississippi River Today

- 1. Delivers products and materials from the Midwest to the Gulf
- 2. _____
- A. Attracts tourists from across the country and around the world
- B. Delivers products from the rest of the world to the Midwest
- C. Popular site for steamboat rides
- D. Featured in many films

15. Suppose you were to canoe down the Mississippi River. Which place would you not pass?

- A. Louisiana
- B. St. Paul
- C. St. Louis
- D. Kansas City

16. Imagine a manufacturing company wants to ship party hats from New Orleans to Memphis. Approximately how many miles will the party hats travel on the Mississippi River?

- A. 300
- B. 600
- C. 900
- D. 1200