MCMS
6th Grade
NTI Packet
Day 15

Day 15 6th Grade Math

Name _____

Reteaching
2-2

Properties of Operations

Commutative Properties You can add or multiply numbers in any order and the sum or product will be the same. **Examples:** $10 + 5 + 3 = 5 + 3 + 10 = 18$ $7 \times 5 = 5 \times 7 = 35$	**Associative Properties** You can group numbers differently. It will not affect the sum or product. **Examples:** $2 + (7 + 6) = (2 + 7) + 6 = 15$ $(4 \times 5) \times 8 = 4 \times (5 \times 8) = 160$
Identity Properties You can add zero to a number or multiply it by 1 and not change the value of the number. **Examples:** $17 + 0 = 17$ $45 \times 1 = 45$	**Multiplication Property of Zero** If you multiply a number by zero, the product will always be zero. **Example:** $12 \times 0 = 0$

Find each missing number. Tell what property or properties are shown.

1. $9 \times 5 = 5 \times$ _____

2. _____ $\times 89 = 89$

3. $(3 + 4) + 19 = 3 + ($_____ $+ 19)$

4. $128 +$ _____ $= 128$

5. _____ $+ 18 = 18 + 12$

6. **Reasoning** What is the product of any number, x, multiplied by 1? Explain how you know.

Name _____

Practice
2-2

Properties of Operations

Find each missing number. Tell what property or properties are shown.

1. $(32 +$ _____ $) + 2 + 7 = 32 + (14 + 2) + 7$

2. $8 + 6 + 12 =$ _____ $+ 12 + 6$

3. $(8 \times$ _____ $) \times 7 = 8 \times (9 \times 7)$

4. _____ $+ 0 = 34$

5. $12 \times 3 = 3 \times$ _____

6. $1 \times$ _____ $= 288$

7. **Reasoning** Write a number sentence that shows why the associative property does not work with subtraction.

8. Which property is shown in $(23 \times 5) \times 13 \times 7 = 23 \times (5 \times 13) \times 7$?

   A Commutative Property of Multiplication
   B Identity Property of Multiplication
   C Associative Property of Multiplication
   D Associative Property of Addition

9. **Writing to Explain** Explain why you do not have to do any computing to solve $15 \times 0 \times (13 + 7)$.

Day

Basic Skills with Decimals Name_____ ID:15

DO NOT USE A CALCULATOR

Date_____ Period____

Find each sum.

1) 457.7 + 220.5

A) 678.2 B) 329.2
C) 753.7 D) 649.705

2) 195.7 + 373.9

A) 539.6 B) 716.5
C) 569.6 D) 665.5

3) 27.733 + 58.8

A) 276.333 B) 320.333
C) 582.133 D) 86.533

4) 36.8 + 259.9

A) 296.7 B) 335.3
C) 167.6 D) 260.2

Find each difference.

5) 385.7 – 136.5

A) 22 B) 249.2
C) 242.4 D) 263.646

6) 394.4 – 267.6

A) 309.6 B) 599.6
C) 143.38 D) 126.8

7) 486.8 – 186.2

A) 441.9 B) 556
C) 300.6 D) 9.2

8) 186.7 – 63.2

A) 419.7 B) 123.5
C) 448.2 D) 610.6

Find each quotient.

9) 6.6 ÷ 0.2

A) 6.8 B) 4.4
C) 1.32 D) 33

10) 3.2 ÷ 4

A) 3.1 B) 7.2
C) 0.8 D) 12.8

11) 7.8 ÷ 2

A) 5.8 B) 4.5
C) 3.9 D) 3.5

12) 4.4 ÷ 0.5

A) 4.7 B) 7.5
C) 8.8 D) 2.2

Find each product.

13) 2.7 × 0.4

A) 8.88 B) 0.68
C) 0.18 D) 1.08

14) 6.1 × 7.4

A) 13.5 B) 50.64
C) 45.14 D) 51.54

15) 1.6 × 1.395

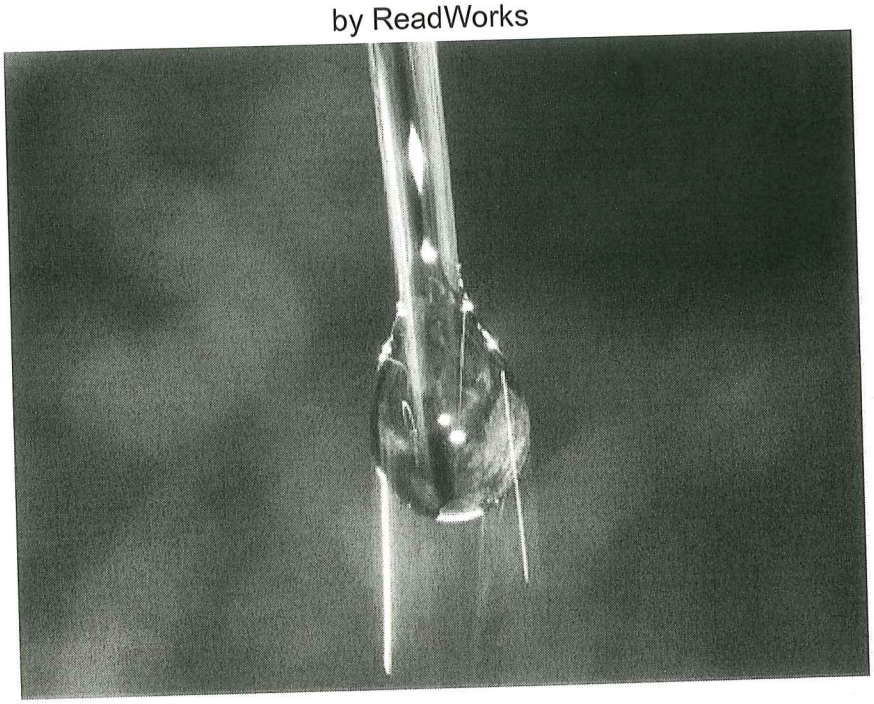
A) 9.132 B) 11.732
C) 2.995 D) 2.232

16) 6.8 × 5.9

A) 39.72 B) 40.12
C) 35.92 D) 34.42

A Drop's Journey

by ReadWorks



What would people learn if they could follow a drop of water wherever it went? They would discover that the water exists permanently, cycling through different states of matter as it travels on its adventure through so many different aspects of the earth. Its journey might not be measured in years but could be measured in states of being-how many times the droplet finds itself to be part of a pool of water in a suburban back yard, locked up in a glacier, floating in a cloud, or part of a massive sea. Let's examine how a tiny drop of water could make its way through so many different circumstances.

Our drop of water is like any other drop of water-it is made of hydrogen and oxygen. In fact, each molecule of our water drop looks exactly the same: two hydrogen atoms linked up with one oxygen atom. This combination of hydrogen and oxygen is simply what makes water what it is.

When we first see our little drop of water, it is part of a huge ocean, the biggest of all the oceans. This little drop of water lives at the bottom of the Pacific Ocean. Being part of the rumbling ocean means it is liquid, of course. It's dark and cold at the bottom of the ocean, and relatively bleak. Every once in a while the water molecule is somehow consumed by a deep-sea dweller, and passes through its body until it eventually rejoins the ocean. As this happens, the little water drop may end up in a different part of the ocean where it is more shallow, and there is less pressure and more light, as some sunlight filters through.

The water droplet continues to sway and move, sometimes finding itself pushed back down into the darkness, but in general moving up, higher and higher, until eventually one cool night, it hits the surface. All of a sudden, instead of water on every edge, the water droplet makes contact with the air. It's resting right on top there, but of course, it stays closely connected to its other oceanic droplets. This tendency to stay connected to other liquid bits of water is what makes water pool together on a table, if you spill a glass. What could force it to abandon its rigid structure, though, is heat. As liquid water is heated, the

individual droplets gain more and more energy. They gain so much energy that they start to bang around against each other with greater and greater force until all of a sudden-pow! The amount of energy the little drop contains is simply too much to be reined in. Instead, the droplet can no longer handle bouncing against its fellow water droplets, and it bursts right out of the body of water and goes straight up into the air. For our little droplet of water, this is exactly what happens the morning after it reaches the top of the ocean. The sun comes out early and throughout the day, and keeps on heating the little drop of water up, hotter and hotter until all of a sudden-pow! Our little droplet of water is lifted up and can no longer call the ocean home.

The water droplet has evaporated, meaning it's gained enough heat to transform from a liquid to a gas. In its new gas state, it is floating up above the ocean into the air. When this happens, all of the salt particles hanging on between water molecules fall, and are left behind. The salt is too heavy for the tiny water droplet to carry it into the sky, so down it stays, making sure the ocean remains salty, even as freshwater rivers run into it, thousands of miles away.

The water droplet continues to rise all the way up, until it's high enough that the air begins to cool down. It's high up in the cool air-the same cool air that makes mountaintops so cool and frigid. And as it gets colder, the droplet of water loses more and more of its energy. It stops bouncing until it slows down dramatically and collides with other drops of water. Rather than separating again, they start to stick. They stick together, with drops of water encasing dust and other small particles that have made it so high up. They stick and continue picking up more and more droplets until they've created the beginnings of a cloud. High up in the sky, the cloud is carried by the wind, across an ocean and finally over the beach. Then it starts to get lower and lower as it collects more and more water droplets.

Soon, enough water is gathered so that the cloud is so heavy that it can start to release some of its water droplets down and back onto the land in big wet drops of rain. Our water droplet falls from the cloud right onto the center of the Rockies, a place that is called the Continental Divide.

The Continental Divide is so named because it represents a stark split across the entire North American continent. The Rocky Mountains are so high they act like a fold in a piece of paper propped up to be a nametag. On one side of the Rockies, all water landing there will trickle down and to the West, so that the droplets of water may eventually reach the Pacific Ocean. On the other side of the Rockies, all water landing there trickles down to the East, and it may eventually reach the Atlantic Ocean. Of course, most of the water will meander amongst the paths of rivers, lakes, bays and clouds on its journey.

Our water droplet falls on the east side of the Continental Divide. Unfortunately, it lands in a small puddle hidden under the shade of a bigger rock. That means it ends up staying there for quite some time, never getting hot enough to pop back into the sky. Months pass, and it grows cold. The next time water falls from the sky, it comes as snow. Cold droplets of water have frozen into tiny solid flakes falling from the sky. It chills our water droplet in the puddle and as the snow packs on, eventually the new drifts meet with a glacier that exists at the top of this mountain. For many months, our water droplet is quiet and still-void of energy and not willing to move. It has crystallized and is joined to its fellow water droplets in a large sheet of frozen ice.

The spring comes and the ice thaws. The water droplet heats up and melts, and as the rest of its snow chunk does, it finds itself propelled forward, trickling all the way down the mountain. This droplet still has so many possibilities-it may trickle all the way into the Atlantic Ocean. Perhaps it will stall and find itself flowing from a natural spring, where it could be collected and bottled, and sent to a grocery store to sit for months on a shelf until someone buys it. Or perhaps it will find its way to your closest lake, and as you dive in, you'll encounter a tiny droplet that has traveled thousands of miles and through several states of being, just to swim next to you.

Name: _____ Date: _____

1. What is the water droplet made of?

A. oxygen and calcium

B. hydrogen and oxygen

C. lithium and oxygen

D. sodium and hydrogen

2. Which of the following states of water are described in the passage?

A. liquid, gas, and ice

B. liquid and gas only

C. liquid and ice only

D. gas only

3. The amount of heat energy in the water droplet determines whether the water droplet can transform from a liquid to a gas. Which evidence from the text supports this statement?

A. The water droplet loses its salt particles when it evaporates into the air.

B. The water droplet gains more and more energy as the liquid water is heated.

C. The water droplets bang against each other when they have a lot of heat energy.

D. The water droplet evaporates when it has gained enough heat to transform from a liquid to a gas.

4. Where in the ocean does the water droplet need to be located in order to evaporate?

A. inside a deep-sea dweller

B. in the middle of the ocean

C. on the surface of the ocean

D. at the bottom of the ocean

5. What is this passage mainly about?

A. how water crystallizes

B. the different states of water

C. the way water evaporates

D. how water moves down a mountain

6. Read the following sentences: "And as it gets colder, the droplet of water loses more and more of its energy. It stops bouncing until it slows down **dramatically** and collides with other drops of water."

What does the word "**dramatically**" tell us about the way the water droplet slows down?

A. It takes a long time for the water droplet to slow down.

B. The water droplet doesn't slow down at all.

C. The water droplet barely slows down.

D. The water droplet slows down a lot.

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

The crystallized water droplet must melt _____ it can trickle down the mountain.

A. although

B. after

C. before

D. never

8. How does the water droplet change throughout the passage?

_____

_____

_____

9. The author writes that the water droplet has evaporated. What does "evaporated" mean?

10. How does heat affect a water droplet's state of matter? Support your answer with evidence from the passage.

6th English
NTI Day#15

Directions

Read this story. Then answer questions 1 through 7.

In Ireland in 1937, Kathleen Murphy represents her dance school at a recital. She scans the audience for her Aunt Polly as she nervously awaits her turn to perform.

Excerpt from *Kathleen: The Celtic Knot*

by Siobhan Parkinson

I put my weight on my left foot and stood with my right foot poised, wondering what on earth I was going to do when the music started, because I couldn't remember even the very first step of the dance. But as soon as I heard the squeezebox[1] leading into my tune, everything that had happened over the past few weeks flew out of my head, and the knowledge of the steps came flooding back.

The split second the bar note sounded, I leaped into action. This was it. Either my legs were going to give way under me and I was going to end up in a heap on the floor with Polly's green curtains all around me, or I was going to dance my heart out. I gave one big, joyful bound and gave myself up to the dance, and the dance did me proud.

I kicked and soared and pranced and whirled, stepped and twirled and spun and flew, tripped and skipped and skimmed and sailed, all over that stage. I hardly knew where I was, and I was completely oblivious to the audience, the strange hall, even the adjudicator,[2] though I knew she must be out there somewhere in the blur of humanity beyond the stage, watching carefully and taking notes. I didn't care about that. I was filled with the joy of the dance, and I didn't give a rattling toss about Tess O'Hara and her sky blue frock and her snooty ways. All I wanted was for the music never to stop, so that I could dance and twinkle and leap in its magic nets forever.

The music did stop, of course, and I did, too; and as soon as I stopped, I knew it was just as well that the music had, because suddenly I was worn out, weak-kneed and panting, fit to collapse.

A terrific noise started up out of nowhere. I thought maybe the roof was coming down or a tremendous thunderstorm had started up, and I stood there, as if nailed to the stage, waiting to be overwhelmed by whatever force it was that had set this thunderous sound in motion. I breathed deeply, blinking and looking around me, still standing center stage, with my toes pointed in front of me and my knee crooked, as I had been taught. Then I realized what the noise was, and I started to smile. It wasn't a natural disaster or a storm.

---

[1] **squeezebox:** slang for an accordion

[2] **adjudicator:** a judge

It was applause, a thunderous clapping and stamping of feet and rocking of chairs. And it was for me, for me and my dance. I beamed. I beamed and beamed until my face ached. I felt like the sun, up there on the stage, the center of a little universe, all eyes toward me, and me beaming and radiating triumph and pleasure and gratitude and exhaustion all at once.

I made a little curtsy, and then I tripped quickly and lightly offstage.

"She's so light on her feet," I could hear people say, as I flew down the steps at the side of the stage. "It's like watching feathers floating on the breeze," some poetic type said. "She's a champion, that's for sure."

They were talking about me, but I'd lost interest now. I wanted to see if Polly was there. I needed to know that she'd seen me dancing. I wanted her to be able to tell my mam about it. Madge and the others wouldn't have the words to describe it, I knew that, and I couldn't describe it myself, but Polly would be able to tell it all with great panache.

I stood near the top of the hall, by the stage, and I scanned the rows and rows of people. A figure was coming toward me, but I couldn't make it out properly in the semi-dusk of the seething room.

"Polly?" I called uncertainly. It couldn't be Polly, though; it was too big and blustering. I was right. It was Mrs. Maguire.

"*Maith thú, a Chaitlín!*" she was saying delightedly, pumping my hand. "Well done, Kathleen! That was a champion performance if ever I saw one. You're my star pupil, do you know that? I'm proud to be your teacher."

I smiled nervously at her. I wasn't used to having my hand shaken, and I certainly wasn't used to people being proud to be my teacher. I kept on smiling, and at the same time I was trying to look around Mrs. Maguire's bulk to see if I could catch a glimpse of Polly's flying figure and wide smile.

Mrs. Maguire moved away then, after giving my hand one last good yank, to talk to another pupil's mother, and as she did so, I spotted Polly, hanging back, waiting for me to finish my conversation with my teacher.

I was so glad to see her. I waved, and she came running forward and scooped me into a tight, tight hug, whirling me around and around the floor at the side of the rows of seats, till I could hardly breathe.

"Did you see me?" I asked when she finally let me go.

"I only caught the end of it, love," she said, "but you were brilliant, absolutely brilliant. You weren't dancing. You were flying!"

"That's what it feels like," I said. "Flying."

1 Read this sentence from lines 10 and 11 of the story.

> **I kicked and soared and pranced and whirled, stepped and twirled and spun and flew, tripped and skipped and skimmed and sailed, all over that stage.**

The author **most likely** includes this description of Kathleen's dancing to

A emphasize that the dance ends quickly

B demonstrate Kathleen's desire for recognition

C provide an image of a spirited performance

D demonstrate Kathleen's skills as a dancer

2 Read this sentence from lines 11 through 14 of the story.

> **I hardly knew where I was, and I was completely oblivious to the audience, the strange hall, even the adjudicator, though I knew she must be out there somewhere in the blur of humanity beyond the stage, watching carefully and taking notes.**

What is the meaning of the phrase "oblivious to" as it is used in this sentence?

A unaware of

B confused by

C scornful of

D afraid of

3 What do lines 10 through 17 **mostly** show about Kathleen?

A Her confidence in her abilities helps her to remember her routine.

B Her delight in dancing allows her to briefly forget her concerns.

C She tries to ignore the unfamiliar setting and the audience.

D She avoids people who are critical about her appearance.

4 Lines 36 through 42 **mainly** develop a central idea of the story by revealing

A the importance of being able to communicate effectively

B that Kathleen has lost interest in the conversation because of her success

C that Kathleen's success is meaningful only if she can share it with her family

D the significance of the support of family members even when they are absent

5 Which detail from the story **best** shows why Polly is important to Kathleen?

A Polly can best describe Kathleen's dance to her mam.

B Polly allows Kathleen to receive praise from her teacher.

C Polly made Kathleen's dress using her own curtain fabric.

D Polly inspired Kathleen to participate in the dance recital.

6 Read this sentence from lines 49 through 51 of the story.

I kept on smiling, and at the same time I was trying to look around Mrs. Maguire's bulk to see if I could catch a glimpse of Polly's flying figure and wide smile.

This sentence suggests that Kathleen

A is surprised by her teacher's presence

B hopes to avoid chatting after her performance

C is trying to be polite even though she is distracted

D feels uncomfortable due to her teacher's compliments

7 How does the author establish the point of view differently in lines 1 through 32 as compared to lines 33 through 61?

A by portraying the narrator's actions rather than sharing only the narrator's feelings

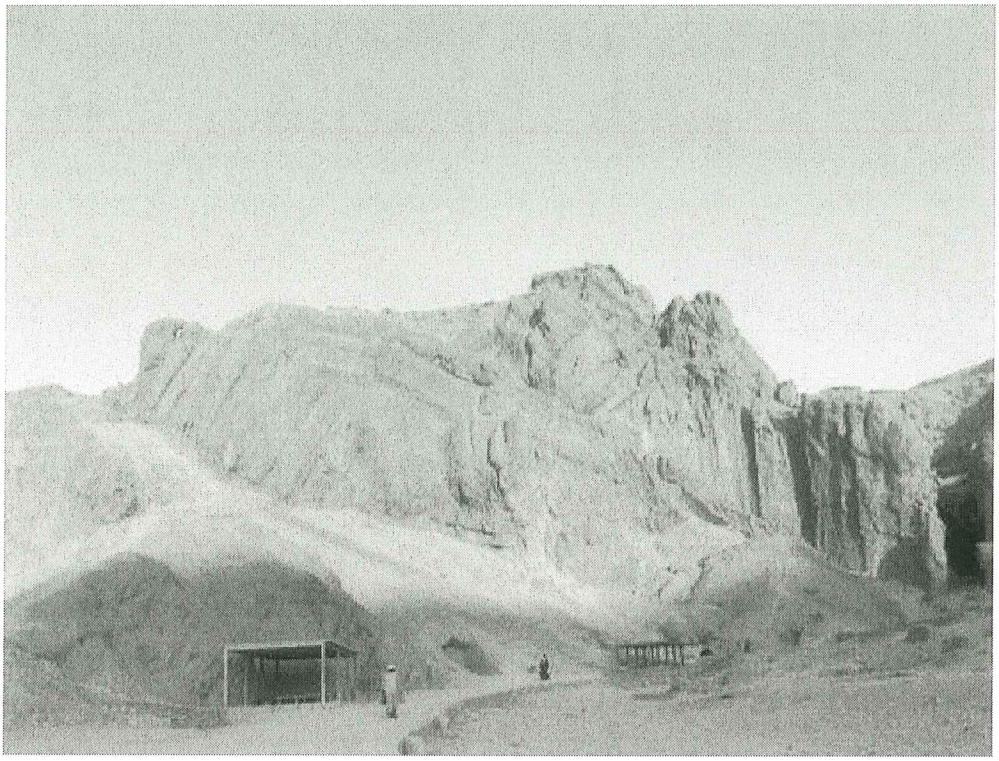
B by describing the narrator's inner thoughts rather than sharing the inner thoughts of all the characters

C by revealing the narrator's intentions through description instead of using description to share the opinions of all the characters

D by revealing the narrator's thoughts only through description instead of through both description and dialogue

Nefertari's Tomb

by Alizah Salario



Valley of the Queens in Egypt

Think about a story involving tomb raiders, a journey into the underworld, and a romance between a glamorous queen and a powerful king. This may sound like the latest Hollywood blockbuster, but it's a script pulled straight from the history books. The story begins with Ramesses the Great, who is known to have ruled Egypt from 1279 B.C. to 1213 B.C. Ramesses had many consorts, but his most beloved wife was Queen Nefertari. She was known for her beauty and for the many Egyptian monuments built in her honor. Nefertari had many nicknames including "beautiful face," "pretty with two feathers," and "appeasing the Gods." When Queen Nefertari died, Ramesses ordered the building of one of Egypt's most extraordinary tombs for her.

Nefertari's tomb is located in Egypt's Valley of the Queens, which hosts more than 70 lavishly decorated tombs belonging to queens, princesses, and other members of the nobility. Queen Nefertari's tomb is considered the most impressive of them all. It's known as the Sistine Chapel of ancient Egypt because of its beautiful decorations and detailed artwork. When it was discovered in 1904 by an Italian Egyptologist, Nefertari's tomb had long before been looted by tomb raiders. They had stolen nearly all of the precious treasures buried with the queen, including her sarcophagus and her mummy. Still, the tomb was an extremely important discovery. The magnificent paintings on the tomb walls are some of the most detailed and well-preserved in all of ancient Egypt. The stories these paintings tell about Queen Nefertari's journey into the underworld shed light on ancient Egyptian beliefs about death and the afterlife.

The ancient Egyptians developed elaborate burial rituals and ornate tombs because they believed in

a life after death. These rituals were designed to help the deceased travel safely into the netherworld and hopefully find paradise in the world beyond. (This is one of the reasons grave robbing was considered such a heinous crime in ancient Egypt. Looters not only took material goods, but, it was believed, stole the deceased's chance at a peaceful afterlife.) Ancient Egyptians believed that when people died, they rode across a lake of fire on the boat of the god Ra. Once they crossed to the other side, they were faced with many challenges and tests on their journey into the underworld.

If you were to tour Nefertari's tomb today, you would first descend steps down into the rock where the tomb was built. Next, enter the antechamber, or vestibule, and notice the grand ceiling painted dark blue and flecked with golden five-pointed stars. On the east wall, notice a huge doorway. The god Osiris stands to the left and Anubis to the right of that opening. These gods are associated with mummification and the afterlife, and, in Egyptian mythology, play an important role in the journey of the deceased. Then cross the threshold into the next room, and examine the paintings of Nefertari being presented to the welcoming gods.

Walk around the room and take a moment to examine a splendid painting of the queen playing a game of senet against an invisible opponent. Perhaps her opponent is fate? (Senet is an ancient Egyptian board game, and sometimes senet game boards were put into graves to provide protection for the journey in the afterlife.) The queen wears a white gown of sheer linen, a gold bracelet, thick collar, and what are probably silver earrings. Her head is adorned with the vulture headdress of a queen. Other paintings in the room depict Nefertari giving special offerings to the gods.

Walk back to the antechamber, and then cross to the north wall, where you will see a stairway. Walk down the stairway, and you will find yourself in the large burial chamber. At one time, the queen's red granite sarcophagus lay in the middle of this chamber. Now carefully study the motifs and decorative pictograms about death and the afterlife on the walls and ceiling. Some of them illustrate ideas from *The Book of the Dead*, an ancient Egyptian funeral text that contained magic spells used to help dead people on their voyage to the underworld. Some of the scenes tell the story of Nefertari's meetings with gods and monsters, and in some cases they offer information about ceremonies concerning the afterlife. These images also provide information on the special roles of many major and minor gods that were important during Nefertari's time in Egypt's period called the New Kingdom. On the door of the burial chamber, notice an image of Nefertari emerging from the horizon, reborn as a sun disc.

Before leaving the burial chamber, look closely at the walls. They're decorated with poetry that Ramesses wrote for his wife. He is believed to have penned the line, "My love is unique-no one can rival her, for she is the most beautiful woman alive. Just by passing, she has stolen away my heart."

Name: _____ Date: _____

1. Who was Nefertari?

A. a king who ruled Egypt from 1279 B.C. to 1213 B.C.

B. a queen whose tomb is located in Egypt's Valley of the Queens

C. a looter who stole goods from tombs in Egypt

D. an Egyptian god who was associated with the afterlife

2. What does the author describe in the second half of this text?

A. the journey of an Italian Egyptologist

B. a king's journey into the netherworld

C. the art inside Queen Nefertari's tomb

D. the plot of a Hollywood blockbuster

3. Ancient Egyptians wanted to help the deceased to travel safely into the underworld and find paradise in the afterlife. What evidence from the text best supports this conclusion?

A. "Ancient Egyptians believed that when people died, they rode across a lake of fire on the boat of the god Ra."

B. "On the east wall, notice a huge doorway. The god Osiris stands to the left and Anubis to the right of that opening."

C. "[S]ometimes senet game boards were put into graves to provide protection for the journey in the afterlife."

D. "The stories these paintings tell about Queen Nefertari's journey into the underworld shed light on ancient Egyptian beliefs."

4. How can ancient Egyptian beliefs about the afterlife best be described?

A. detailed and elaborate

B. simple and minimalistic

C. solemn and negative

D. celebratory and thankful

5. What is this passage mostly about?

A. a looting trend by tomb raiders impacting many Egyptian tombs

B. a tomb that gives insight into ancient Egyptian beliefs

C. the poetry a king wrote for his beloved wife after she died

D. the remarkable beauty and kindness of Queen Nefertari

6. [Queen Nefertari's tomb] is known as the Sistine Chapel of ancient Egypt because of its beautiful decorations and detailed artwork. [. . .] The magnificent paintings on the tomb walls are some of the most detailed and well-preserved in all of ancient Egypt. The stories these paintings tell about Queen Nefertari's journey into the underworld shed light on ancient Egyptian beliefs about death and the afterlife.

The ancient Egyptians developed elaborate burial rituals and ornate tombs because they believed in a life after death.

Based on these sentences from the text, what does the word "ornate" mean?

A. simple and plain

B. heavily decorated

C. highly expensive

D. bright and colorful

7. Choose the answer that best completes the sentence.

The Valley of the Queens hosts more than 70 lavishly decorated tombs. _____, Queen Nefertari's tomb is considered the most impressive of them all.

A. However

B. Meanwhile

C. Therefore

D. Finally

8. Some scenes in Nefertari's tomb illustrate ideas from The Book of the Dead, an ancient Egyptian funeral text that contained magic spells. What was the purpose of these magic spells?

9. Why are the well-preserved paintings in Nefertari's tomb so important to people who want to learn about ancient Egyptians?

10. What does Nefertari's tomb tell us about ancient Egyptian beliefs regarding burials and the afterlife? Support your answer with at least one example of a painting or decoration in her tomb that illustrates these beliefs.