

## GRADE 5 <br> READING MATHEMATICS

## Administered 2006

## READING

## ADMINISTERED IN APRIL



Dr. Marie Tyler looked down at the desolate ground as the helicopter circled the landing area. The rocky gray ground looked like the surface of the moon. Only four months earlier Mount Saint Helens had erupted in the state of Washington, causing widespread damage. Tyler and other scientists were here to study the effects of the huge explosion.

The area around Mount Saint Helens had been popular with tourists and hikers for its rugged beauty. People fished and rafted on clear lakes and rivers. Deer, elk, hawks, and other wildlife had lived in the vast forests around the mountain. All that changed on May 18, 1980.

Tyler, a biologist, remembered the awful day Mount Saint Helens had ripped wide open, spewing rock, ash, and smoke. The volcano had been rumbling for months, and scientists believed that it was just a matter of time before something happened. However, nobody was prepared for the violence of the eruption when it came. The eruption of the volcano killed 57 people and destroyed the landscape for miles around.


Beautiful Mount Saint Helens before a destructive eruption

## New Life on Mount Saint Helens

Continued from page 31
When the north side of the volcano collapsed, it started the largest landslide ever recorded. Enormous chunks of the mountain flew into the valley below, filling it with debris. Acres of trees, many towering 150 feet tall, had been flattened. Water was blown out of lakes and replaced by ash and mud.

As Tyler's helicopter landed, she worried about the wildlife in the area. Tyler and the other biologists surveyed the ground, which had been charred by


The effects of the volcanic eruption on Mount Saint Helens the volcanic blast. There wasn't a living thing in sight, and she couldn't see even a trace of the thick forest that had been there.

The scientists planned to take pictures of the area and record their observations. They hoped to use this information to learn more about how forests recover. As terrible as the Mount Saint Helens eruption had been, it offered a unique opportunity to learn about how nature copes with disaster.

Javier Barilla, a biologist who specializes in forest wildlife, motioned for Tyler to come over. Barilla handed Tyler a pair of binoculars and pointed into the distance. "Elk," he said. "They've already come back. That's a good sign."

Tyler peered at the large deer-like animals stepping carefully among the boulders as they searched for plants and grass. "They're going to have a long, hard winter without anything to eat," Tyler said. "They'll have to move to a different area if they're going to survive."
"Look at that!" shouted John Durbin, Tyler's assistant. Tyler turned to where Durbin was pointing, and a smile slowly spread across her face. Poking through the ashy soil was a tiny plant called a fireweed. The purple blossoms of the plant were bright against the dull ground. Tyler knew that as more fireweed grew, their roots would provide a base for other plants to take hold. Soon after the plants were restored, animals would also begin to return.

The team of scientists took soil samples and continued to take photographs, but now the mood was brighter. Tyler knew that it might take a long time, but life would return to Mount Saint Helens.

## 32 DISCOVER Explore

## Moving On

 understand. "It's all right," he told my mother. "His whole life is about to change. We're all upset by this uncertainty.""I know you don't believe me now," my father said quietly, "but something good will come out of all this. I don't know what. Just keep an open mind."

The next few weeks were a blur. Dad was in a city 300 miles away, looking for work. Mom and I stayed in our house, knowing that our days there were numbered. We even began packing our belongings in anticipation. When my father called with the news that he had a job, I felt numb.
$7 \quad$ As we pulled away from the house, my mother must have seen the sadness and disappointment on my face. "Jesse, life goes on," she said. "A wonderful new life awaits us, but only if we work at it."

I thought about those words, which seemed to echo what my father had said before he left. I tried to look on the bright side. "I'll try, Mom," I promised in a small voice. However, my new optimism faded as we drove into the city that would now be our home. Everything seemed so unfamiliar.

Seeing our new neighborhood helped-tall trees and quiet sidewalks welcomed us. Then I spotted our house, and it just kind of looked right to me. Dad rushed out the front door and into our overdue hugs.

10 "This is it," he said. "It's not home yet, but I suspect that you and your mother might have a few decorating tips to change that."


11 My father was trying to be lighthearted, but I could see that he was a little nervous. I said, "Actually, Dad, I think it looks kind of cool."

12 Dad gushed with details. "There's a neighborhood swimming pool two blocks away. And believe it or not, the Little League coach lives right across the street! He told me he could use a strong arm in the outfield. I'll take you to meet him tomorrow."

13 "I'm ready, Dad," I said. And I was.

## Use "New Life on Mount Saint Helens" (pp. 4-5) to answer questions 1-5.

1 Scientists knew that Mount Saint Helens was going to erupt because they -

A had noticed animals leaving the area
B had seen a large landslide take place
C had heard rumbling sounds
D had smelled smoke and ash

2 Look at the following outline of information from the selection.

## I. Mount Saint Helens

1. Located in the state of Washington
2. Surrounded by forests and lakes

## II. The Eruption

1. Flattened trees
2. $\qquad$
3. Blew water out of lakes

## III. Dr. Tyler and Her Team

1. Hope to learn how forests recover
2. Take soil samples

Which information belongs on the blank line?
F Charred the ground
G Was popular with tourists
H Brought back the elk
J Was photographed by scientists

3 Read the dictionary entry below for the word trace.
trace \'trās \noun 1. a path or trail made by the passage of people or animals 2. a sign of something past 3. a very small amount of a chemical 4. a mark or line made by an instrument

Which definition best fits the meaning of the word trace as it is used in paragraph 5 of this selection?

A Definition 1
B Definition 2
C Definition 3
D Definition 4

5 What is the importance of paragraph 7 to the selection?

A It shows how scientists cooperate to solve problems.

B It demonstrates that elk are plentiful in the area being studied.
C It explains that some scientists specialize in the study of forests.

D It shows that wildlife is returning to the area.

4 Which sentence from this selection best shows that Dr. Tyler cares about what happens to the Mount Saint Helens area?

F Tyler, a biologist, remembered the awful day Mount Saint Helens had ripped wide open, spewing rock, ash, and smoke.

G As Tyler's helicopter landed, she worried about the wildlife in the area.
$\mathbf{H}$ Tyler and the other biologists surveyed the ground, which had been charred by the volcanic blast.
J They hoped to use this information to learn more about how forests recover.

## Use "Moving On" (pp. 6-7) to answer questions 6-10.

6 What problem does Jesse face in the story?
F He doesn't want to move to a new city.
G He thinks that his parents don't listen to him.

H He is afraid he's not good enough at baseball.
J He is worried that his father won't find a new job.

7 Paragraph 2 is mainly about -
A how Jesse's parents kept a secret from him

B why Jesse's father lost his job
C why Jesse likes playing baseball
D how Jesse feels about moving

9 Which sentence from the story shows that Jesse is willing to accept moving to another city?

A "I'm finally playing center field."
B "A wonderful new life awaits us, but only if we work at it."
C "Actually, Dad, I think it looks kind of cool."

D "I'll take you to meet him tomorrow."

10 In paragraph 6, the phrase "our days there were numbered" means that Jesse is -

F busy with school and baseball
G going to have to leave soon
H counting all his belongings
J eager to see his father again

8 Jesse and his mother do not move to the new city right away because they -

F have to try to sell their current house
G want to be sure Jesse's father first finds a job
H think they may not need to move after all
J need time to say good-bye to their friends

## Use "New Life on Mount Saint Helens" and "Moving On" to answer questions 11-13.

11 Both selections end with a feeling of -
A sadness
B fear
C hope
D pride

13 Which important idea can be found in both selections?

A Life goes on even after a major change.
B Family members can help one another get through any situation.
C Nature is beautiful but can be harsh.
D Humans can affect the environment.

12 One concept that is important in "New Life on Mount Saint Helens" but not in "Moving On" is that of -

F the powerful forces of nature
G cooperation between family members
H people adapting to new situations
J the change of seasons

## Letting Go

 of his voice. "I'm pretty sure I can." Mateo skillfully pulled the line through the polished metal loops on the pole, attached and baited the hook, and cast it over the boat's side. His father smiled but said nothing. Mateo wondered whether Papá's thoughts had traveled to another time, when Papá had been a boy and had shared this same fishing pole with his own father. begun to daydream about the prize again when the tip of his grandfather's pole twitched. Just below the surface of the water, Mateo saw the shimmering body of an enormous bass. His heart racing and his mind awhirl, Mateo pulled back roughly on the line.

10 "Gently now, son," said his father. "Remember, to catch a fish, you must use your brain, not just your arms." Papá's calm voice helped Mateo focus on what he had already learned. By paying careful attention to the line, Mateo could determine the fish's movements. If the fish swam away from the boat or dove deeper,
he would give the fish more line. If the fish came toward the boat, he would reel in the line more quickly.

11 When Mateo was ready to reel in the fish, he stood up, but he lost his balance and nearly dropped the fishing pole overboard. He gasped as he realized that his grandfather's pole was bent nearly double with the weight of the fish. He prayed it wouldn't break. He couldn't bear the thought of breaking the pole.

12 After trying everything they could to reel in the fish, Mateo and his father finally realized that the line must have gotten wrapped around something underwater. Mateo looked at his father helplessly, not knowing what to do. Papá took out his bait knife. "We have no other choice," he said. With one quick stroke of the knife, he cut the line, letting go of their best chance to win.

13 Papá took the fishing pole from Mateo. He wiped it carefully with the bottom of his shirt and found more bait. He handed the bait and the pole to Mateo and said, "There will be other fish."

14 Mateo stared at the pole in his hands. Then he looked at his father, who was tending to his own line. Mateo said nothing as he tied a new hook to his line, baited it, and cast it into the water. He noticed that the sun was a bit higher in the sky now. Father and son again sat silently, eyes fixed on the rippling water.

14 What kind of relationship does Mateo have with his father?

F Mateo loves his father but does not know how to please him.

G Mateo wonders why he must fish with his father every weekend.

H Mateo respects his father and enjoys his company.

J Mateo wishes that his father were more like his grandfather.

15 How does the author tell this story?
A By describing the efforts of Mateo and his father to win the fishing contest

B By comparing Mateo and his father as fishermen

C By showing how bass fishing can be done from a small boat

D By explaining why it is so hard to catch a largemouth bass

17 Which of these is the best summary of the story?

A Mateo and his father enter a fishing contest. Mateo dreams about what his family could do with the prize money. He really wants a new bicycle and thinks that winning the prize money would be a good way to get one. Later Mateo almost catches a big fish, but it gets away.
B At a fishing contest Mateo's father lets him use his grandfather's fishing pole. When Mateo gets a bite, the fish is so big that it almost breaks the pole. Mateo worries that the pole will break, but it doesn't.

C Mateo and his father hope to win a fishing contest by catching the biggest bass. Mateo gets to use his grandfather's fishing pole. He hooks a big fish but realizes that the line is stuck on something underwater. His father cuts the line and tells Mateo there will be other fish.

D Mateo and his father are out fishing one day when Mateo's father gets a bite on his line. It turns out to be only a small bass. Then Mateo gets a bite, and his father reminds him to use his brain in order to catch it. In spite of this, Mateo is not able to reel in the fish.

16 At the end of the story, Mateo -
F has a new understanding of his father
G learns to keep trying after he fails
H feels embarrassed about losing the fish
J makes a silent promise to win next time

18 Look at this dictionary entry for the word crest.
crest $\backslash$ 'krest $\backslash$ noun 1. the ridge on a roof 2. a ridge on the head of a bird or another animal 3. the highest point 4. the top of a wave or hill

Which definition best matches the meaning of the word crests in paragraph 1 of the story?

F Definition 1
G Definition 2
H Definition 3
J Definition 4

19 Mateo is pleased when -
A he baits his hook all by himself
B he helps his father put the boat in the water

C his father lets him use his grandfather's fishing pole

D his father asks him to spend the day fishing

20 Look at the time line of information from the story.


Which of these events should go on the blank line?
F Papá cleans Mateo's pole and gives him more bait.
G Mateo loses his balance in the boat.
H Mateo's heart starts to race.
J Papá gives Mateo his grandfather's fishing pole.

21 The reader can conclude from the story that a good fisherman must -

A have his own boat
B watch for fish in the water
C use a special fishing pole
D react to the fish's movements

22 Which sentence from the story shows that Mateo is an experienced fisherman?

F As always, Mateo watched carefully.
G Mateo had wanted to fish with it his whole life, but his father had always told him that he had to wait until he was older.

H Mateo skillfully pulled the line through the polished metal loops on the pole, attached and baited the hook, and cast it over the boat's side.

J His heart racing and his mind awhirl, Mateo pulled back roughly on the line.

## Discovering the Past

 born on a Texas ranch in 1851. McJunkin worked to be independent and to make something of himself during a time when opportunities for African Americans were very limited. He taught himself to read and write, speak Spanish, and play the fiddle. McJunkin was ardent about learning and enjoyed reading about what life was like in the past. In fact, McJunkin's passion for knowledge and interest in the world around him led to a discovery that changed people's ideas about the history of North America.3 Riding along a gully, McJunkin saw something white sticking out of the ground. At first he thought it was wood, but when he took a closer look, the find turned out to be some large bones that the flood had uncovered. McJunkin, who had been a buffalo hunter, thought they looked like buffalo bones. However, he had never seen buffalo bones that big. was also an amateur archaeologist. Over the years he had collected oddly shaped rocks, old bones, and other unusual items from the past. McJunkin was inquisitive about what kind of animal these bones had belonged to and why the bones were in the gully. He gathered a few of these bones and placed them with the rest of his collection on his mantel in his home. However, his curiosity about the bones never died.

Though no one knew it at the time, McJunkin had made a huge discovery. He continued to talk about the bones, but for years
most people just laughed at him and his interest in these old bones. Then in 1912 McJunkin met Carl Schwachheim while visiting a fair in Raton, New Mexico. Schwachheim was a collector of fossils, bones, and arrowheads. He found McJunkin's description of his discovery fascinating and promised to come visit McJunkin one day.

Unfortunately, McJunkin died in January 1922, and it was not until July of that year that Schwachheim and a few other interested collectors were finally able to go to the site where the bones had been found. The men dug up more bones and spear points and took them back to Raton. Since none of the men were professional archaeologists, though, they were not sure what to do with the bones.

Finally in 1926 Schwachheim persuaded some scientists to look at the bones and spear points. The experts were excited by their findings. They determined that the bones dated back almost 10,000 years and were from a kind of bison that had become extinct shortly after the Ice Age. The ancient spear points gave the scientists valuable information about the people who had lived long ago. These spear points were the first evidence that humans

had lived and hunted in North America during the Ice Age. Thanks to McJunkin's discovery, scientists came to accept the existence of human life in North America during the Ice Age.

8 Although the importance of his discovery was not recognized in his lifetime, George McJunkin is honored for having made one of the most significant archaeological finds in North America.

Photograph courtesy of Museum of New Mexico, neg. no. 50884.

23 One way that McJunkin and Schwachheim were alike was that both -

A were born in Texas
B worked at the Crowfoot Ranch
C wanted to be scientists when they were young
D were interested in items from the past

24 McJunkin's death in 1922 was sad because he died -

F while working at Crowfoot Ranch
G just after meeting Schwachheim
H before the value of his discovery was recognized
J while he was still a young man

25 Which word from paragraph 4 helps the reader know what inquisitive means?

A amateur
B collection
C curiosity
D unusual

26 From information in the selection, the reader can determine that ancient bison -

F have smaller bones than buffalo
G were all killed by human hunters
H were unable to run as fast as human hunters
J lived in the same area as humans did

27 Use the diagram of information from the selection to answer the question below.

## Effects



Which of the following belongs in the empty box?

A Schwachheim came to visit the Crowfoot Ranch.

B McJunkin talked to Schwachheim about fossils.

C McJunkin became the foreman of a ranch in New Mexico.

D There was a heavy rainstorm on the Crowfoot Ranch.

28 Which of the following is the best summary of the selection?

F George McJunkin was born in Texas in 1851. He spent his youth learning to read, write, and speak Spanish, along with other skills. He died in January 1922.

G George McJunkin was working at the Crowfoot Ranch in 1908. A great flood occurred that year. McJunkin was repairing fences after the flood when he found some unusual bones.

H George McJunkin was a man of many skills and interests. In 1908 he discovered some unusual bones. These bones helped scientists learn about humans and animals from long ago.

J George McJunkin enjoyed learning about the past. During much of his life, he worked as a foreman at the Crowfoot Ranch. While working there, he made an important discovery.

29 The author probably wrote this selection to -
A recognize McJunkin's role in a scientific discovery
B encourage readers to look for bones on ranches

C highlight McJunkin's life in New Mexico
D inform readers about how discoveries are made

30 Why was Schwachheim unable to meet with McJunkin at the site of the discovery?

F He realized that the bones McJunkin had found were not important.
G He was not invited to visit McJunkin's ranch.

H McJunkin did not tell him the location of the bones.

J McJunkin died before a visit was possible.

## The Science Project

2 "O.K., class. Listen carefully," Mr. Kimura said while passing out the assignment sheet. "You will be pretending that you are Rube Goldberg. For those of you who don't know, he was a prizewinning cartoonist who drew new inventions with lots of different connected parts. In his cartoons all sorts of unusual items are used to complete simple tasks in the most complicated way. Each group will design and then create a mousetrap, using a Ping-Pong ball to trap a plastic mouse in a cage. You will have all week to work on your project in class. Use the remainder of today to discuss your plans."

As Mr. Kimura explained the class project, Mercedes's uncertainties grew. She just didn't know how well her group was going to work. Chinh was one of the most popular kids in school. Everyone liked being around him. Dustin, on the other hand, had been at the school only a couple of months and always sat at the back of the room, never talking to anyone. Mercedes looked at him. He was wearing the black T-shirt and jeans with big black boots that he wore every day. His long hair matched his clothes and almost covered his face. "I wonder if he even knows how to talk," she thought.

Mercedes looked over the assignment sheet, waiting for Chinh to speak. After reading the sheet again and again, she finally decided that she would have to say something. "If we have 12 steps built into our mousetrap, we'll get extra points," she said to Chinh and Dustin. "I think each of us should draw a plan tonight. Then tomorrow we can decide on the best parts of each one. After that we can work them into one weird machine. What do you think?" she asked.
"Sounds like a plan," Chinh said with a smirk. Then he got up and went to another table to talk to his friends. desig used hair dryer to push the Ping Pong ball, but it had design used a hair dryer to push the Ping.Pong ball, but it had only eight steps. Mercedes's plan required using a ladder and had the 12 steps they needed for extra points, but it wasn't as imaginative as Dustin's. For the first time, Mercedes heard Dustin speak. "We could combine my design with yours," he suggested. "If we do this, we could get an A."


11 Mercedes stared at Dustin, wondering where all those great ideas had come from. "What's wrong?" Dustin asked.

12 "Nothing. Good idea," Mercedes said, looking down at the paper and feeling her cheeks turn red. Then she tried to hide behind her own hair.

Once the three had decided on a plan, they made a list of the items each of them would bring to school the next day to assemble their project. Mercedes crossed her fingers and hoped that everyone would bring the things on their list.

14 The next morning Mercedes lugged a box full of items into class and dumped it on the table, anxious to begin working. A few minutes later Chinh came in, empty-handed. "What's up?" Mercedes asked.

15 Chinh shook his head. "Last night my puppy chewed up my list, and I couldn't remember anything that was on it." He shrugged and gave an indifferent glance toward Mercedes. "I don't have anything."

Mercedes looked away. Obviously Chinh didn't care about the project. He hadn't even bothered to think of a believable lie. He walked off to talk to his friends, leaving Mercedes to stare after him.
"What's going on?" A voice broke into her thoughts. Dustin stood there with two boxes at his feet and a short ladder over his shoulder.
"Chinh didn't bring in anything. And apparently he would rather be in another group," Mercedes said, nodding toward Chinh, who was laughing with his friends.

19 "I had a feeling something like this might happen," Dustin said. "That's why I decided to bring some extra stuff. I also asked Mr. Kimura after class yesterday what would happen if everyone didn't do their part."

Mercedes turned to Dustin and smiled. He was full of surprises.

31 Mercedes's goal in the story is to -
A get to know Chinh and Dustin better
B make a good grade on her assignment
C design an invention that will really catch mice

D be allowed to do the assignment on her own

32 Which idea from the story shows that Dustin is a good judge of character?

F He always sits in the back of the class.
G He does not talk very much.
H He suggests how to combine the designs.
$\boldsymbol{J}$ He brings in an extra box of items.

33 Dustin talks to Mr. Kimura after class because he -

A knows that Mercedes does not like working with him
B wants his group to get extra credit
C hopes to get out of doing the assignment
D thinks that Chinh might not do his share

34 Why does Mercedes suggest that each group member draw his or her own plan at home?

F She wants the group to choose her as its leader.

G She hopes the teacher will let her switch groups.
H She realizes that no one else is going to suggest anything.
J She has a great idea that she does not want to share.

35 Read this dictionary entry for the word anxious.
anxious $\backslash$ 'ay $(\mathrm{k})$-shəs $\backslash$ adjective

1. uncertain 2. eager 3. nervous 4. restless

What is the definition of anxious as it is used in paragraph 14 ?

A Definition 1
B Definition 2
C Definition 3
D Definition 4

36 What is paragraph 3 mainly about?
F Why Chinh is very popular
G How Mr. Kimura assigned students to groups
H Why Dustin likes to wear black
J How Mercedes feels about her group

37 Mercedes first begins to realize that she has been wrong about Dustin when he -

A suggests how his design can be combined with hers

B asks her what's wrong
C agrees to her idea that they each draw their own plan

D brings in an extra box of items for the project

38 At the beginning of the story, Mercedes thinks that Dustin is -

F polite
G smart
H boring
J strange

39 In paragraph 7, Mercedes is ready for the bell to ring because -

A Chinh has left the table
B she is not comfortable with her group
C Dustin won't talk
D she wants to start the project

40 The author wrote this story most likely to -
F give the reader some ideas for science projects

G show that science is more interesting than mathematics

H amuse the reader by describing a humorous situation

J encourage people to get to know others before judging them

41 The mousetrap assignment is based on the ideas of -

A another teacher
B the science textbook
C a famous cartoonist
D the students

42 The reader can conclude that Mercedes and Dustin will -

F give Chinh another chance
G work together to complete the project
H earn the highest grade in the class
J talk to Mr. Kimura again

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Page 28

# MATHEMATICS 

## ADMINISTERED IN MAY

Page 30

## Mathematics Chart

| LENGTH |  |
| :---: | :---: |
| Metric | Customary |
| 1 kilometer = 1000 meters | 1 mile $=1760$ yards |
| 1 meter = 100 centimeters | $1 \mathrm{mile}=5280$ feet |
| 1 centimeter = 10 millimeters | 1 yard $=3$ feet |
|  | 1 foot = 12 inches |
| CAPACITY AND VOLUME |  |
| Metric | Customary |
| 1 liter = 1000 milliliters | 1 gallon $=4$ quarts |
|  | 1 gallon $=128$ ounces |
|  | 1 quart $=2$ pints |
|  | 1 pint $=2$ cups |
|  | 1 cup $=8$ ounces |
| MASS AND WEIGHT |  |
| Metric | Customary |
| 1 kilogram = 1000 grams | 1 ton = 2000 pounds |
| 1 gram $=1000$ milligrams | 1 pound = 16 ounces |
| TIME |  |
| 1 year = 365 days |  |
| 1 year = 12 months |  |
| 1 year = 52 weeks |  |
| 1 week = 7 days |  |
| 1 day $=24$ hours |  |
| 1 hour $=60$ minutes |  |
| 1 minute $=60$ seconds |  |

Metric and customary rulers can be found on the separate Mathematics Chart.

## Mathematics Chart

| Perimeter | square | $P=4 s$ |
| :--- | :--- | :--- |
|  | rectangle | $P=2 l+2 w \quad$ or $\quad P=2(l+w)$ |
| Area | square | $A=s^{2}$ |
|  | rectangle | $A=l w \quad$ or $\quad A=b h$ |
|  | triangle | $A=\frac{1}{2} b h \quad$ or $\quad A=\frac{b h}{2}$ |

## DIRECTIONS

Read each question. Then fill in the correct answer on your answer document. If a correct answer is not here, mark the letter for "Not here."

## SAMPLE A

Which digit is in the thousands place in the number $4,861,392$ ?

A 6
B 4
C 1
D Not here

## SAMPLE B

Joey has 8 books. Roberto has twice as many books as Joey has. How many books does Roberto have?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

1 Which of these shows only a rotation?
A


B

D


2 The graph below shows a line segment with 4 points marked.


Which table shows the coordinates of these 4 points?

F

| $\boldsymbol{x}$ | 6 | 4 | 2 | 0 |
| :--- | :--- | :--- | :--- | :--- |
| $\boldsymbol{y}$ | 1 | 2 | 3 | 4 |

G

| $\boldsymbol{x}$ | 1 | 2 | 3 | 4 |
| :--- | :--- | :--- | :--- | :--- |
| $\boldsymbol{y}$ | 7 | 5 | 3 | 1 |

H

| $\boldsymbol{x}$ | 1 | 2 | 3 | 4 |
| :--- | :--- | :--- | :--- | :--- |
| $\boldsymbol{y}$ | 6 | 4 | 2 | 0 |

J

| $x$ | 6 | 4 | 2 | 0 |
| :--- | :--- | :--- | :--- | :--- |
| $y$ | 2 | 3 | 4 | 5 |

3 Silvan made 96 ounces of fruit drink. How many cups of fruit drink did Silvan make?

A 12 c
B 104 c
C 768 c
D 88 c

4 One million, two hundred thousand, sixty copies of a CD were sold during one month. Which of the following shows this amount written as a numeral?

F 1,260
G $1,000,260$
H 1,260,000
J 1,200,060

5 The table below shows some territories acquired by the United States and their areas in square miles.
Territories Acquired

| Territory | Area <br> (square miles) |
| :--- | :---: |
| Louisiana Territory | 827,192 |
| Florida | 58,560 |
| Texas | 390,143 |
| Oregon Territory | 285,580 |
| Alaska | 586,412 |
| Hawaii | 6,450 |

According to the table, how much larger was the area of the largest territory than the area of the smallest territory?

A $820,742 \mathrm{mi}^{2}$
B $768,632 \mathrm{mi}^{2}$
C $579,962 \mathrm{mi}^{2}$
D $833,642 \mathrm{mi}^{2}$

6 Julia has a case with videotapes in it. Of these videotapes, 3 are action movies, 6 are comedy movies, and the remaining 8 are animated movies. If Julia picks 1 videotape from the case without looking, what is the probability that she will pick an animated movie?

F $\frac{3}{17}$
G $\frac{6}{17}$
H $\frac{8}{17}$
J $\frac{8}{9}$

7 The table below shows the number of boys and girls in different grades who tried out for the tennis team.

Tennis Team Tryouts

| Grade | Number <br> of Girls | Number <br> of Boys |
| :--- | :---: | :---: |
| Ninth | 21 | 19 |
| Tenth | 17 | 13 |
| Eleventh | 23 | 15 |
| Twelfth | 11 | 9 |

Which grade had a prime number of girls and a prime number of boys try out for the tennis team?
A Ninth
B Tenth
C Eleventh
D Twelfth

8 Brenda drew a figure that appeared to have 3 acute angles. Which could be the figure Brenda drew?

F


G


H


J


9 The table below shows the prices of various items at a carnival.

Carnival Prices

| Item | Price |
| :--- | :---: |
| Admission ticket | $\$ 5.25$ |
| Box of popcorn | $\$ 0.89$ |
| Lemonade | $\$ 1.55$ |

Which is the best estimate of the amount of money needed to pay for one admission ticket, one box of popcorn, and one lemonade?

A $\$ 9.00$
B $\$ 6.00$
C $\$ 7.00$
D $\$ 8.00$

10 Lamont is required to read 1 biography, 1 science-fiction book, and 1 poetry book each month. His book choices are shown below.

Lamont's Book Choices

| Biography | Science Fiction | Poetry |
| :--- | :--- | :--- |
| Lincoln's Life | Beyond the Galaxy | Poems of Nature |
| Davy Crockett | The Year 3000 | Spring |
|  | Undersea City | Haiku |
|  |  |  |

How many different combinations of required books are possible?
F 8
G 18
H 11
J 48

11 Theo has 4 old coins: $\mathrm{W}, \mathrm{X}, \mathrm{Y}$, and Z . Coin Y is worth $\$ 2$. Coin Z is worth 3 times the value of Coin Y. Coin X is worth 4 times the value of Coin Y. The 4 coins are worth $\$ 30$ altogether. What is the value of Coin W?

A $\quad \$ 14$
B $\$ 18$
C $\$ 9$
D $\$ 19$

12 The models below are made up of 1-inch cubes. Which of the models has a volume of 36 cubic inches?

F


G


H


J


13 The picture below represents the sandbox Mrs. Stiller put in her backyard for her son. Use the ruler on the Mathematics Chart to measure the length and width of the sandbox to the nearest inch.


What is the perimeter in feet of the sandbox?
A 10 ft
B 20 ft
C 21 ft
D 24 ft

14 Holly walked 4.5 miles on Saturday and 7.2 miles on Sunday. Which of the following questions can best be answered using this information?

F How many days a week does Holly walk?
G How many miles does Holly walk each week?

H How much farther did Holly walk on Sunday than on Saturday?
J How much time does Holly spend walking each day?

15 Which solid has two circular bases?
A Cone
B Prism
C Cylinder
D Sphere

16 The model below shows $1 \frac{9}{100}$ shaded.

|  |  |  |  | $\|l\| l \mid$ |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
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Which decimal represents the part of the model that is shaded?

F 1.91
G $\quad 1.09$
H 19.0
J 1.9

17 It took Mallory $\frac{3}{4}$ hour to wash her car and $1 \frac{3}{4}$ hours to wax it. How many minutes did it take her to wash and wax her car?

A 90 minutes
B 105 minutes
C 150 minutes
D 170 minutes

18 The table below shows how many dance lessons 6 people attended last year.
Dance Lesson Attendance

| Name | Abby | Ned | Dorothy | Fernando | Heather | Mario |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Lessons | 15 | 9 | 16 | 20 | 5 | 2 |

What is the range of the numbers of dance lessons these people attended last year?
F 11
G 12
H 18
J 22

19 Darian leaves for school at 7:35 A.M. After traveling for 30 minutes, he arrives there just in time for his first class, which lasts 45 minutes. After that he has a 15 -minute break before his second class, which lasts 50 minutes. About what time does Darian's second class end?

A 10:00 A.M.
B 9:30 A.м.
C 9:00 A.m.
D 10:30 А.м.

20 Lina bought 3 boxes of facial tissues. Two boxes had 200 tissues each, and the third box had 150 tissues. Which number sentence shows the total number of tissues Lina bought?

F $(2 \times 200) \times 150=$
G $\quad(2+200) \times 150=$ $\square$
H $(2 \times 200)+150=$ $\qquad$
J $(2+200)+150=$ $\qquad$

21 There are 26 people in Rachel's class. If each person has 12 insects in his or her insect collection, what is the total number of insects the class has collected?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

22 The factor tree for the number 24 is shown below.


According to the factor tree, which of the following statements is true?

F The number 24 is prime.
G The only prime factor of the number 24 is 2 .

H The numbers 24,12 , and 6 are composite.
J The numbers 2, 3, 6, and 12 are prime factors of 24.

23 The table below shows the total number of syllables in different numbers of haiku poems.

## Syllables in Haiku Poems

| Number of Haiku Poems | 2 | 4 | 6 | 8 |
| :---: | :---: | :---: | :---: | :---: |
| Total Number of Syllables | 34 | 68 | 102 | 136 |

What is the relationship between the number of haiku poems and the total number of syllables?
A The total number of syllables is 17 times the number of haiku poems.
B The total number of syllables is 32 more than the number of haiku poems.
C The number of haiku poems is 17 times the total number of syllables.
D The number of haiku poems is 32 more than the total number of syllables.

24 How is the numeral 24.017 written in words?
F Twenty-four thousand, seventeen
G Twenty-four and seventeen thousandths
H Twenty-four and seventeen hundredths
J Twenty-four and seventeen

25 During the past 13 days, Troy drove 546 miles. He drove the same number of miles each day. How many miles did Troy drive each day?

A 312 mi
B 42 mi
C $\quad 559 \mathrm{mi}$
D 50 mi

26 Which of the following does NOT describe a rectangle?

F 4 faces
G 2 pairs of parallel sides
H 4 right angles
J 2 pairs of congruent sides

27 The table below shows information about the water temperature in locations where green sea turtles are found.

Green Sea Turtles

| Location | Temperature |
| :---: | :---: |
| L | $28^{\circ} \mathrm{C}$ |
| M | $26^{\circ} \mathrm{C}$ |
| N | $29^{\circ} \mathrm{C}$ |

This table shows information about the water temperature in locations where green sea turtles are not found.

| Location | Temperature |
| :---: | :---: |
| $X$ | $19^{\circ} \mathrm{C}$ |
| $Y$ | $14^{\circ} \mathrm{C}$ |
| $Z$ | $25^{\circ} \mathrm{C}$ |

Based on the information in the tables, which statement is true about the locations where green sea turtles are found?

A Green sea turtles can be found only in locations where the water temperature is less than $23^{\circ} \mathrm{C}$.
B Green sea turtles can be found only in locations where the water temperature is less than $19^{\circ} \mathrm{C}$.
C Green sea turtles can be found only in locations where the water temperature is greater than $25^{\circ} \mathrm{C}$.
D Green sea turtles can be found only in locations where the water temperature is greater than $28^{\circ} \mathrm{C}$.

28 Rusty's dog weighs 79 pounds. How many ounces does his dog weigh?

F 553 oz
G $\quad 1,264 \mathrm{oz}$
H 443 oz
J 1,164 oz

29 At a video arcade Zane can purchase 4 tokens for $\$ 1$. He will need 2 tokens to play each game. Which is a correct way of finding the number of games that Zane can play with $\$ 16$ in tokens?

A Add 4 and 16 and then divide the sum by 2
B Add 4 and 16 and then multiply the sum by 2
C Multiply 4 by 16 and then divide the product by 2
D Multiply 4 by 16 and then multiply the product by 2

30 A shoe store made this table to show its sales for one afternoon.

Shoes Sold

| Number Sold | Kind of Shoe |
| :---: | :---: |
| 4 | High-heel |
| 6 | Sandal |
| 11 | Sneaker |
| 2 | Boot |

According to the table, which statement is true?

F The store sold fewer sneakers than sandals and high heels combined.

G The store sold three times as many sandals as boots.

H The store sold more sandals than high heels and boots combined.

J The store sold twice as many sneakers as sandals.

31 What are all the common factors of $5,10,15$, and 20 ?

A 1,5
B 1, 2, 5
C $1,2,3,5$
D 1,2

32 The grid below can be used to represent Gilbert's favorite restaurant.


Gilbert is sitting at a table located at (1, 6). He walks 3 units to the right and 4 units down to the salad bar. Which ordered pair represents the location of the salad bar?

F (5, 9)
G $(8,6)$
H $(4,2)$
J $(3,4)$

33 The table below shows the total height in millimeters of different stacks of tuna fish cans.

## Tuna Fish Cans

| Number <br> of Cans | Total Height <br> (millimeters) |
| :---: | :---: |
| 2 | 76 |
| 5 | 190 |
| 8 | 304 |
| 10 | 380 |

What is the relationship between the number of cans and the total height in millimeters?

A The total height in millimeters is 76 more than the number of cans.

B The total height in millimeters is 76 times the number of cans.

C The total height in millimeters is 38 times the number of cans.

D The total height in millimeters is 38 more than the number of cans.

34 Which single transformation is represented in the models of the snowboarders?


F Reflection
G Translation
H Rotation
J Not here

35 The model below shows the volume of a swimming pool that was built at a community center.


Each $\square=1$ cubic unit.

What is the volume of the swimming pool?
A 512 cubic units
B 384 cubic units
C 216 cubic units
D 288 cubic units

36 Isabella and Sidney raced their toy cars. The diagram below shows the distance each car traveled during the race.


How much farther did Isabella's car travel than Sidney's car traveled?

F $\quad \frac{34}{100} \mathrm{~m}$
G $\quad \frac{44}{100} \mathrm{~m}$
H $\quad \frac{72}{100} \mathrm{~m}$
J $\frac{34}{0} \mathrm{~m}$

37 The table below shows the ticket prices at an amusement park.

## Ticket Prices

| Type of <br> Ticket | Price |
| :---: | :---: |
| Child | $\$ 10$ |
| Youth | $\$ 15$ |
| Adult | $\$ 20$ |

The 5 people in Nick's family paid a total of $\$ 80$ for tickets. If they purchased 2 adult tickets, what were the other 3 tickets they purchased?

A 2 child and 1 youth
B 3 child
C 3 youth
D 2 youth and 1 child

38 Mia painted 36 triangles on the mirror in her room. She painted 6 of the triangles red and 4 of them yellow. She then painted half the remaining triangles orange and the rest white. How many triangles did Mia paint white?

F 13
G 16
H 10
J 18

39 Which statement about the figure appears to be true?


A $\angle U$ is congruent to $\angle V$.
B $\overline{U V}$ is congruent to $\overline{V W}$.
C $\angle V$ is congruent to $\angle W$.
D $\overline{U W}$ is congruent to $\overline{V W}$.

40 The table below shows the length of time 5 students kept their kites in the air.
Kite-Flying Times

| Student | Time in the Air |
| :--- | ---: |
| Georgia | 25 minutes |
| Victor | 30 minutes |
| Ali | 65 minutes |
| Rami | 48 minutes |
| Phyllis | 120 minutes |

What is the median length of time these 5 students' kites were in the air?
F 25 minutes
G 48 minutes
H 65 minutes
J 30 minutes

41 Five boys ordered 1 small pizza each. The table below shows the fraction of his own pizza each boy ate.

| Pizzas |  |
| :---: | :---: |
| Boy | Fraction of <br> Pizza Eaten |
| Trevor | $\frac{1}{6}$ |
| Brian | $\frac{1}{10}$ |
| Jay | $\frac{1}{4}$ |
| Connor | $\frac{1}{2}$ |
| Daniel | $\frac{1}{3}$ |

Which boy ate more of his own pizza than Daniel ate?

A Trevor
B Brian
C Jay
D Connor

42 Which fraction model is equivalent to $\frac{4}{5}$ ?


G


H


J


43 Christine and Kyle were estimating the number of fish in the school aquarium. Kyle estimated that there were 67 fish, and Christine estimated that there were 25 fewer than Kyle's estimate. Which number sentence could be used to find $f$, Christine's estimate?

A $67 \times 25=f$
B $67+25=f$
C $67-25=f$
D $67 \div 25=f$

The table below shows the amount of time it takes to do different tasks when building a bookcase.

Building a Bookcase

| Task | Amount of Time |
| :--- | :---: |
| Cutting wood | 30 min |
| Nailing wood together | 1 h |
| Sanding bookcase | 75 min |
| Painting bookcase | 30 min |

How much time would it take to complete all these tasks?
F 3 hours 25 minutes
G 3 hours
H 3 hours 15 minutes
J 4 hours

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