

MCMS
7th Grade
NTI Packet
Day 11

MCMS

7th Grade Math

NTI Day #11

Name _____ Date _____ Class _____

LESSON 1-5

Reteach

Order of Operations

To help you remember the order of operations use the phrase "**P**lease **E**xcuse **M**y **D**ear **A**unt **S**ally."

> **P**: first, **p**arentheses (if any)
> **E**: second, **e**xponents (if any)
> **M** and **D**: then, **m**ultiplication and **d**ivision, in order from left to right
> **A** and **S**: finally, **a**ddition and **s**ubtraction, in order from left to right

Evaluate. $39 \div (9 + 4) + 5 - 2^2$

Parentheses $\longrightarrow$ $39 \div 13 + 5 - 2^2$

Exponents $\longrightarrow$ $39 \div 13 + 5 - 4$

Multiply and divide from left to right $\longrightarrow$ $3 + 5 - 4$

Add and subtract from left to right $\longrightarrow$ $8 - 4 = 4$

Simplify each expression.

1. $12 \cdot 4 - 2$

_____ $- 2$

_____

2. $15 \div 3 \cdot 5$

_____ $\cdot 5$

_____

3. $15 \cdot 3 \div 5$

_____ $\div 5$

_____

4. $8 + 20 \div 4$

_____

5. $5 - 2 \cdot 6 \div 4 + 1$

_____

6. $3^2 + 6 \cdot 4 - 5^2$

_____

7. $1 + 4 \cdot 9 \div 6 - 7$

_____

8. $18 \div (6 \div 3)$

_____

9. $(18 \div 6) \div 3$

_____

10. $4 \cdot 5 + 8 \div 2 - 7$

_____

11. $2 \cdot 3 - 8 \div 2^2$

_____

12. $8(7 - 6) \div 2^3$

_____

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Name _____ Date _____ Class _____

LESSON 1-5

Problem Solving

Order of Operations

Write the correct answer.

1. In 1975, the minimum wage was $2.10 per hour. Write and simplify an expression to show wages earned in a 35-hour week after a $12 tax deduction.

_____

2. George bought 3 boxes of Girl Scout cookies at $3.50 per box and 4 boxes at $3.00 per box. Write and simplify an expression to show his total cost.

_____

3. In 1 week Ed works 4 days, 3 hours a day, for $12 per hour, and 2 days, 6 hours a day, for $15 per hour. Simplify the expression $12(4 \cdot 3) + 15(2 \cdot 6)$ to find Ed's weekly earnings.

_____

4. Keisha had $150. She bought jeans for $27, a sweater for $32, 3 blouses for $16 each, and 2 pairs of socks for $6 each. Simplify the expression $150 - [27 + 32 + (3 \cdot 16) + (2 \cdot 6)]$ to find out how much money she has left.

_____

Choose the letter for the best answer.

5. As of September 1, 1997, the minimum wage was set at $5.15 per hour. How much more would someone earn now than in 1997 if she earns $5 more per hour for a 40-hour week?

   A $206 more

   B $200 more

   C $406 more

   D $400 more

6. Gary received $200 in birthday gifts. He bought 5 CDs for $15 each, 2 posters for $12 each, and a $70 jacket. How much money does he have left?

   F $31

   G $10

   H $132

   J $169

7. Yvonne took her younger brother and his friends to the movies. She bought 5 tickets for $8 each, 4 drinks for $2 each, and two $3 containers of popcorn. How much did she spend?

   A $22

   B $51

   C $54

   D $38

8. On a business trip, Mr. Chang stayed in a hotel for 7 nights. He paid $149 per night. While he was there, he made 8 phone calls at $2 each and charged $81 to room service. How much did he spend?

   F $246

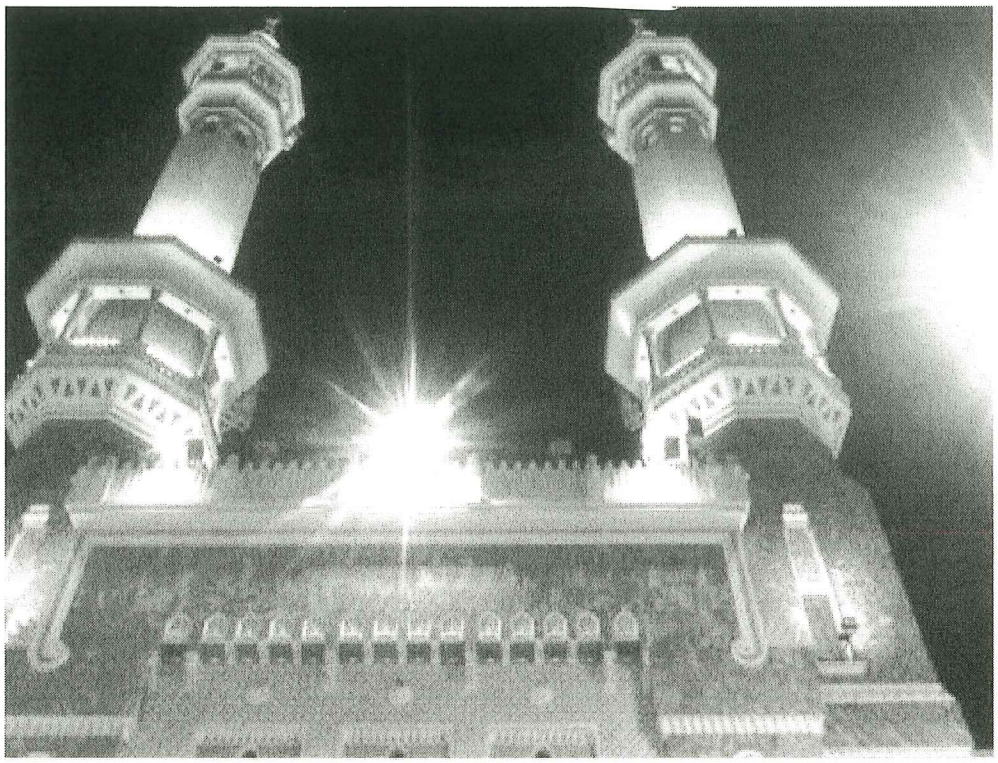
   G $946

   H $1,043

   J $1,140

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Islam



Islam is the second most practiced religion in the world, with approximately 1.6 billion practitioners making up nearly a quarter of the world's population. Though they live all over the world, practitioners of the Islamic faith (known as Muslims) are most commonly found in northern Africa, the Middle East, and Southeast Asia. Only Christianity, with its 2.1 billion believers, outranks Islam in terms of sheer numbers. Both Islam and Christianity, like Judaism, are monotheistic religions, which means they teach faith in one god. Actually, all three religions believe in the same God. These religions also teach that God made a covenant with a man named Abraham; thus, they are called the "Abrahamic religions." Much in the same way Jesus Christ established Christianity by adding new teachings to the Jewish canon, Muhammad founded Islam by sharing his personal revelations from God. Though Jesus is the son of God according to Christian tradition, in the Islamic faith, both he and Muhammad are referred to as prophets.

Muhammad was born during the late sixth century, around the year 570 A.D., in the Arabian city of Mecca. He died on June 8, 632, but not before leaving his mark on history and humanity. Muhammad was a man of deep faith, and upon returning home from a prayer retreat in his fortieth year, he told his family that he had received a revelation - a message from God. One of the messages he relayed to the people who began to follow him was that "God is one." This has been interpreted as meaning that there is only one unique and universal God in existence. The Arabic word *Allah* literally means "the God." Muhammad taught that Allah commands the creation of all things in the universe. He is so great that humans cannot truly comprehend him or his reach of influence. In addition, Muhammad preached that everyone's mission in life must be to worship Allah and live virtuously. People who

follow Muhammad's teachings and act according to the will of God can reach *Jannah*, the Islamic paradise. In Jannah, during the afterlife, all of a person's worldly desires will be fulfilled.

After Muhammad had gained some popularity, the wealthy and elite members of his community began to treat him with hostility. Many rejected his teachings in favor of the traditional polytheistic religion. In 622 A.D., he led those who chose to follow him on a migration to a neighboring city, which Muhammad renamed Medina. This event became known as the Hijra and marked the beginning of the Islamic calendar. The Hijra sparked a tremendous growth in the Islamic religion, as Muhammad's number of followers grew to nearly 10,000 in the eight years following; after settling down in Medina Muhammad invited numerous other tribes to join him.

In spite of the peaceful manner with which Muhammad solicited the neighboring Jewish tribes, he could not achieve peace so easily with those in his homeland. There were numerous skirmishes between Muslims and Meccans, some going remarkably well for the Muslim forces. But not always- during the Battle of Uhud, Muhammad's own uncle, Hamza, was slaughtered. He had been a champion of Islam and a strong fighter in previous battles. The fact that he died bravely defending his beliefs made him a martyr. Though they lost the Battle of Uhud, the Muslims rallied around their fallen comrades and survived to continue spreading the word of the Prophet.

In 628 A.D., the Muslims and the Meccans wrote a peace treaty so that Muslims could make the annual pilgrimage to Mecca for religious purposes. To back up the treaty, neighboring tribes were asked to choose sides and support their allies in the event of a treaty violation. Eventually, one of the allied tribes broke the agreement, and Muhammad decided to support his own ally, who had been attacked. By this time his forces outnumbered the Meccans, so he planned a surprise attack on the city of Mecca itself. Because the Meccans were unprepared for battle, they chose to surrender peacefully. Thus, in 630 A.D. Muhammad won back control of Mecca without shedding a drop of blood. Also, in spite of the many years of persecution suffered by Muslims, he refrained from exacting vengeance or forcing conversion to Islam. Those who let the Muslims peacefully inhabit the city were allowed, in turn, to go about their own business. Many of the inhabitants of the city were so impressed by this generosity, as well as by the popularity of the new religion, that they converted to Islam willingly.

Having successfully entered Mecca, Muhammad and his followers were able to complete the holy pilgrimage to the Ka'aba. The Ka'aba was originally the site where the angel Gabriel created a spring to save the life of Abraham's son Ishmael around 2000 B.C., but in the following millennia it had become a holy destination for pagan as well as Christian Arabs. However, when Muhammad led the Muslims on the pilgrimage in 630 A.D., they tore down the pagan symbols and re-consecrated it as the main shrine of Islam. To this day, the pilgrimage to Mecca, called the Hajj, is one of a Muslim's most sacred duties.

In spite of the great victory at Mecca, the fighting was not over. As Muhammad continued to send out envoys and missionaries to the neighboring tribes, threats continued to come from across the Arabian Peninsula. However, Muhammad soon succeeded in uniting the entire peninsula under Islam.

Finally, in the year 631 A.D., nine years after his first migration into Medina and soon after the local civil wars had ended, Muhammad led his followers on the farewell pilgrimage. At his Farewell Sermon, Muhammad instructed his people to end violence for revenge or profit. In pre-Islamic days, violence was always met with violence. In the new Islamic community, there would be peaceful justice. He also spoke in favor of equality and respect for all fellow Muslims. Muhammad would die in

Medina just a few months later, after falling ill.

After Muhammad's death, a book was completed with Muhammad's teachings that he said were messages from God. The book became known as the Qur'an (pronounced: kor-AHN), a word that translates as "the reading." There are disagreements among different Islamic groups and Western scholars over when and how the Qur'an was created. Regardless, Muslims believe that the words in the Qur'an are the revelations Muhammad received from God through the angel Gabriel. These messages were transmitted over the course of about twenty-three years, beginning during that important prayer retreat in 609 A.D.. Because of this belief and its poetic style, Muslims stand firm that the Qur'an is a one-of-a-kind manuscript, the final and most holy of God's revelations.

The second most important holy text in Islam is the Sunnah, a guide for how to interpret the Qur'an and live a perfect life in accordance with God's will, as exemplified by how Muhammad lived his life. The word *Sunnah* means "a clear and well-trodden path." Muslims look to the Qur'an and Sunnah not only for spiritual guidance, but also for solutions to all the problems of mankind.

Today there are many different sects of Islam, whose interpretations of the holy texts vary widely. In the same way that different Christian and Jewish denominations teach similar values with different practical emphases, Muslims are divided by their definitions of scriptural truth. However, they all respect the Qur'an as the ultimate statement of God's will. The message received from Muhammad hundreds of years ago remains impressively intact as the guiding ethic for the world's second most popular religion.

Name: _____ Date: _____

1. What happened when Muhammad was approximately 40 years old?

A. He informed others that he had received a revelation from God.

B. He led those who chose to follow him to Medina.

C. The number of his followers grew to 10,000.

D. He fell ill and died.

2. The author describes the sequence of events in Muhammad's life. Which of the following events occurred before the Battle of Uhud, in which Muhammad's uncle was slaughtered?

A. Muhammad died in Medina after falling ill.

B. Muhammad led his followers on a pilgrimage and delivered his Farewell Sermon, instructing his people to end violence for revenge or profit.

C. Muhammad led his followers to Medina.

D. Muhammad won control of Mecca and succeeded in uniting the Arabian Peninsula.

3. Read the following sentences: "After Muhammad's death, a book was completed with Muhammad's teachings that he said were messages from God... The second most important holy text in Islam is the Sunnah, a guide for how to interpret the Qur'an and live a perfect life in accordance with God's will, as exemplified by how Muhammad lived his life... Muslims look to the Qur'an and Sunnah not only for spiritual guidance, but also for solutions to all the problems of mankind."

What can be concluded about Islam based on this information?

A. Islam spread only after The Qur'an was created.

B. Islam became a religion after Muhammad died.

C. Islam is deeply rooted in the teachings of Muhammad.

D. Islam is based on different interpretations of Muhammad's teachings.

4. Which of the following words best describes the early beginnings of Islam?

A. tumultuous

B. peaceful

C. surprising

D. mysterious

5. What is this passage mainly about?

A. the differences of the three "Abrahamic Religions"

B. religious conflicts in Mecca and Medina

C. Muhammad and Islam

D. wars among different religions

6. Read the sentence: "Because the Meccans were unprepared for battle, they chose to surrender peacefully. Thus, in 630 CE Muhammad won back control of Mecca **without shedding a drop of blood**."

What does the author mean by saying, "**without shedding a drop of blood**"?

A. The Muslims killed many Meccans without suffering any losses themselves.

B. No one was killed during battle to take control of Mecca.

C. Many people were bruised, but they did not bleed.

D. Muhammad himself was not injured during the takeover of Mecca.

7. Choose the answer that best completes the sentence below.

_____ Islam, Christianity, and Judaism have differences, they are all rooted in the covenant God made with Abraham.

A. Since

B. Because

C. Although

D. However

8. List at least two similarities that Islam shares with Christianity and Judaism.

9. In 628 CE, the Muslims and the Meccans wrote a peace treaty so that Muslims could make the annual pilgrimage to Mecca for religious purposes. What did Muhammad decide to do after one of the allied tribes broke the treaty?

10. Explain an important characteristic Muhammad had that made him a strong leader. Use information from the passage to support your answer.

Name Date Class

7th Science
Day 11 (1 page)

SECTION 1 Enrichment

Really Hot Stuff

Thousands of people living on the eastern side of the Sierra Nevada mountain range in California are directly affected by a major volcanic eruption that occurred over 760,000 years ago. At that time the Long Valley Caldera was formed. A caldera is any broad crater-like basin that results from the collapse of a volcano.

Today the Long Valley Caldera is about 15 km wide and 30 km long. It has been constantly monitored since an earthquake in 1980 indicated increased activity beneath the areas near Mammoth Lakes and much of Inyo and Mono counties.

The current series of eruptions has been going on for the past 5,000 years. They are caused by underground explosions that blast molten rock (magma), rock fragments, and ash rising from 150 m to as high as 10 km or more. It is the ash deposits that can cause the most damage to the landscape for hundreds of kilometers.

Hot Springs and Fumaroles

One of the byproducts of this ongoing sub-surface "cooking" is a remarkable series of hot springs, fumaroles (steam vents), and resulting mineral deposits called a hydrothermal system. The system's springs are found mostly in the eastern portion of the caldera. The altitude there is lower. The fumaroles are found in the higher western half. This underground hot water system is receiving close attention from the U.S. Geological Department as well as scientists from all the counties affected by the frequent minor eruptions. The effects of the movements on plant life, trees, above-ground waterways, as well as the possibilities of future eruptions are being monitored.

A Handy Energy Source

One of the benefits of these springs is that the residents of the Mammoth Mountain area can use geothermal heat as an energy source. This energy is converted into electricity by turbines in a local hydrothermal power plant. However, as volcanic activity continues the future of the Mammoth hydrothermal power station is uncertain.

Fortunately there have been no volcanic eruptions in the area for about 200 years, but the earthquakes are still numerous. The most obvious signs of activity beneath the surface are found in the springs located in Little Hot Creek and Hot Creek Gorge. As little as 30 years ago, it was possible to sit or swim in these waters. But today they are fenced off and tourists stand in awe as the waters boil and spout scalding water high into the air.

1. What is the name for an area created by a collapsed volcano?

_____

2. Approximately how long ago did the eastern Sierra suffer a major catastrophic eruption?

_____

3. What byproduct of an eruption causes the greatest threat to the landscape?

_____

4. In what fairly recent year did the earthquake occur that brought so much attention to the Mammoth Lakes area?

_____

Meeting Individual Needs

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7th Eng. Day 11

The Run [The Run Series, #1]



Dennis and Mac had been driving for almost a week, and they hadn't seen a single soul. They were worried. When they'd left the ranch, they'd thought maybe they'd run into someone, another survivor. But there was no one. The roads were almost empty. There was the occasional abandoned car, but that was it. They drove mostly on highways, to make better time. Mac wondered if they might not have better luck on the smaller country roads, but Dennis wouldn't have it. Those roads had curves and were thick with trees. There was no way of seeing danger coming. If someone wanted to spring a surprise on you, you wouldn't know it until it was too late.

When the plague came, Dennis and Mac had been working as ranch hands on a cattle farm. Both had just finished their first year of college. Dennis went to school on the East Coast, Mac on the West. They found that they were very similar people. They both studied hard and read a lot of books. But they also both liked being outdoors. At the end of a good day, they came home smelling of sweat and dirt. They quickly became friends.

The ranch was a small, family-run operation, with only about 50 head of cattle. The family that ran it, the Greersons, would advertise in college newspapers in the spring. There were plenty of ranch hands in the area who needed work, but Bucky Greerson felt city kids could benefit from an exposure to country life. Young men would apply, and then the Greersons would hire about a half-dozen hands every spring to help them run cattle. It was tough work, but Dennis and Mac felt lucky to be picked.

The farm didn't have a TV or the Internet or a telephone. As a result, the first they heard of the plague was on the radio. Every night, the ranch hands liked to gather in the mess hall and play cards. While they played, they listened to the radio. The ranch was so far up in the hills that the radio only got one station. At night they listened to the station's best DJ, Petey "The Muskrat" Coltrain, who spun old bluegrass records. Sometimes, between records, The Muskrat told stories. Dennis and Mac thought he was hilarious.

One night, though, The Muskrat's radio show was very different. It couldn't have been more than six months ago, but to Dennis and Mac, thinking back on it now, it felt like another lifetime. The Muskrat had been playing a cheery Bill Monroe song, "Footprints in the Snow," when he cut out the record halfway through the chorus. The ranch hands stopped their game of Gin Rummy. They turned and looked at the radio. The Muskrat always played a record all the way through. What could be wrong?

"Folks," said the Muskrat. "I don't know how to tell you this, but I'm going to ask you to stay very calm.

The manager of my station has just passed me a note. It seems that the local health authorities are asking us radio folks to tell you, our listeners, that... well, a disease is spreading."

The ranch hands put down their cards. Dennis and Mac exchanged a glance.

"Now," The Muskrat said, his rich voice sounding uncharacteristically shaky, "they don't quite know what this disease is, but it's real bad. It's very contagious, and people who get it don't have a lot of luck recovering. Now, doctors are trying to figure out a cure, but there's been no luck yet. So, in the meantime, we're asking that you stay in your homes as much as possible and avoid public places until the disease dies down."

One of the ranch hands, a big, cocky boy named T.J., laughed. "Like heck I'm not going into town," T.J. chuckled. "I got a date." The other ranch hands stared at him. T.J. stopped laughing.

"Please, folks, do what the doctors say," The Muskrat pleaded. "I'm sure it'll just be for a few days." He was quiet for a moment. Then the ranch hands heard the sound of a turntable needle hitting the record, and an old Earl Scruggs song came on.

That was the beginning of it. For the next few days, the ranch went about its business. The Greersons told the boys not to worry, that this would all be over soon. They had enough food on the ranch to last months. In the meantime, there were plenty of new calves that needed branding. At night, everyone gathered around the radio and listened to updates. The news seemed only to get worse. More and more people were getting sick. The symptoms were strange. People would become violently ill, then fall into a long, deep sleep. The big cities - New York, Los Angeles, Chicago - had become like ghost towns. No one would go out into the street for fear of catching the disease.

The news kept getting worse until, finally, the radio station stopped transmitting. The Greersons called a meeting in the dining room of the main house. Everyone sat around the big dining room table where Ann Greerson served Sunday supper. After everyone was seated, Bucky Greerson stood up. He was a short, plump man with a droopy handlebar mustache. You wouldn't think it looking at him, but his voice boomed.

"Now," he said, "I know you're worried about your families, and I don't feel right chaining you here while you don't know what's become of your people. So, anyone who wants to leave is free to go. Ann and I will make do."

Dennis and Mac looked at each other. They'd talked about leaving but had tried to pretend they wouldn't need to. They had hoped the plague would be over soon, that the world would return to the way it was, that it had all been a strange hallucination. Now that they had the option to venture out into the world, to see how bad things really were, they weren't sure they wanted to know.

"By a show of hands," Bucky Greerson asked, "how many of you want to leave?"

Mac and Dennis looked around. They were the only two with their hands up.

The Greersons gave them enough food to last a couple weeks - corn bread and apples and cured ham and syrupy peaches in mason jars. Mac and Dennis packed up their things and loaded everything into Mac's truck, a sputtering old pickup. The Greersons and the ranch hands gathered around to see them off.

"Be safe, boys," said Ann Greerson, kissing them each on the cheeks and hugging them hard. "And remember your manners." As Mac and Dennis pulled away, they saw her husband holding her, her body shaking with sobs.

A week later, Mac and Dennis had zigzagged through dozens of small towns and a few larger cities. What they found frightened them: every place was empty. Not a person was out. Sometimes, they would stop and knock on doors. No one would answer. If they went inside, they wouldn't find a single soul home. Sometimes they'd find the dinner table set, plates piled high with molding food. Every time they entered a new room, they both winced, thinking they'd find a dead body. But they never did. It was indescribably eerie.

Sometimes, if the place still got electricity, they'd try to use the phone. Every time, no matter what number they dialed, the same recorded message came on: "The number is not in service. Please check the number and try again."

Finally, the young men decided to make tracks to the nearest big city. It would be a full day of driving, but there had to be someone there. You can't abandon a whole city.

Dusk had come, and Mac was at the wheel. Dennis had been driving for the last eight hours and was taking a nap in the passenger seat. They were passing through a long, flat piece of pastureland when Mac saw a flicker of movement in the distance. He stopped the car, turned off the engine and shook Dennis awake.

"Look," Mac said excitedly. "I think someone's coming."

Dennis squinted his eyes. The flicker of movement was becoming larger. What had been a dot of motion became a long line, stretching across the horizon. Mac and Dennis strained to see.

"I think it's some people," said Dennis. "Let me get my binoculars."

He rustled in his backpack and pulled out his pair. Dennis put them to his eyes and looked through them. Mac heard him gasp.

"My gosh," whispered Dennis.

What he saw was people. Thousands of people. Hundreds of thousands, maybe a million. A swarm of people like the world had never seen. And the people were all running. They were running as fast as they could go, like something was chasing them, or like they were chasing something. As they grew closer, Dennis could just make out the people's faces. Their eyes were wild.

"Start the car," said Dennis.

Ed.: *The tale continues in Part 2, "Refueling."*

Name: _____ Date: _____

1. What news do Dennis and Mac hear on the radio while at the ranch?

A. There is a cattle farm that hires young men to work over the summer.

B. Thousands of people are running as fast as they can across the country.

C. There is a bad disease spreading among people.

D. Food is getting moldy on dinner plates because people are not staying at home.

2. What is the sequence of events at the beginning of this story?

A. The story begins after the disease has struck and then takes the reader back in time to a point before the disease.

B. The story begins before the disease has struck and then takes the reader forward in time to a point after the disease has ended.

C. The story begins as the disease is striking and then takes the reader back in time to a point before the disease.

D. The story begins as the disease is striking and then takes the reader two years into the future.

3. The Muskrat says that the disease is "real bad."

What evidence in the story supports his statement?

A. T.J. wants to go into town even though The Muskrat has advised people to stay in their homes.

B. After The Muskrat warns people about the disease, an old Earl Scruggs song comes on the radio.

C. The Greersons tell the boys not to worry, saying that the disease will end soon.

D. The disease is very contagious, and doctors have not been able to figure out a cure.

4. Why do Dennis and Mac decide to drive to the nearest big city?

A. They want to find a person.

B. They are running out of food and need more.

C. They see thousands of people running.

D. They both like being outdoors.

5. What is this story mainly about?

A. a married couple who own a ranch, the young men they hire to work for them one summer, and the music they listen to together

B. two young men, a mysterious disease, and what happens when they go out to explore after the disease hits

C. a radio DJ, the music he likes to play, and the effect that his song choices have on the people who listen to them

D. a long line of people running through a flat piece of pastureland and what happens when two young men see them

6. Read the following sentence: "More and more people were getting sick. The **symptoms** were strange. People would become violently ill, then fall into a long, deep sleep."

What does the word **symptoms** mean?

A. fears of getting sick

B. signs of a disease

C. serious injuries

D. suggestions that doctors give to patients

7. Choose the answer that best completes the sentence below.

Dennis and Mac are frightened after leaving the ranch _____ the towns and cities they visit have no people in them.

A. although

B. as a result

C. because

D. however

8. What happens to people when they get sick with the disease described in the story?

9. What are the people Dennis and Mac see at the end of the story doing?

10. Is there a connection between the disease and the people Dennis and Mac see at the end of the story? Explain why or why not, using evidence from the story.