

# Webster County Schools

95 CLARK AVENUE – EUPORA, MS 39744

Office of Curriculum

662-258-5551, Extension 15

[packets@webstercountyschools.org](mailto:packets@webstercountyschools.org)

# 9<sup>th</sup> – 12<sup>th</sup> Grade

## Packet 2

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For Additional Online Resources, please see the Link to the following resources on the Curriculum page on [www.webstercountyschools.org](http://www.webstercountyschools.org):

## MDE Learning-at-Home Resources for Districts

The resources contained on this website contain materials and tools that may be used to provide additional resources to parents or students. This information is only intended to be a general summary of information provided to the public. The Mississippi Department of Education does not endorse or promote any commercial products or services. The views and opinion of authors expressed do not necessarily reflect those of the MDE, and they may not be used for advertising or product endorsement purposes. Please make sure that you choose the tool(s), resource(s) or material(s) that are developmentally appropriate and best fit the needs of your students, school, or district.

Resources have been divided into the following categories:

- Internet Services
- Multiple Content Area Resources
- Arts (Dance, Music, Theatre, Visual Arts) Resources
- Career Pathway Experiences (CPE) Alternative Resources
- English Language Arts Resources
- Mathematics Resources
- Science Resources
- Social Studies Resources
- World Language Resources
- Counselor Resources
- English Learner Resources
- Virtual Learning Resources

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## At-Home Learning Packet Schedule:

- Packet 2- April 20, 2020
- Packet 3- May 4, 2020
- Packet 4- May 18, 2020

# Textual Evidence

## Question 1 .

"Want to go fishing with us?" Jenny asked Cathy, her new friend who had recently moved to the city from the Midwest. "You just need a hat and sunscreen. We won't be gone too long. We have food. What do you say?"

"Sure," Cathy replied. "Do I need to pack any vegetarian food?"

"Oh! I forgot! I can make you a sandwich without meat. Let's run," Jenny convinced her friend and gestured her to hurry up. "Let's try to get there while it's still morning."

"Is anyone else coming?" Cathy voiced her concern. "I mean who else is coming?"

"Just Pat," Jenny replied as she motioned Cathy to lock the door. "We can chat in the car. We'll pick him up and leave for the lake."

"Uh ok," Cathy mumbled, unable to back out now. "Fishing is about enjoying silence, right?"

"Why not," Jenny remarked. "Pat is chatty, though!"

"Did you tell him you were going to invite me?" Cathy asked, unable to keep her mind off the topic. "Doesn't he mind?"

"I assumed he'd be okay. He likes my friends. He mentioned you were cool to hang out with," Jenny replied as she started driving. She turned on the radio and sang the opera as she drove. "I am the only one I know who sings an opera in the car, ha!"

After Jenny sang three arias, she arrived at Pat's apartment with Cathy, who refused to get out of the car. She made an inaudible excuse and moved to the back seat of the car. When Jenny returned with Pat, Cathy managed to greet them and stayed quiet. The three of them drove for an hour and arrived at a serene lake. The radio was not on during this trip, and Pat talked about his college plans for the whole hour. He was going to Yale, far away from Purdue, Jenny and Cathy's future academic institution. He was happy about settling down at one place for four years. Once the group reached the lake, Pat kept talking. This time, he went on and on about having moved 300 times around the country and being separated from 300 best friends in each city.

"You are exaggerating," Jenny accused Pat. "Maybe you have moved like 20 times."

"And, I have fallen in love only two times," Pat blurted out. "But, you are the real one, Jenn."

"Who was the other one?" Jenny asked, plainly jealous. "You never told me."

"There was this girl in my grade school in Nebraska. I thought we were soul mates. What do kids know! I am sure she does not even remember my name now," Pat recanted. "That was so long ago. I bet she couldn't recognize me if she saw me. Well, I forgot how she looked as well. Oh well! But, you'll never forget me, right?"

As the couple exchanged their stories from their past, they forgot to notice Cathy who was hiding her Cornhuskers cap in her purse. They did not see the disgusted look on her face when Pat caught a fish and dumped it on the bucket. Cathy closed her eyes, unable to see the trembling fish, and stared at the lake.

Which of these is true based on the evidence in the passage?

- A. Cathy is always in a hurry to leave.
- B. Pat tries to converse with Cathy a lot.
- C. Cathy has lived in Nebraska before.
- D. Jenny needs to be a safer driver.

**Question 2 .**

*from The Last Mile*  
by Sarah Orne Jewett

It had been one the warm and almost sultry days which sometimes comes in November: a maligned month, which is really an epitome of the other eleven, or a sort of index to the whole year's changes of storm and sunshine. The afternoon was like spring, the air was soft and damp. The grass looked as if it had been growing green of late instead of fading steadily. It seems like a reprieve from the doom of winter, or from even November itself.

The dense and early darkness which usually follows such unseasonable mildness had already begun to cut short the pleasures of this spring-like day, when a young woman, who carried a child in her arms, turned from the main road of Oldfields into a foot-path which led southward across the fields and pastures. She seemed sure of her way, and kept the path without difficulty, though a stranger might easily have lost it here and there. The path led among the patches of sweet-fern or bayberry bushes, or through shadowy tracts of small white pines. She stopped sometimes to rest, and walked more and more wearily, with increasing effort. She kept on her way desperately, as if it would not do to arrive much later at the place she was seeking. The child seemed to be asleep; it looked too heavy for so slight a woman to carry.

The path led after a while to a more open country, there was a low hill to be climbed, and at its top the slender figure stopped and seemed to be panting for breath. A follower might have noticed that it bent its head over the child's for a moment as it stood, dark against the darkening sky. There had formerly been a fortress on this hill, which in the daytime commanded a fine view of the surrounding country, and the low earthworks or foundations of the garrison were still plainly to be seen. The woman seated herself on the sunken wall in spite of the dampness of increasing chill, still holding the child, and rocking to and fro like one in despair.

The child waked and began to whine and cry a little in that strange, lonely place, and after a few minutes, perhaps to quiet it, they went on their way. Near the foot of the hill was a brook, swollen by the autumn rains; it made a loud noise in the quiet pasture, as if it were crying out against a wrong or some sad memory. The woman went toward it at first, following a slight ridge which was all that remained of a covered path which had led down from the garrison to the spring below at the brookside. If she had meant to quench her thirst here, she changed her mind, and suddenly turned to the right, following the brook a short distance, and then going straight toward the river itself and the high uplands, which by daylight were smooth pastures.

It was night now; it was too late in the year for the chirp of any insects; the moving air, which could hardly be called wind, swept over in slow waves, and a few dry leaves rustled on an old hawthorn tree which grew beside the hollow where a house had been, and a low sound came from the river. The whole country side seem asleep in the darkness, but the lonely woman felt no lack of companionship; it was well suited to her own mood that the world slept and said nothing to her. It seemed as if she were the only creature alive.

**Directions: Select all the correct answers.**

Which **two** pieces of evidence from the passage suggest that the woman travels for a specific purpose?

The path led after a while to a more open country, there was a low hill to be climbed, and at its top the slender figure stopped and seemed to be panting for breath.

The path led among the patches of sweet-fern or bayberry bushes, or through shadowy tracts of small white pines.

She seemed sure of her way, and kept the path without difficulty, though a stranger might easily have lost it here and there.

She stopped sometimes to rest, and walked more and more wearily, with increasing effort.

She kept on her way desperately, as if it would not do to arrive much later at the place she was seeking.

**Question 3 .**

Most of us cook our food in an oven that requires wood, propane, or electricity. Solar ovens, on the other hand, only require the rays of the sun as an energy source. There are over 60 different types of solar ovens, but most operate according to the same basic principles. Solar cooking is a process that concentrates sunlight on a reflective surface, converts light to heat, and traps heat inside a container. The oven is placed in direct sunlight and left until the food inside is thoroughly cooked. Cooking time varies according to the type of solar oven, the amount of sunlight, and the quantity of food.

Solar ovens are generally cheap to purchase and operate. A simple Internet search can provide many tips on making your own oven from household items. Although solar ovens provide a less fuel-intensive way to cook, they do have some disadvantages. They take longer to heat food than conventional ovens, and they do not work well on cloudy or rainy days. For a growing number of people, the advantages of cooking by the sun's power far outweigh the minor disadvantages. Why not buy or make your own solar oven today?

Which of the following sentences from the passage **best** supports the idea that solar ovens are financially affordable?

- A. A simple Internet search can provide many tips on making your own oven from household items.
- B. Although solar ovens provide a less fuel-intensive way to cook, they do have some disadvantages.
- C. Most of us cook our food in an oven that requires wood, propane, or electricity.
- D. Cooking time varies according to the type of solar oven, the amount of sunlight, and the quantity of food.

**Question 4 .****The New Deal**

In order to combat the economic devastation caused by the Great Depression, Franklin Roosevelt had Congress pass a series of bills known as the New Deal. Its aim was to put a stop to the economic downturn and help America recover from years of financial deprivation.

Roosevelt based the ideals of the New Deal on three foundations. First, "Relief" was the idea that those Americans in need would need immediate support. Second, "Reform" was the idea that American business centers needed to be reformed to ensure the tragedy would not happen again. Third, "Recovery" was the idea that the New Deal would help the economy recover so that it would be stronger than before the Great Depression.

The New Deal closed the banks, created government programs that would protect the banks should they fail in the future, and took the United States off the gold standard. This created a more elastic economy that allowed financial centers to bounce back if the dollar continued to fail. The New Deal also called for the federal government to spend billions of dollars putting America to work. Roosevelt knew that Americans were a proud people. While some might take charity, the president knew all of them would take honest work. The mobilized workers built dams, railroads, power stations, highways, canals, and levies against floodplains. It was a new face on an old country. New buildings sprung up everywhere. The workers built Hoover Dam, one of the largest dams in the world, in a little less than five years. A network of interstate highways spread from coast to coast and border to border. Roosevelt's New Deal gave Americans heart again after having lost so much during the Great Depression.

The plan was not without its opponents, however. Critics screamed that the New Deal was bald-faced communism while still others called it fascism. Roosevelt denied these opponents' claims directly. In one of his Fireside Chats, he said that though some might try to scare Americans by calling the New Deal communism or fascism, it was the "right" thing to do. He said Americans were in need, and now they were working to build a better country. Opponents also pointed out that unemployment had not returned to its lowest point before the Depression. They complained that Roosevelt could not balance the budget, and the United States was slipping further into debt. Roosevelt said that the increased spending was necessary to stabilize the nation. Most Americans sided with Roosevelt, as he continued to win elections.

Eventually, the United States entered World War II, and unemployment virtually disappeared. Factory production skyrocketed, and the United States government spent even more money by purchasing weapons, equipment, and ammunition from American companies. The federal government spent more money during World War II than it ever did during the years of the New Deal. This catapulted the American economy into superpower status as early as 1946, a status the country still enjoys today.

Which quote from the article supports the New Deal was a good financial idea?

- A. "The New Deal also called for the federal government to spend billions of dollars putting America to work."
- B. "Critics screamed that the New Deal was bald-faced communism while still others called it fascism."
- C. "Opponents also pointed out that unemployment had not returned to its lowest point before the Depression."
- D. "Roosevelt's New Deal gave Americans heart again after having lost so much during the Great Depression."

**Question 5 .**

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Which example best supports that Cathy finds fishing hard to enjoy?

- A. the fact that she does not sing along with Jenny
- B. toward the end, her hiding of the Cornhuskers cap
- C. in the last paragraph, the look of disgust on her face
- D. her inability to back out from the fishing trip



**Question 6 .**

John Deere was born in Rutland, Virginia, on February 7, 1804. At age 17, he became an apprentice blacksmith to Captain Benjamin Lawrence, and he opened his own shop four years later. Trouble with creditors plagued him, however, and he sold his shop and moved to Illinois after only a few years to avoid declaring bankruptcy.

Deere's time in Illinois was to prove life changing. He noticed that the wrought-iron plows used by local farmers were ineffective in the tough Illinois soil. In 1837, he developed and manufactured the first effective cast-steel plow. He sold the first of his plows to a neighbor, and by 1841, he was manufacturing 75-100 plows each year.

By 1868, Deere turned his success with "the plow that broke the plains" into the financially successful Deere & Company. He also focused on civic activities. He served as mayor of Moline, Illinois, and he improved much of the city's infrastructure by installing street lights and fire hydrants and creating a city park. John Deere passed away at his home in 1886, and his company remains one of the foremost manufacturers of agricultural machinery in the world.

Which of the following **best** explains the success of Deere's invention?

- A. Illinois farmers preferred to buy from local businesses.
- B. The cast-steel plow was better suited to Illinois soil.
- C. The wrought-iron plow was too expensive for farmers.
- D. Cast iron was manufactured more cheaply than wrought iron.

**Question 7 .**

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According to the article, what is one downside of cooking with solar ovens?

- A. They are complicated to assemble.
- B. They are dependent on sunny weather.
- C. They can overheat and cause serious burns.
- D. They are expensive to buy and maintain.

**Question 8 .**

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According to the article, what caused John Deere to move to Illinois?

- A. He wanted to sell his new cast-steel plow.
- B. He wanted to escape his financial problems.
- C. He wanted to expand Deere & Company.
- D. He wanted to run for mayor of Moline, Illinois.

## Question 9 .

### The Summer of Rain

by A. Gautam

Maya looked at the overcast sky and hesitated before stepping out. She looked back to the bed where her little brother lay sleeping. Mihir had been in bed for the last two days. The fever had gone down, but he still appeared pale as buffalo's milk. His eyes were the color of turmeric powder. Although Mihir was eating and keeping his food down, Maya knew that he needed another dosage of medicine. The city doctor was far away, and Maya vaguely remembered his address. Maya rushed to the bed to feel Mihir's forehead one last time and decided to leave for the city. She had been unable to make up her mind the whole morning. *I have to go now if I want to be home by sunset*, Maya thought to herself and ordered her mind to be calm. After leaving several notes explaining the whereabouts of the food, juice, and herself all over Mihir's room, Maya wrapped the shawl tightly around her arms. She locked the house from the outside and left.

After walking a few blocks, Maya remembered that she needed her rubber boots and umbrella. Maya said a few inaudible words of anger at her lack of attention, rushed back to the porch where she had left the umbrella and her boots, and resumed her journey with quicker steps. Maya had no idea that she could almost run in those awkward boots when she needed to. The whole time she was walking toward the city, Maya fretted over the important things she might have forgotten to do. Her feet mechanically moved in the direction of her destination. She failed to notice that not even stray dogs were out in this weather. *It doesn't even feel like summer*, Maya thought, wishing she had worn a jacket instead of her mother's shawl. The sun was nowhere to be seen among the grey clouds, and Maya had already lost the track of time.

"In the monsoon months  
It rains to make me wet  
How to I console  
My one lonely heart?"

Maya started singing so she would not feel alone. Now, she had understood why her mother always sang while doing chores. She would sing while doing dishes, cooking, or cleaning the house. *Wow! Ma sings all the time*, Maya realized. Because her mother sang so much, her house had felt unusually quiet without her. *If I had brought along the radio, I would have at least known when they unblocked the roads!* Maya laughed thinking of all the things she planned on carrying for one trip she was taking to the city. "Like I am going on a voyage!" she said out loud and thought about her mother who often spoke to herself—accidentally.

"Take care of each other, we'll be back in two days," Maya remembered her mother's words. *Two days have turned into four long ones, Ma!* she thought and realized that her feet had carried her to the city. She found herself standing near the auto rickshaw stop and talking to several drivers. Only one driver agreed to take her all the way to Dr. Ram's clinic. Maya asked about the auto rickshaw fare in advance because she had to spare enough money for the medicine. She also asked him if he was certain about the location of the clinic.

"The doctor Ram's clinic? Forty Rupees," the driver said and looked curiously at her. "And, I know about every street in Kathmandu."

Only at that moment did she realize that it was not a good idea for a girl to get in an auto rickshaw alone. "No thanks! But, can you give me directions to go there?" she asked.

"How about you split the fare with another customer going that way? It will take you at least two hours to get there on foot. I will make sure you share the seat with a lady," the driver said.

Maya contemplated about the offer when an elderly woman approached the driver and asked him if he could take her to Thimi.

"Hey, girl, the clinic is on the way to Thimi! I won't even charge you for the fare if the lady agrees. I will try to find a customer coming back this way so I can drop you here when you are done at the clinic. You can split the fare again. I am not this kind every day so hop in before it rains," the driver said, smiling.

"Yeah. I don't mind, but you have to hurry up. It will rain soon," the woman persuaded Maya.

"Will you put on the radio while we go there? I have to hear the news about the landslide," Maya asked the driver and climbed in to the auto rickshaw. "I didn't know people in the city are also nice like us."

"Sure," the driver said as he started the engine and turned on the radio. "I am also from the countryside, though. Why is a young girl like you out alone in this weather anyway?"

"My brother is sick. I have to get him medicine," Maya replied. As she carefully listened to the news on the radio, she smiled. The blockade was over. Now, her parents could be home by tonight. She hoped to be home before they did so she could give Mihir one more dose of the medicine.

Which example supports the idea that Maya resembles her mother?

- A.** Maya hardly remembers directions.
- B.** Maya is bold and fearless like her.
- C.** Maya likes to listen to the radio.
- D.** Maya sings and talks to herself.

## Question 10 .

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It can be concluded from this passage that

- A.** Dr. Ram is unaffordable for many.
- B.** Dr. Ram offers free treatments.
- C.** Dr. Ram often makes house calls.
- D.** Dr. Ram is a well-known person.

# Explanations

1. The passage implies that Cathy has recently moved from the Midwest. She also hides the Cornhuskers cap in her purse. Cornhuskers is the logo for Nebraska's football team. It can be concluded from the passage that Cathy has lived in Nebraska before.
2. The choices "She seemed sure of her way, and kept the path without difficulty, though a stranger might easily have lost it here and there" and "She kept on her way desperately, as if it would not do to arrive much later at the place she was seeking" are the best support for the suggestion that the woman travels with a specific purpose. The first sentence notes that the woman "seemed sure of her way," and it indicates that she is not a stranger to the area. The second sentence shows that the woman is seeking a specific place, which confirms she travels with a specific specific purpose in mind.
3. In this article, the author states, "A simple Internet search can provide many tips on making your own oven from household items." This information supports the author's idea that "solar ovens are generally cheap to purchase and operate."
4. The article points out that many Americans were suffering because of economic hardship. The quote, "Roosevelt's New Deal gave Americans heart again after having lost so much during the Great Depression," shows that the New Deal worked to restore Americans' faith in America.
5. The passage implies that Cathy does not like fishing. She does not participate in the activity. In fact, she bears a look of disgust when Pat catches a fish and dumps it on the bucket.
6. In the second paragraph, the author calls wrought-iron plows "ineffective in the tough Illinois soil." Deere's cast-steel plow, however, is described as "effective." The third paragraph states that the cast-steel plow became known as "the plow that broke the plains." This information suggests that the cast-steel plow was better suited to Illinois soil than other plows; therefore, it became successful in Illinois.
7. In the second paragraph, the author states that solar ovens "do not work well on cloudy or rainy days." This implies that solar ovens, unlike conventional ovens, are dependent on sunny weather.
8. According to the text, John Deere had problems with creditors, and he "sold his shop and moved to Illinois after only a few years to avoid declaring bankruptcy." This information suggests that Deere moved to Illinois to escape his financial problems.
9. The fourth paragraph of this passage shows the activities Maya and her mother have in common. Maya finds herself singing while walking just as her mother does while doing housework. Also, Maya talks to herself as she has noticed her mother doing.
10. In this passage, Maya enquires about Dr. Ram's clinic to the auto rickshaw drivers even though she does not know his address. In addition, the driver who offers to take her there also knows about the clinic. Because Dr. Ram's name seems to be common knowledge for people, it is safe to conclude that he is a well-known person.

# Textual Evidence

## Question 1 .

Thousands of students head off to college each year during the fall. They go to a variety of schools around the nation. This is done in the pursuit of higher education and experience. In college, they get to choose the field that interests them. For the most part, college is seen as a rite of passage into adulthood. In most cases, students are on their own for the very first time. Students are able to make their own decisions without the guidance of their parents.

However, some parents seem to have a hard time letting go of their children when it's time for college. As always, parents have been an integral part of their children's lives. Parents feed, clothe, and educate their children into their adulthood. They even help their children choose a college. Now, with technology, parents can be constantly connected with their children. They can check up on their children by calling, text messaging, or e-mailing. This constant connection makes parents more reluctant to let go of their children.

Because of the growing problem of "hovering" parents, colleges have started to create programs that make the transition easier for parents. Last year, 97% of colleges in the U.S. and Canada had programs for parents of incoming students. These programs prepared to parents to say goodbye. The University of California, Los Angeles created an orientation just for parents. The orientation kept parents and students separated in workshops intended only for parents. These workshops featured topics about financial aid, dorm room life, and academics.

Read the following sentence from the passage.

Last year, 97% of colleges in the U.S. and Canada had programs for parents of incoming students.

Which argument does this sentence support?

- A. Clingy parents are a growing problem for colleges.
- B. Incoming students dictate the programs at their colleges.
- C. Students prefer colleges with programs for parents.
- D. Parents enjoy learning just as much as their children.



**Question 2 .**

Video games have entertained since 1967 when the first console was created. It was called the Brown Box, which started with the game with two squares that chased each other. The creators followed up with 12 more games. Following this innovation, video games flourished. They could amuse children and adults for hours with their different stages that have varying levels of difficulty.

Although video games are enjoyed by many, its critics see them as detrimental to children and society. The critics consider video games to be like television. They fail to see that video games have benefits. According to the Office of Naval Research, video games help adults understand information faster. Games also help with improving reasoning and problem solving skills. Like adults, teens see these improvements when they play video games. On top of that, teens use the games to socialize with other people their age. This allows them to practice their social skills.

In addition, playing video games can benefit a person's mental health. Researchers believe that video games can alleviate stress and worry. In one instance, playing games helped relieve depression because it made the person focus on the game instead of the sorrow that consumed him or her. Video games can distract a person with entertaining characters and levels. Games, like Tetris, require full concentration to solve high-level puzzles. Other times, role-playing games can engross a person with far-off adventures. In addition, video games also can improve attention spans of children who have difficulty concentrating on school and homework.

Which detail from the passage supports the claim that playing video games is advantageous?

- A. On top of that, teens use the games to socialize with other people their age.
- B. They could amuse children and adults for hours with their different stages that have varying levels of difficulty.
- C. The critics consider video games to be like television.
- D. Following this innovation, video games flourished.

**Question 3 .**

**Directions: Select the correct text in the passage.**

Read the statement below.

Jim Sturgis does not allow opposition to affect his determination.

Which sentence from the passage best supports this statement?

*from Science VS. Luck*  
by Mark Twain

At that time, in Kentucky (said the Hon. Mr. K——), the law was very strict against what is termed "games of chance." About a dozen of the boys were detected playing "seven up" or "old sledge" for money, and the grand jury found a true bill against them. Jim Sturgis was retained to defend them when the case came up, of course. The more he studied over the matter, and looked into the evidence, the plainer it was that he must lose a case at last—there was no getting around that painful fact. Those boys had certainly been betting money on a game of chance. Even public sympathy was roused in behalf of Sturgis. People said it was a pity to see him mar his successful career with a big prominent case like this, which must go against him.

But after several restless nights an inspired idea flashed upon Sturgis, and he sprang out of bed delighted. He thought he saw his way through. The next day he whispered around a little among his clients and a few friends, and then when the case came up in court he acknowledged the seven-up and the betting, and, as his sole defense, had the astounding effrontery to put in the plea that old sledge was not a game of chance! There was the broadest sort of a smile all over the faces of that sophisticated audience. The judge smiled with the rest. But Sturgis maintained a countenance whose earnestness was even severe. The opposite counsel tried to ridicule him out of his position, and did not succeed. The judge jested in a ponderous judicial way about the thing, but did not move him. The matter was becoming grave. The judge lost a little of his patience, and said the joke had gone far enough. Jim Sturgis said he knew of no joke in the matter—his clients could not be punished for indulging in what some people chose to consider a game of chance until it was *proven* that it was a game of chance. Judge and counsel said that would be an easy matter, and forthwith called Deacons Job, Peters, Burke, and Johnson, and Dominies Wirt and Miggles, to testify; and they unanimously and with strong feeling put down the legal quibble of Sturgis by pronouncing that old sledge was a game of chance.

**Question 4 .**

Predictably, the world's growing population has increased the demands for many resources. The most prominent of these are the roads that span a city. With so many people across the globe, it is no surprise that roads are frequented by more and more drivers. Therefore, this rise in use can cause many problems. Among these problems is the high level of traffic congestion.

Many times, cities grow too fast and cannot accommodate the large number of drivers. As a result, during peak times, roads can be gridlocked for hours or even days. Traffic jams can cause further difficulty when car accidents happen and construction work occurs. These can make traffic come to a standstill because they can block multiple lanes, limiting the flow of traffic. Furthermore, these issues can cause the cars to run out of gas while waiting to move.

This is especially a problem in China where the population has grown so much that traffic jams are an ordinary occurrence. Of China's 1.3 billion people, there are 199 million drivers. In addition, the country has developed into the leading buyer of cars in the world. The Chinese buy over 13 million vehicles each year. These cars range from motorcycles to small-sized passenger vehicles.

On China's National Expressway 110, traffic jams can last over a month because of construction or road work. The expressway does not have the capacity for a large quantity of cars. In addition, minor accidents and stalled cars contribute to the lengthy delay. In August of 2010, one traffic jam leading into Beijing spanned 60 miles and lasted for days. To solve this problem, 400 police were sent out to conduct traffic. Because of the traffic jam, many vendors made a profit by selling overpriced food.

Read the following sentence from the passage.

The expressway roads do not have the capacity for large quantity of cars.

Which argument does this sentence support?

- A. The great number of drivers on the road leads to traffic jams.
- B. Local vendors can gain a profit when there are traffic jams.
- C. Traffic jams occur on long stretches of road leading to Beijing.
- D. Automobiles tend to stall and run out of gas on roadways.

**Question 5 .**

Traveling from one place to another can be rewarding because you learn something new about places. Big cities as well as small towns have their own histories and their specialties. Some places are known for growing a particular fruit or vegetable. For example, Poteet, Texas is known for its strawberries. Some places boast that they are the birthplace of a famous person. At whatever spot you end up, there is likely something that makes it unique.

Road trips can help you explore the places along your way. All it requires is a car, a few necessities, and a desire to see new things. These unexpected stops in between can often make the entire trip memorable. They might even be more fun than the original purpose of the trip. Side trips can happen anywhere, from large cities to very small towns.

Read the following sentence from the passage.

Some towns boast that they are the birthplace of a famous person.

Which argument does this sentence **best** support?

- A. The majority of towns throw parades for famous people.
- B. Celebrities most often grow up in small towns and move away.
- C. There is something distinct about each town.
- D. Many places have museums dedicated to educating tourists.

**Question 6 .**

Predictably, the world's growing population has increased the demands for many resources. The most prominent of these are the roads that span a city. With so many people across the globe, it is no surprise that roads are frequented by more and more drivers. Therefore, this rise in use can cause many problems. Among these problems is the high level of traffic congestion.

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Which of the following sentences supports the idea that China's consumerism contributes to the traffic problem?

- A. These cars range from motorcycles to small-sized passenger vehicles.
- B. The Chinese buy over 13 million vehicles each year.
- C. Of China's 1.3 billion people, there are 199 million drivers.
- D. The expressway does not have the capacity for large quantity of cars.

**Question 7 .**

**Directions: Select the correct text in the passage.**

Which sentence from the passage **best** supports the idea that before Salk's team, medical researchers had been unable to combat polio effectively?

**Salk's Polio Vaccine**

In 1953, a medical researcher named Jonas Salk attempted to inoculate himself, his family, and other volunteers with an injection for the polio virus. Salk was testing his research in hopes that his discoveries could be used to prevent polio epidemics, or outbreaks, across the United States and the world. Building on the research of previous scientists and doctors, Salk developed a polio vaccine by growing large numbers of the virus in test tubes. Salk then killed the virus with formaldehyde and used this dead virus to create vaccines for immunization. Once injected in a person's body, the dead virus lacked the ability to infect but still triggered an immune response that produced polio antibodies and prevented future polio infections. Analyzing their test results, Salk and his team were thrilled to see that their vaccine caused the immune system to produce polio antibodies without making a person ill. After years of research, scientists finally felt they had the upper hand in the expensive and prolonged battle against polio.

Researchers believe polio has been around for thousands of years. However, scientists did not identify the virus until 1908. Since the early 1900s, increased polio outbreaks in the United States caused a growing hysteria among many Americans. In 1916, a polio outbreak in New York City killed 2,000 people. Future US President Franklin Delano Roosevelt became ill with polio in 1921, and the infection caused lifelong paralysis in his legs. In 1952, the United States dealt with 57,000 cases of polio—the most cases ever in a single year.

In 1954, the government approved a massive vaccination trial test using Salk's vaccine for over one million children in the United States. The next year, scientists announced that the vaccination trial had been a success: the vaccine prevented polio infections in 80% to 90% of people. Soon thereafter, the government approved the vaccine and began delivering the vaccine across the country. The success of Salk's polio vaccine helped eliminate the virus from the United States and other parts of the world.

**Question 8 .**

Traveling from one place to another can be rewarding because you learn something new about places. Big cities as well as small towns have their own histories and their specialties. Some places are known for growing a particular fruit or vegetable. For example, Poteet, Texas is known for its strawberries. Some places boast that they are the birthplace of a famous person. At whatever spot you end up, there is likely something that makes it unique.

Road trips can help you explore the places along your way. All it requires is a car, a few necessities, and a desire to see new things. These unexpected stops in between can often make the entire trip memorable. They might even be more fun than the original purpose of the trip. Side trips can happen anywhere, from large cities to very small towns.

How does the author support the claim that places have a specialty?

- A. by listing the directions to the places
- B. by giving an example of a small town
- C. by describing the people in the places
- D. by comparing small towns to big cities

**Question 9 .**

With the coming of summer, there are many activities that the warmer weather allows people to do. It gives them a chance to change up their routine. Different physical activities can be done outside, and the natural surroundings can be enjoyed as well.

People can experience the great outdoors with sports, either as a player or a spectator. Most often, water sports are popular during this time of the year. The coolness of the water offsets the hotter temperatures. Sports, like water volleyball and polo, combine fun with physical activity. This allows people to exercise in an enjoyable way instead of a regimented plan. Watching summer sports can also be entertaining because they are different from other seasonal activities.

Besides taking part in water sports, people can find pleasure in their natural surroundings. During the summer, nature is at its height in which most flowers are fully matured. Therefore, hiking trips are a great way to come into contact with the environment. These excursions outdoors can be done locally, or they can take place in foreign locations. Like sports, hiking combines amusement with exercise.

Read the following sentence from the passage.

Therefore, hiking trips are a great way to come into contact with the environment.

Which argument does this sentence support?

- A. Road trips become enjoyable in the summer because of the weather.
- B. To get acquainted with the environment, exploration needs to occur.
- C. Hiking through foreign locations is a good way to see the world.
- D. The summer is an excellent time to enjoy the great outdoors.

**Question 10 .**

In theory, there is a distinct difference between each meal that you eat each and every day. Breakfast is clearly breakfast, lunch is lunch, and dinner is dinner. In reality, however, the line between each meal can be hazy. There are no laws about which meal is appropriate during which time. Therefore, there should be no restrictions in what you can eat from one part of the day to the next.

Most often, breakfast foods include eggs, meat, pancakes, toast, cereal, and oatmeal. However, breakfast is only said to be the first meal of the day because you are breaking the fast from the previous day. It is considered the most important meal of the day. Breakfast is said to give the body nutrition and improve concentration. There are no known rules or guidelines about what the meal should consist of to be called breakfast. The same goes for lunch and dinner.

The type of food that you eat is important because it should benefit you. Breakfast foods that are high in sugar can make you feel extremely hungry after eating them. They only satisfy you at that moment. As a result, it is best to eat breakfast foods with high fiber, such as vegetables and fruit, to help keep hunger in check. They also help keep you healthy because you're not eating all the time. Such foods are essential for lunch and dinner as well, so there cannot be a clear-cut choice for meals. Meals should be composed of foods that are good for you and should not be dismissed because they are not eaten at the "right" time.

Read the following sentence from the passage.

In reality, however, the line between each meal can be hazy.

Which argument does this sentence support?

- A. Meals should not be confined to only certain types of food.
- B. Times for meals are not clearly designated around the world.
- C. Breakfast, lunch, and dinner can be eaten one after the other.
- D. Each food item in a meal should be carefully kept apart.

# Explanations

1. In the third passage, the author describes how some colleges tried to solve the problems with "hovering" parents. The sentence best supports the argument that clingy parents are a growing problem; therefore, colleges have had to create orientation for parents.
2. In the passage, the author notes the benefits of playing video games. Therefore, the sentence that best supports this idea would reveal a reason why video games are beneficial. In this case, they help teens learn social skills.
3. The sentence "But Sturgis maintained a countenance whose earnestness was even severe" best supports the statement that Jim Sturgis does not allow opposition to affect his determination. Sturgis is described as being an admired and respected lawyer, even though the others in the court believe that he has no chance to win his case. However, Sturgis is not affected by these opinions. He continues to maintain his resolve even when others do not take him seriously.
4. This sentence can be found in the fourth paragraph in which it is noted that the roadways cannot accommodate for the large amount of cars. Therefore, the great number of drivers leads to traffic jams.
5. This sentence can be found in the first paragraph, which discusses how places likely have something unique about them. Therefore, the sentence that supports this idea would reveal how towns try to be distinct from one another. The correct answer is "There is something distinct about each town."
6. In the passage, the author notes that the Chinese population is the leading buyer of cars, which contributes to the traffic problem. To support this claim, it is best to reference the number cars sold to the Chinese people each year.
7. Based on the information in the passage, the reader can infer that medical researchers had been unable to combat polio effectively before the discovery of a polio vaccine by Salk's team of scientists. The sentence that best supports this idea is "In 1952, the United States dealt with 57,000 cases of polio—the most cases ever in a single year" because only two years before the release of Salk's polio vaccine, the United States dealt with its worst polio epidemic on record. Salk's polio vaccine was a crucial discovery in the fight against polio because up to that point, medical researchers had been relatively unable to protect people against polio infections.
8. In the first paragraph, the author notes that places have something special about them. In this case, he or she provides an example of a small town, Poteet, Texas, which is known for growing strawberries.
9. This sentence can be found in the third paragraph in which it is noted that the summer is good time to enjoy nature. Therefore, the given sentence best supports the argument that notes that summer gives people a chance to enjoy the great outdoors.
10. This sentence can be found in the first paragraph, which introduces the idea that meals should not have to consist of what is deemed to be a breakfast, lunch, or dinner food. The author notes that some foods can be a part of other meals; therefore, the lines between meals is a bit hazy. The author argues that meals should not defined by certain types of food.

# Interpret Expressions

## Question 1 .

Which of the following interpretations for the given expression is correct?

$$5(x + 8)^2$$

- A. The sum of 5,  $x$ , and 8 squared.
- B. The quotient of 5 and the square of  $x + 8$ .
- C. The product of 5 and the square of  $x + 8$ .
- D. The product of 5 and the sum of  $x$  and 8 squared.

## Question 2 .

Steve purchased a set of golf clubs for his son from Super Golf. The sale price of the set of golf clubs is represented by the expression below.

$$x - 0.5x$$

Which statement best describes  $0.5x$ ?

- A. It is the amount of the tax.
- B. It is the amount of the discount.
- C. It is the price per golf club in the set.
- D. It is the cost of the set of golf clubs.



**Question 3 .**

Susie bought a rectangular rug for her living room that had a square pattern. Each square on the rug has a side length of  $s$  inches. The length of the rug was 3 inches longer than 8 times the length of one side of one square in the pattern. She found the area of the rug in square inches with the equation shown below.

$$A = 40s^2 + 39s + 9$$

Which statement best describes the term  $(40s^2)$ ?

- A. the area of the rug that is covered by squares
- B. the width of the rug
- C. the perimeter of the squares on the rug
- D. the area of the rug that is not covered by squares

**Question 4 .**

**Directions:** Drag the tiles to the correct boxes to complete the pairs.

Match each expression to the correct interpretation.

the sum of the cube of  $4x$   
and 1

1 added to the product of 4  
and the cube of  $x$

the cube of the sum of  
 $4x$  and 1

4 times the cube of  
the sum of  $x$  and 1

$(4x + 1)^3$	←→	
$(4x)^3 + 1$	←→	
$4(x + 1)^3$	←→	
$4x^3 + 1$	←→	

**Question 5 .**

Which of the following interpretations for the given expression is correct?

$$Pr^t$$

- A. The product of  $P$ ,  $r$ , and  $t$ .
- B. The product of  $P$  and  $r^t$ .
- C. The quotient of  $t$  and  $Pr$ .
- D. The product of  $P$  and  $r$ , raised to the power of  $t$ .

**Question 6 .**

The officials at a stable counted the number of horses. They expect the number of horses to increase every five years. The approximate number of horses at the stable,  $t$  years after the count was taken, is shown by the following expression.

$$100(1.75)^{\frac{t}{5}}$$

Which statement below best describes the coefficient, 100?

- A. the rate at which the number of horses is increasing
- B. the initial horse count
- C. the increase in the number of horses at the stable every five years
- D. the number of times the number of horses has compounded since it was counted

**Question 7 .**

The capacity,  $C$ , of a liquid required for an experiment is based on a needed output of  $n$  units and can be modeled by the equation below.

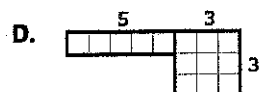
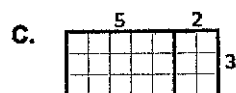
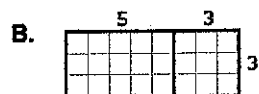
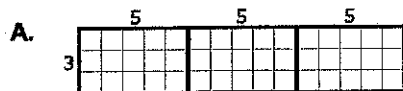
$$C = 1.44n^{\frac{1}{3}}$$

Which of the following best describes the coefficient of  $n^{\frac{1}{3}}$ ?

- A. 44% of the output units needed cubed
- B. 144% of the cube root of the output units needed
- C. 44% of the cube root of the output units needed
- D. 144% of the output units needed cubed

**Question 8 .**

Which diagram represents the meaning of the following expression?  
 $(5 + 3) \times 3$

**Question 9 .**

$(-a)^n$  is negative

If  $a$  is a real number and  $n$  is a positive integer, which of the following represents all values of  $a$  and  $n$  such that the above statement is true?

- A.  $\{a \mid a \text{ is positive}\}$  and  $\{n \mid n \text{ is even}\}$
- B.  $\{a \mid a \text{ is negative}\}$  and  $\{n \mid n \text{ is odd}\}$
- C.  $\{a \mid a \text{ is negative}\}$  and  $\{n \mid n \text{ is even}\}$
- D.  $\{a \mid a \text{ is positive}\}$  and  $\{n \mid n \text{ is odd}\}$

**Question 10 .**

Brenda is opening a savings account which compounds interest quarterly. Her banker gave her the following expression to find the amount that will be in the account, in dollars, after  $t$  years.

$$4,100(1.05)^{4t}$$

Which statement below best describes the exponent,  $4t$ ?

- A. the amount of the yearly earnings
- B. the number of times the account has compounded since it was opened
- C. the rate at which the account is increasing
- D. the amount of the initial deposit



# Explanations

1. Consider the mathematical expression associated with each answer choice.

The sum of 5,  $x$ , and 8 squared.

$$5 + x + 8^2$$

The quotient of 5 and the square of  $x + 8$ .

$$\frac{5}{(x + 8)^2}$$

The product of 5 and the sum of  $x$  and 8 squared.

$$5(x + 8^2)$$

The product of 5 and the square of  $x + 8$ .

$$5(x + 8)^2$$

Therefore, the interpretation below is correct.

**The product of 5 and the square of  $x + 8$ .**

2. Since the expression represents the sales price of the set,  $x$  represents the original price of the set, and  $0.5x$  is the amount of the discount.
3. The formula for the area of a rectangle is shown below.

$$A = l \cdot w$$

The length of the rug is 3 inches longer than than 8 times  $s$ , so the length of the room is represented by  $(8s + 3)$ .

To find the width of the rug, divide the area of the rug by the length of the rug using long division.

$$\begin{array}{r}
 8s + 3 \overline{) 40s^2 + 39s + 9} \\
 \underline{-(40s^2 + 15s)} \phantom{+ 9} \\
 24s + 9 \\
 \underline{-(24s + 9)} \\
 0
 \end{array}$$

So, the width of the rug is represented by  $(5s + 3)$ , and the complete equation for the area of Susie's rug is shown below.

$$40s^2 + 39s + 9 = (8s + 3)(5s + 3)$$

The term  $40s^2$  is the product of  $8s$  in the length and  $5s$  in the width.

Since the variable  $s$  represents the side length of each square, the length of the rug includes 8 side lengths, and the width of the rug includes 5 side lengths.

The product of the 8 side lengths and the 5 side lengths is the area of the squares on the rug.

Therefore, the statement that best describes the term  $(40s^2)$  is **the area of the rug that is covered by squares**.

4. The matches should be completed as shown below.

$$4x^3 + 1 \leftrightarrow 1 \text{ added to the product of 4 and the cube of } x$$

$$(4x)^3 + 1 \leftrightarrow \text{the sum of the cube of } 4x \text{ and } 1$$

$$4(x + 1)^3 \leftrightarrow 4 \text{ times the cube of the sum of } x \text{ and } 1$$

$$(4x + 1)^3 \leftrightarrow \text{the cube of the sum of } 4x \text{ and } 1$$

5. Consider the mathematical expression associated with each answer choice.

$$\text{The product of } P \text{ and } r, \text{ raised to the power of } t. \rightarrow (Pr)^t$$

$$\text{The product of } P, r, \text{ and } t. \rightarrow Prt$$

$$\text{The quotient of } t \text{ and } Pr. \rightarrow \frac{t}{Pr}$$

$$\text{The product of } P \text{ and } r^t. \rightarrow Pr^t$$

Therefore, the correct interpretation is shown below.

### The product of $P$ and $r^t$ .

6. The given exponential expression takes on the following form.

$$P(r)^n$$

In this expression, as  $n$  increases, the value of the expression will increase at a rate of  $r$ . When  $n = 0$ , the expression will be equal to  $P$ .

Therefore,  $P$ , which in this case is 100, represents **the initial horse count**.

7. The variable  $n$  represents the number of output units needed.

Raising a term to the fractional exponent  $\frac{1}{n}$  means taking the  $n^{\text{th}}$  root of the term.

In the equation,  $n$  is raised to the one-third power, which translates to taking the third, or cube, root of  $n$ .

The cube root of  $n$  is multiplied by 1.44, which represents 144% of the cube root of  $n$ .

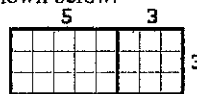
Therefore, the coefficient of  $n^{\frac{1}{3}}$  is described as **144% of the cube root of the output units needed**.

8. The expression can be rewritten as  $(5 \times 3) + (3 \times 3)$ .

This represents the sum of two areas.

One area has a length of 5 and a width of 3 and the other area has a length of 3 and a width of 3.

Therefore, the diagram which represents the expression is shown below.



9. In order for  $(-a)^n$  to be negative,  $a$  must be positive and  $n$  must be odd.

$$\{a \mid a \text{ is positive}\} \text{ and } \{n \mid n \text{ is odd}\}$$

10. The given exponential expression takes on the following form.

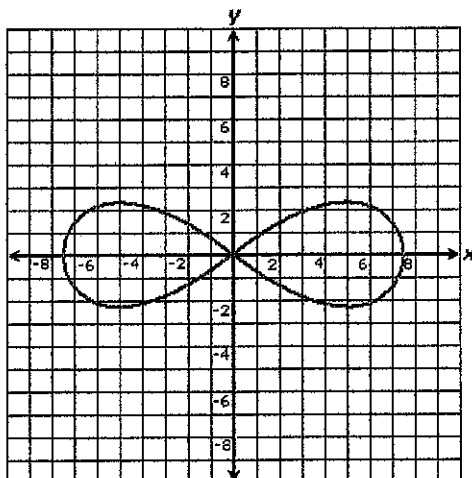
$$P(r)^n$$

In this expression, as  $n$  increases, the value of the expression will increase at a rate of  $r$ . When  $n = 0$ , the expression will be equal to  $P$ .

Therefore,  $n$ , which in this case is  $4t$ , represents **the number of times the account has compounded since it was opened**.

# Functions

## Question 1 .



Using the vertical line test, determine if the graph above shows a relation, a function, both a relation and a function, or neither a relation nor a function.

- A. neither a relation nor a function
- B. relation only
- C. both a relation and a function
- D. function only

## Question 2 .

Rewrite the following equation as a function of  $x$ .

$$31x - \frac{1}{6}y + 10 = 0$$

- A.  $f(x) = \frac{31}{6}x + \frac{5}{3}$
- B.  $f(x) = -\frac{31}{6}x - \frac{5}{3}$
- C.  $f(x) = 186x + 60$
- D.  $f(x) = -186x - 60$

## Question 3 .

Using the notation " $a(x) = \dots$ " corresponds to which of the following?

- A. function notation
- B. function equation and equation notation
- C. neither function notation nor equation notation
- D. equation notation

**Question 4 .**

Do the ordered pairs below represent a relation, a function, both a relation and a function, or neither a relation nor a function?

$(-2,-7)$  ,  $(0,-11)$  ,  $(-2,-23)$  ,  $(7,-25)$

- A. neither a relation nor a function
- B. relation only
- C. function only
- D. both a relation and a function

**Question 5 .**

Which of the following function notations corresponds to the equation below?

$$y - 5.58x = -3$$

- A.  $f(y) = 5.58y - 3$
- B.  $f(x) = 5.58x - 3$
- C.  $f(x) = 3x - 5.58$
- D.  $f(y) = 3y - 5.58$

**Question 6 .**

Jolie is going to draw a parallelogram on a coordinate plane. Will this be a function, relation, function and relation, or neither relation nor function?

- A. neither relation or function
- B. function and relations
- C. function only
- D. relation only

**Question 7 .**

A set of ordered pairs in which there is only one  $y$ -value for each  $x$ -value is called a \_\_\_\_\_.

- A. domain
- B. relation
- C. function
- D. range



**Question 8 .**

Roni recently bought a car for \$27,000. Her research shows the car will depreciate an average of \$1,400 per year. If  $x$  represents the number of years Roni owns the car, which of the following functions represents the value of the car after  $x$  years?

- A.  $f(x) = 27,000 - 1,400x$
- B.  $f(x) = 27,000 + 1,400x$
- C.  $f(x) = 1,400x - 27,000$
- D.  $f(x) = 27,000x - 1,400$

**Question 9 .**

**Directions:** Use the drawing tool(s) to form the correct answer on the provided number line.

Determine the domain of the following function, and graph the domain on the given number line.

$$f(x) = \sqrt{x - 3} + 1$$

Drawing Tools

Click on a tool to begin drawing.

Eraser
Erase
Undo

- Select
- Point
- Open Point
- Line Segment
- Ray

**Question 10 .**

Gus has a lunch food budget of \$250 per month. He spends an average of \$5 per day on lunch. Which of the following functions represents how much money is left in his lunch budget after  $x$  days of buying lunch?

- A.  $f(x) = 250 + 5x$
- B.  $f(x) = 250x - 5$
- C.  $f(x) = 5x - 250$
- D.  $f(x) = 250 - 5x$

# Explanations

1. A *relation* is a set of one or more ordered pairs.

A *function* is a relation in which each element of the domain is paired with EXACTLY one element of the range.

*The Vertical-Line Test:* Given the graph of a relation, if a vertical line can be drawn that does not cross any of the graph in more than one place, it is a function.

Any vertical line drawn between  $x = -7.5$  and  $x = 0$  and any vertical line drawn between  $x = 0$  and  $x = 7.5$  will cross the graph in more than one place.

Therefore, the graph is not a function, and it is a **relation only**.

2. To rewrite the equation as a function of  $x$ , first isolate  $y$  on one side of the equation.

$$31x - \frac{1}{6}y + 10 = 0$$

$$31x - \frac{1}{6}y = -10$$

$$-\frac{1}{6}y = -31x - 10$$

$$y = 186x + 60$$

Then, substitute  $f(x)$  for  $y$  in the equation. This leaves the following as the correct answer.

$$f(x) = 186x + 60$$

3. A function is a relation that assigns to each input number ( $x$ ) exactly one output number. A function is notated  $a(x) = \dots$ , where  $a(x)$  indicates that the output value of the function,  $a$ , depends on  $x$ .

So, the notation " $a(x) = \dots$ " corresponds to **function notation**.

4. A *relation* is a set of one or more ordered pairs.

A *function* is a relation in which each element of the domain is paired with EXACTLY one element of the range.

There are two  $y$ -coordinates (range elements) when  $x = -2$ .

Therefore, it is a **relation only**.

5. The first step is to solve the equation for  $y$ .

$$y - 5.58x = -3$$

$$y = 5.58x - 3$$

In function notation, the variable  $y$  is represented by  $f(x)$ .

$$f(x) = 5.58x - 3$$

6. A *relation* is a set of one or more ordered pairs.

A *function* is a relation in which each element of the domain is paired with EXACTLY one element of the range.

No matter which way the parallelogram is turned, there will be more than one domain with two ranges.

The shape will not pass the vertical line test; therefore, it is a **relation only**.

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7. A set of ordered pairs in which there is only one  $y$ -value for each  $x$ -value is called a **function**.

8. The car's annual depreciation, \$1,400, indicates the rate of change.

Since the car depreciates that amount every year, and  $x$  represents the number of years, -1,400 is the value to be attached to the variable  $x$ .

Further, the depreciation has to be subtracted from the original value of the car, to determine the value after  $x$  years.

Therefore, the function which represents the value of Roni's car, after  $x$  years of depreciation, is  $f(x) = 27,000 - 1,400x$ .

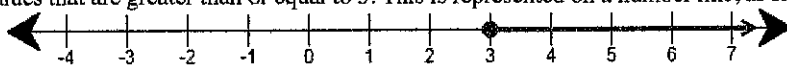
9. The domain of a function is the set of all possible real number inputs for the function.

Taking the square root of a negative number will produce a solution that is not a real number. So, set the expression under the square root symbol to be greater than or equal to zero to determine what values are possible inputs for  $x$ , as shown below.

$$x - 3 \geq 0$$

$$x \geq 3$$

So, the domain includes all values that are greater than or equal to 3. This is represented on a number line, as shown below.



10. The cost per lunch per day, \$5, indicates the rate of change.

Since  $x$  represents the number of times Gus buys lunch, -5 is the value to be attached to the variable  $x$ .

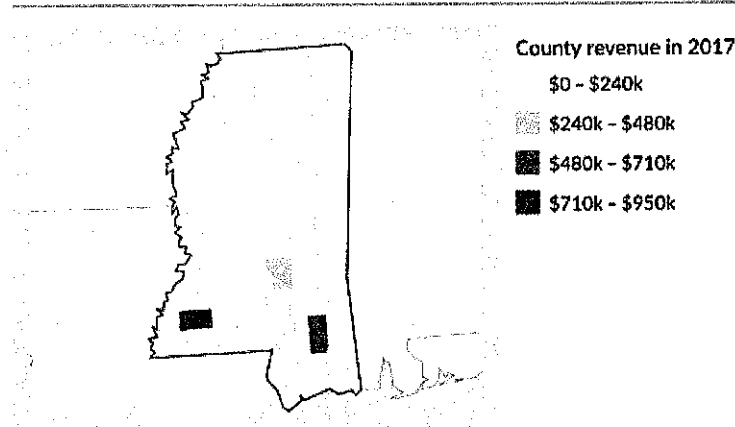
Further, the amount he spends on buying lunch has to be subtracted from his original budget in order to determine how much money is left in his budget.

Therefore, the function which represents the amount of money left in his lunch budget, after  $x$  days of buying lunch, is  $f(x) = 250 - 5x$ .

# Physical Features and Regions of Mississippi

## Question 1 .

### REVENUE COLLECTED BY COUNTY



*Data courtesy of the Department of the Interior*

This map shows the amount of revenue the government collected in taxing natural resource production in various counties in 2017.

Based on the image, which of the following statements about natural resource production in Mississippi is true?

- A. The most natural resources come from rivers in the state.
- B. One county produces the majority of natural resources.
- C. The southern part of the state has more valuable resources than the north.
- D. Energy production is much more valuable than agricultural production.

## Question 2 .

The Pearl River forms part of the border between Mississippi and which other state?

- A. Arkansas
- B. Louisiana
- C. Tennessee
- D. Alabama

**Question 3 .**

**MISSISSIPPI - 2010 Census Results**  
 Percent Change in Population by County: 2000 to 2010

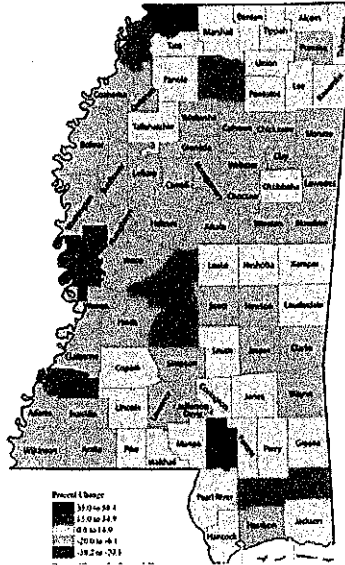


Image courtesy of the U.S. Census Bureau

This map shows changes in the population from the 2000 to the 2010 census. The green areas grew in population and the purple areas saw a decline in population.

Based on the evidence presented in the map, which of the following statements about population trends in Mississippi is true?

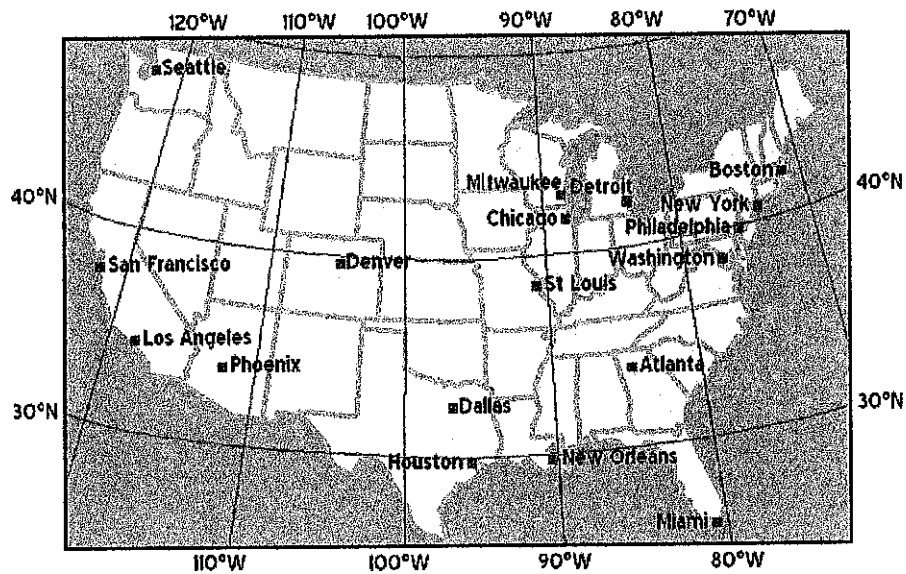
- A. More people are leaving Mississippi than entering.
- B. The Mississippi government is encouraging people to move east.
- C. The Delta region is experiencing a significant decline in population.
- D. The Gulf Coast is experiencing a population boom.

**Question 4 .**

The Piney Woods region of Mississippi separates the Central Prairie from which area?

- A. the Black Prairie
- B. the Northern Prairie
- C. the Eastern Prairie
- D. the Native Prairie

## Question 5 .



Which of the following pairs of geographic coordinates are located in Mississippi?

- A. 88°W, 37°N
- B. 95°W, 31°N
- C. 92°W, 33°N
- D. 89°W, 33°N

## Question 6 .

Which of the following serves as the western border of the state of Mississippi?

- A. The Mississippi River
- B. The Gulf of Mexico
- C. The Smoky Mountains
- D. The Ozark Mountains

## Question 7 .

What do Hancock County, Harrison County, and Jackson County all have in common?

- A. They are located on the Arkansas border.
- B. They are located on the Louisiana border.
- C. They are located on the Gulf Coast.
- D. They are located on the Pearl River.

**Question 8 .**

Which of the following terms **best** describes Mississippi's climate?

- A. oceanic
- B. savannah
- C. humid subtropical
- D. subtropical highland

**Question 9 .**

Compared to other regions in Mississippi, the Delta region **most likely** produces

- A. more seafood.
- B. less timber.
- C. more minerals.
- D. less agriculture.

**Question 10 .**

Mississippi's northern border is shared with the state of

- A. Tennessee.
- B. Arkansas.
- C. Louisiana.
- D. Alabama.

# Explanations

1. The southern part of Mississippi is rich with minerals and oil deposits in the gulf. Compared to the northern part of the state, **the south has more valuable natural resources.**
2. The Pearl River forms part of the border between **Louisiana** and Mississippi. The river makes up the southwestern border of Mississippi and empties into the Gulf of Mexico.
3. The Delta region is located along the western border of the state. Most of the counties in the Delta region are purple, indicating they have experienced a decline in population. Thus, **the Delta region is experiencing a significant decline in population.**
4. Along the northern edge of the Piney Woods lies the narrow Central Prairie, separated from **the Black Prairie** by a section of hills and woods. The Black Prairie has very fertile soil that is good for agriculture.
5. The map shows that the coordinates **89°W, 33°N** are located in Mississippi. Geographic coordinates like longitude and latitude represent the absolute location of a given place.
6. **The Mississippi River** serves as the western border of the state. The natural landscape of the Mississippi River divides Mississippi from Arkansas and Louisiana. It is very common for geographical features such as rivers to serve as political boundaries.
7. The Gulf Coast region of Mississippi is in the southern part of the state. Three counties have land that border the Gulf of Mexico—Hancock, Harrison, and Jackson. Thus, all three of these counties are **located on the Gulf Coast.**
8. The climate of Mississippi is mostly **humid subtropical**. The area is defined by mild winters and hot, humid summers. Mississippi is well-suited for agricultural production.
9. The Delta region, located in the northwestern part of the state, is quite flat and suitable for farming. It does not, however, have a lot of forests compared to other regions. Therefore, the Delta region would likely produce **less timber.**
10. Mississippi shares its northern border with the state of **Tennessee**. Arkansas and Louisiana are to the west, while Alabama is to the east.