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## GRADE 5 MATHEMATICS READING SCIENCE

## Administered Spring 2003

## MATHEMATICS

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## Mathematics Chart

LENGTH

Metric
1 kilometer = 1000 meters
1 meter $=100$ centimeters
1 centimeter = 10 millimeters

Customary
1 mile = 1760 yards
1 mile $=5280$ feet
1 yard = 3 feet
1 foot $=12$ inches

## CAPACITY AND VOLUME

Metric
1 liter = 1000 milliliters

## Customary

1 gallon $=4$ quarts
1 gallon = 128 ounces
1 quart $=2$ pints
1 pint = 2 cups
1 cup $=8$ ounces

## MASS AND WEIGHT

Metric
1 kilogram = 1000 grams
1 gram = 1000 milligrams

Customary
1 ton $=2000$ pounds
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 Stylists at a hair salon charge $\$ 26$ for each haircut. If they gave 63 haircuts, how much money did they collect, not including tips?

A $\quad \$ 89$
B $\$ 504$
C $\$ 1,538$
D \$1,638

3 Marcy bought 6 apples priced at $\$ 0.35$ each. She used a coupon worth $\$ 0.50$ off the total cost. Which number sentence can be used to find how much money Marcy needed in order to buy the apples?

A $(6 \times 0.35)-0.50=1.60$
B $(6+0.35)+0.50=6.85$
C $\quad(6-0.35)+0.50=6.15$
D $(6 \times 0.50)-0.35=2.65$

4 Some of the greatest long-jump distances by Olympic athletes are listed in the table below.

Long-Jump Distances

| Year | Distance <br> (meters) |
| :---: | :---: |
| 1968 | 8.90 |
| 1976 | 8.35 |
| 1988 | 8.72 |
| 1992 | 8.67 |

According to this table, in which year was the greatest long-jump distance recorded?

F 1968
G 1976
H 1988
J 1992

5 Some fifth-grade students recorded the temperature outside on 6 days in October. The data are shown in the table below.

October Temperatures

| Date | Temperature <br> $\left({ }^{\circ} F\right)$ |
| :--- | :---: |
| Oct. 1 | 45 |
| Oct. 2 | 52 |
| Oct. 3 | 48 |
| Oct. 4 | 50 |
| Oct. 5 | 61 |
| Oct. 6 | 43 |

Which is the most appropriate graph of the data listed in the table?


6 Wilma ran 4 miles. She wants to find her running time per mile in minutes. What additional information does she need?

F The number of minutes that she ran
G The number of feet in 4 miles
H The number of laps in 1 mile
J The number of laps that she ran

7 The table shows the number of tickets sold for the first 5 games of the football season.

Ticket Sales

| Game | Number Sold |
| :--- | :---: |
| First | 263 |
| Second | 198 |
| Third | 303 |
| Fourth | 279 |
| Fifth | 234 |

About how many tickets were sold for the first 5 games?

A 800
B 1,000
C 1,300
D 1,500

8 The leather band of Jaime's watch is broken. He needs a new watchband that measures $5 \frac{1}{2}$ inches long. Use the ruler on the Mathematics Chart to measure the line segment under each watchband shown below. Which watchband is $5 \frac{1}{2}$ inches long?


9 A concert area was set up with 16 rows of chairs. Each row had 12 chairs. In addition, there were 9 chairs set up on the stage. Which expression can be used to find how many chairs there were in all?

A $(12 \times 16)+(12 \times 9)$
B $(16+12)+9$
C $(16 \times 12)+(16 \times 9)$
D $(16 \times 12)+9$

10 Which of these shapes could never have perpendicular lines?

F Square
G Rectangle
H Triangle
J Circle

11 Which of these does NOT show a reflection?
A

C

B

D


12 Look for the pattern in the sequence of numbers below.
$25,32,28,35,31,38$
Which rule describes this pattern best?
F Add 25, subtract 4
G Add 13, subtract 7
H Add 7, subtract 4
J Add 4, subtract 7

13 Which group shows the prime factorization of the number 104?

A $2 \times 2 \times 2 \times 13$
B $2 \times 4 \times 13$
C $\quad 4 \times 26$
D $2 \times 2 \times 26$

14 A rectangular prism is shown below.


What is the volume of this rectangular prism?
F 240 cubic units
G 110 cubic units
H 83 cubic units
J 54 cubic units

15 According to a report published in 1999, the population of Dallas was $1,063,292$. What does the 6 in this number represent?

A Six thousand
B Sixty thousand
C Sixty-three thousand
D Six hundred thousand

17 Olivia bought some candy for $\$ 0.58$. She received $\$ 0.42$ in change. What is the least number of coins she could have received?

A 4
B 5
C 6
D 7

16 How many millimeters are equivalent to 400 centimeters?

F $\quad 0.4 \mathrm{~mm}$
G 4 mm
H 40 mm
J Not Here

18 Which of these figures has 2 more vertices than faces?
F

H

G

J


19 Carmen recorded the colors of the first 24 cars that drove by her house Saturday morning. The table shows the data she collected.

Car Colors

| Color | White | Black | Red | Blue | Green | Other |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number <br> of Cars | 4 | 6 | 2 | 5 | 4 | 3 |

Which fraction represents the number of black cars that she counted?
A $\frac{1}{3}$
B $\frac{1}{4}$
C $\frac{1}{5}$
D $\frac{1}{6}$

20 The numbers below form a pattern.

$$
23,27,33,37,43,47, \ldots
$$

Which of the following numbers will fit the pattern when it is extended?

F 51
G 78
H 104
J 123

21 Caleb and his brother collect seashells. Caleb has 468 seashells, and his brother has 263. How many more seashells does Caleb need to collect in order to reach his goal of 750 seashells?

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

22 Which is a prime factor of the composite number 18?

F 3
G 5
H 6
J 9

23 Which transformation of the shaded figure is represented in the diagram?


A Reflection
B Translation
C Rotation
D Not Here

24 Mr. Perkins needs 16 ounces of milk for a recipe. How many cups of milk does he need for the recipe?

F 2 c
G 4 c
H 8 c
J Not Here

25 Which of these rectangular prisms has a volume of 96 cubic units?
A

C

B

D


26 Amy has 6 video games, as shown below. She plans to play 2 of these games today, and the order in which she plays them is not important.


How many different combinations of 2 video games are possible?

F 15
G $\quad 12$
H 5
J 4

27 Wanda is watering plants for her neighbor. She gives each plant a little less than $\frac{1}{2}$ cup of water once a week. Which amount is less than $\frac{1}{2}$ cup?

A $\frac{3}{6}$ c
B $\frac{3}{7}$ c

C $\frac{4}{6}$ c
D $\frac{4}{7} \mathrm{c}$

28 A rectangular rabbit cage is shown below.


What is the perimeter of the bottom of the rabbit cage?

F 12 feet
G 16 feet
H 18 feet
J 20 feet

29 On a class field trip, there was 1 adult for every 8 students. If a total of 54 students and adults went on the trip, how many were students?

A 46
B 47
C 48
D 62

30 The graph below shows the number of trees planted at a park last year.


Which statement about the data shown on the graph is NOT true?

F A total of 37 trees were planted last year.
G The median number of trees planted was 11.

H There were 3 more maple trees than cedar trees planted.
$\mathbf{J}$ The range of the data is 6 .

31 Trent is 5 feet tall. His sister Elise is 30 inches tall. What fractional part of Trent's height is Elise's height?

A $\frac{1}{6}$

B $\frac{1}{3}$

C $\frac{1}{2}$

D $\frac{2}{3}$

32 The table shows the amount of water that Nicholas drinks over a certain number of days.

## Water That Nicholas Drinks

| Number of Days | Ounces of Water <br> (total) |
| :---: | :---: |
| 3 | 144 |
| 4 | 192 |
| 6 | 288 |
| 7 | 336 |

If this pattern continues, how many ounces of water will he drink over 9 days?

F $\quad 240 \mathrm{oz}$
G 345 oz
H 384 oz
J 432 oz

33 Dora's family bought a bag of oranges. There are 6 people in Dora's family. If they ate $\frac{3}{8}$ of the oranges, what fraction of the oranges remained?

34 Veronica is packing 60 cookies for a class picnic. She packs 6 cookies in each bag. Which number sentence can be used to find the number of bags, $b$, that she will need?

F $\quad 60 \times 6=b$
G $\quad 60+6=b$
H $60 \div 6=b$
J $60-6=b$

35 A trapezoid is shown below.


Which statement about the trapezoid is true?
A The trapezoid has 3 acute angles.
B The trapezoid has 2 sides that are parallel lines.

C The trapezoid has 2 right angles.
D The trapezoid has 3 obtuse angles.

36 Some friends went to a movie theater by different routes. It took Malcolm twice as long as Julie to get to the theater. It took Alex 5 minutes longer than it took Julie. Which table shows a reasonable set of travel times for the 3 friends' routes?
F

| Person | Time |
| :--- | :---: |
| Malcolm | 18 |
| Julie | 9 |
| Alex | 13 |

G

| Person | Time |
| :--- | :---: |
| Malcolm | 16 |
| Julie | 10 |
| Alex | 15 |

H

| Person | Time |
| :--- | :---: |
| Malcolm | 18 |
| Julie | 9 |
| Alex | 14 |

37 The figure below is missing a measurement for one line segment.


What is the missing measurement?
A 1 centimeter
B 4 centimeters
C 5 centimeters
D 8 centimeters

38 Alaska, the largest state in the United States, has an area of 656,424 square miles. Rhode Island, the smallest state, has an area of 1,545 square miles. What is the difference between the areas of these two states?

F $\quad 501,924 \mathrm{sq} \mathrm{mi}$
G $654,879 \mathrm{sq} \mathrm{mi}$
H 655,879 sq mi
J 657,969 sq mi

39 What part of the model is shaded?


A 0.003
B 0.03
C 0.3
D 3.0

40 Marcus and Joe are placing books on the library shelves. They have completed $\frac{2}{3}$ of the job so far. Which fraction is equivalent to $\frac{2}{3}$ ?

F $\quad \frac{2}{6}$
G $\frac{2}{4}$
H $\quad \frac{4}{6}$
J $\frac{3}{2}$

41 The table below shows the coordinates of 3 points.

| Point | $L$ | $M$ | $N$ |
| :---: | :---: | :---: | :---: |
| $\boldsymbol{x}$ | 2 | 4 | 6 |
| $\boldsymbol{y}$ | 1 | 3 | 5 |

Which graph shows the line containing these 3 points?
A

C





Which problem matches this advertisement?
F The regular prices of 2 kinds of phones are $\$ 20$ and $\$ 39$. If Ms. Chung buys 1 of each kind of phone, what will be the total cost of the phones?

G The regular price of a phone is $\$ 39$. The phone is on sale for $20 \%$ off the regular price. What is the sale price of the phone?
$\mathbf{H}$ The regular price of a phone is $\$ 20$. The phone is on sale this week for $39 \%$ off the regular price. What is the sale price of the phone?
$\mathbf{J}$ The regular price of a phone is $\$ 39$. If Ms. Chung buys 1 phone at the regular price, the second phone will cost $20 \%$ less. What will be the total cost of the phones?

43 The graph shows some areas of a public library.


Which ordered pair best represents the point on the graph labeled "Magazines"?

A $(1,4)$
B $(3,6)$
C $(4,1)$
D $(5,4)$

44 Max is packing books into boxes. Each box can hold 12 books. Which number sentence can be used to find the total number of boxes that he needs in order to pack 84 books?

F $84 \div 12=$
G $\quad 84-\square=12$
H $84+12=\square$
J $\square \div 12=84$

READING

## Hastin's Big Chance

As usual, it was a scorching summer day in southern India. Hastin wiped the sweat from his forehead and wished for a cool breeze. He reached into his bag and pulled out a mango. He tore into the fleshy orange fruit with his teeth and wiped the juice from his chin. Sandos, his elephant, wandered over to Hastin. The elephant tried to swipe the mango from Hastin's hand with his trunk. Hastin laughed and tore off a piece for his playful friend.

Hastin had a deep affection for his elephant. The two had been together since Hastin was eight years old and Sandos was two years old. In the five years they had been together, Sandos had grown to be one of the strongest elephants living in the Mudumalai Wildlife Sanctuary. Yet the elephant was always gentle with Hastin. Hastin had become very fond of his giant friend.

As Hastin and Sandos rested, they watched Hastin's father clear a road with the mahouts, or elephant trainers, who worked on clearing the roads. The mahouts were working with their elephants to remove some trees that had been knocked into the road by wild elephants. The sanctuary where the mahouts and elephants worked and lived had many visitors. The roads needed to be clear so the visitors could drive safely through the park.

Hastin watched as the elephants moved the trees with their tusks. As he watched, he thought about becoming a mahout one day. However, there were few positions available. It would be difficult to become a mahout and get a job at the sanctuary. Hastin would have to prove to the head mahout that he could control an elephant before he would be considered for a position.

As a mahout, Hastin would work with the elephants, doing many jobs for the sanctuary. Besides moving trees, the mahouts and the trained elephants also worked to control wild elephants. The wild elephants sometimes wandered out of the sanctuary. They would go into the surrounding fields where the farmers had planted their crops. The farmers often called on the mahouts to take the wild elephants back to the sanctuary.
 mahouts. "Hastin! Come quickly! I need you!" his father shouted to him. His call sounded urgent.

After Hastin had rested awhile, he heard several yells from the Hastin jumped up. "Dray, Sandos!" The elephant acknowledged the command by holding out its front foot. Hastin climbed the foot like a ladder and grabbed the chain collar around Sandos's neck to pull himself up. "Hut!" Hastin said. As the elephant began moving forward, Hastin tucked his feet under the chain collar to keep from falling.

Hastin rode toward his father and immediately saw what the problem was. A jeep carrying food and supplies had hit a tree in the road. The jeep had rolled onto its side and was blocking the road. Nearby, other trained elephants, not quite strong enough to move the jeep, began to eat the spilled food as the confused driver walked to safety.

Hastin's father looked at him. "Your elephant is one of the strongest. Now is the time to prove that you can be a mahout."

Hastin knew that his father was right. Hastin took a deep breath. "Hut!" he said to Sandos with confidence in his voice. He led Sandos to the jeep. As Hastin gave the commands, the large elephant leaned its head against the side of the jeep and pushed.

The jeep moved but not enough. Again Hastin gave the orders, and Sandos followed his commands. As the elephant pushed, the jeep slowly rolled back onto all four wheels.
11 The other mahouts congratulated Hastin on a great job. The head mahout walked over to Hastin. "You have proved to me that you and Sandos are ready. Your training is complete. Beginning tomorrow, you will work with the other mahouts and elephants."
12 Hastin smiled, feeling great joy in his heart. He and Sandos would finally be able to work alongside his father and the other mahouts. Hastin lay his body over Sandos's head. He felt the strength of the leathery creature beneath him. He was glad that Sandos had followed his commands. He was also thankful for the friendship he had with Sandos. As Hastin and Sandos made their way back, they moved as one, elephant and mahout.

1 The author probably wrote this selection to -
A inform readers about the Mudumalai Wildlife Sanctuary

B explain to readers the process of training elephants
C entertain readers with a story about a boy who proves his skills
D give readers information about how to become a mahout

3 The reader can tell that wild elephants -
A are very easy to control
B can cause a great amount of damage
C are much larger than trained elephants
D cannot move heavy things

4 Paragraph 4 is mainly about -
F how hard it is to become a mahout
G how elephants move trees
H how the mahouts control the elephants
J how mahouts protect the sanctuary

5 What can the reader tell about Hastin?
A He does not like the training he has to do.
B He is determined and hardworking.
C He does not get along with the mahouts.
D He is eager to leave the sanctuary.

6 Why does Hastin have to prove his skills to the head mahout?

F Hastin's father wants to show how well he has trained Hastin.

G The head mahout decides who becomes a mahout at the sanctuary.

H The head mahout says that Hastin is not yet fully trained.
J Hastin wants the head mahout to stop giving him orders.

7 The reader can tell that the sanctuary -
A is a very expensive place to visit
B contains many other wild animals
C is home to both wild and trained animals
D provides elephant rides for visitors

8 Why is it important to Hastin that Sandos follow his commands?

F He wants to show the head mahout that he is ready to become a mahout.

G He doesn't want Sandos to eat the spilled food.

H Hastin wants visitors to watch him work with Sandos.
J He wants to show his father how strong Sandos is.

9 Hastin worries about becoming a mahout because -

A Sandos does not usually obey commands
B he has not been training as often as he should

C very few people are chosen to become a mahout

D mahouts are often injured by wild elephants

10 From what the reader learns about Hastin, which statement does not make sense?

F Hastin and Sandos continue working together in the park.
G Hastin decides not to be a mahout at the wildlife sanctuary.
H Hastin becomes a great mahout at the sanctuary.
J Hastin works hard every day to be a good mahout.

11 How does Hastin feel after he and Sandos push the jeep back onto its four wheels?

A Disappointed that he has to work
B Proud of himself and Sandos
C Frightened of the head mahout
D Surprised that he can control Sandos


## Hero's Corner

 Instead of pursuing his dream to become an opera singer, Dr. Turnbull chose to seek another dream. He decided to share his talent and time with young people. In 1968 he started a boys' choir in Harlem. That choir led to the founding of a special school called the Choir Academy of Harlem. The school now has more than 500 students. Instruction centers on music but also includes college preparation classes in English, math, and science. Almost all the academy's students go on to college. The Boys Choir of Harlem has become famous worldwide for its wonderful performances. There is now a Girls Choir of Harlem that is working toward a similar goal.3 However, Turnbull does not measure success in terms of fame or money. He sees success in the thousands of young people whose lives he has helped change.

## MUSICAL HI-NOTES


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## Choir Sings a Song Called Success

About three dozen students from New York City are really going places. In fact, these fourth through twelfth graders are seeing the world! The Boys Choir of Harlem holds about 100 concerts a year to share its beautiful sound with excited fans. The choir has performed for royalty, presidents, and other leaders around the world. The choir members' travels have taken them to London, Tokyo, Paris, and many other places. Its shows have made the choir famous. More importantly, the young singers are finding personal success.

The choir was started in 1968 by Dr. Walter Turnbull to help African American children living in a part of New York City called Harlem. Turnbull wanted to give these children an appreciation of all kinds of music. He also wanted to provide safe activities for the youth of the neighborhood.

Turnbull hoped the children of Harlem would learn to love music as much as he did. However, Turnbull wanted to do more than share his passion for music. He was determined to prove that the
youth of Harlem could perform the same kinds of music as the great choirs of the world. Unlike other boys' choirs, Turnbull's choir would include older boys with deep voices to give the group a well-rounded sound. Turnbull dreamed of a choir that would sing all kinds of songs, from classical to jazz. The special mix of music and voices worked. The Boys Choir of Harlem quickly became popular.

However, Turnbull felt he needed to do even more to help the youth of Harlem. He asked the New York City school system to let him start an elementary school for grades four through six. In 1987 he opened the school, which he named the Choir Academy of Harlem.
Today the academy has more than 500 students in grades four through twelve. Girls are part of the school, too, and perform in their own choir. The academy not only offers instruction in music but also teaches college preparation classes in English, math, and science. An amazing $98 \%$ of the students go on to college. However, only a few continue with music. Many
of the students enter fields such as medicine, teaching, and business.

Turnbull insists that the students be honest and responsible. He tells them that discipline and hard work are all part of being in the choir. A beautiful voice is useless without self-control and serious effort.

Turnbull also believes that practice makes perfect. The students practice their music for four hours every school day. The students don't just learn how to sing, however. They spend many hours studying song lyrics. They learn not only the words of the songs but also what the words mean and how they are pronounced. In addition, the students study music history. This helps them better understand the ideas behind the music.

Each year about 3,000 students apply to the Choir Academy of Harlem. Only about 150 are accepted. Not all of these students become part of the choir.

Many study other areas of music, such as piano. About 200 students make up the concert choir that sings in the New York area. From this number, 35 to 40 students are selected for the performing choir. Turnbull looks at the students' progress in school, their behavior in class, and how well they sing in practice to help him decide who will travel with the performing choir. Of course, teachers go with the choir so that the students will not have a lapse in their studies. They cannot afford to fall behind in their schoolwork.

The Choir Academy of Harlem teaches young people about hard work and the importance of an education. Thanks to Dr. Walter Turnbull and his staff, thousands of students have had the chance to learn these lessons and to succeed in all areas of their lives.

## Use "Hero's Corner" (p. 32) to answer questions 12 and 13.

12 Which sentence shows that the Choir Academy of Harlem helps young people succeed?

F Turnbull overcame many difficulties to reach his goal.

G He finished college and went on to earn his master's degree in music.
$\mathbf{H}$ He decided to share his talent and time with young people.

J Almost all the academy's students go on to college.

13 Why did Turnbull want to start a school?
A The students were having trouble reading music.

B He wanted to provide a better education for the youth.

C He needed a place to get all the boys together.

D He wanted parents to come to the school to hear the choir.

## Use "Choir Sings a Song" (pp. 33-34) to answer questions 14-17.

14 Which of these is the best summary of this selection?

F The Boys Choir of Harlem holds about 100 concerts each year. The choir sings all kinds of songs, from classical to jazz. The choir has traveled all over the world.

G Dr. Walter Turnbull started the Boys Choir of Harlem in 1968 to help children in the neighborhood. The choir was very successful, but Turnbull wanted to do more. In 1987 he started a special school for Harlem's children.

H The Boys Choir of Harlem is not like other choirs. It has performed for kings, presidents, and other important people. The concert choir contains about 200 students, and the performing choir includes 35 to 40 students.

J The Choir Academy of Harlem does not teach students just about music. Students at the school learn the value of hard work and the importance of education. They also study music history.

15 Teachers travel with the performing choir when it goes on tour to -

A make sure the students do not get into arguments

B talk to other young people about joining the choir

C help the students keep up with their class work

D perform in a special choir made up of the school's staff

16 Which sentence from the article shows that Turnbull is concerned that his students be good citizens?

F The choir has performed for royalty, presidents, and other leaders around the world.

G Turnbull insists that the students be honest and responsible.
H Turnbull also believes that practice makes perfect.
J In addition, the students study music history.

17 Look at this web of information.


Which detail belongs in the empty circle?
A Students' grade level
B Students' popularity
C Students' favorite music
D Students' behavior in class

## Use "Hero's Corner" and "Choir Sings a Song" to answer questions 18-20.

18 What can the reader tell about Turnbull's beliefs from these selections?

F He thinks education is as important as music.

G He thinks it is important to be famous.
H He thinks all choirs should perform for world leaders.

J He thinks that choirs should perform only certain kinds of music.

19 An idea present in both selections is -
A the worldwide fame of the Boys Choir of Harlem

B Turnbull's struggles to earn his master's degree

C the wide variety of music performed by the Boys Choir of Harlem

D Turnbull's childhood growing up in Mississippi

20 One way these selections are alike is that both mention -

F the college preparation classes at the Choir Academy of Harlem

G the reasons students must learn music history

H the struggles Turnbull faced while growing up
J the highest college degree that a person can receive

## Tía Lidia Weaves a Story

Ñanduti is a type of thin lace handmade by women in Paraguay. Nanduti can be made into many things, such as a scarf, tablecloth, or blanket. A mantilla is often made of this fine lace. It is worn by some women like a veil over their head and shoulders. Paraguay, she smiled at all the wonderful sights and smells. Along the side of the road, men and women sold goods from their street shops. Some were selling beans and peanuts, while others sold hats, mats, and many other things. Celina paused at one of the many shops where women were selling mantillas. She admired the delicate lace mantillas that many women in Paraguay both sell and wear. Most of the lace mantillas were white, but some were more colorful. At last Celina hurried on to Tía Lidia's house. Celina liked to visit her aunt every day. made lace. Celina had always been fascinated by the wooden frame that stood in the corner of the house. She loved to watch her aunt stand at the frame, working the delicate strands of linen or silk. Most of all, she loved the pretty lace pieces called ñanduti that Tía Lidia created. Tía Lidia made everything from small lace collars to long, flowing dresses.
3 This morning, when Celina arrived at her aunt's house, Tía Lidia was working on an elegant lace tablecloth. She had been working on the tablecloth for several weeks. First Tía Lidia had placed a sheet of linen on the wooden frame. Then she had drawn a pattern of circles and fancy designs on the material. Finally she had begun carefully removing some of the threads from the material and weaving other threads across the open spaces. It was a difficult process that would produce a thin, detailed lace.

As Tía Lidia worked, Celina walked around the room and admired some of the lovely pieces her aunt had made. She smiled when she saw one rectangular piece of lace that lay over a bench. Celina carefully lifted it and settled it over her head like a veil. She peered out from behind the finely woven patterns. She thought that this must be how the world looked to new brides. "This looks like a spider's web," she said.
 Guaraní, the old language of Paraguay, ñanduti means 'web." Tía Lidia paused as she carefully wove a thread into the tablecloth. "Have I ever told you the story of the white spider?" she asked at last.
"No, Tía Lidia. Tell me!"
The dark-haired woman stepped away from the frame and smoothed her colorful skirt. "Every young girl in Paraguay should know this story. But this story needs a nice cup of yerba mate." As Tía Lidia prepared the hot drink, she told Celina about the lace Tía Lidia's mother had woven. "My mother told me this story when I was learning to make $\tilde{n} a n d u t i$.
"A very long time ago," Tía Lidia began, "when a young man named Juan was fetching water for his mother to make tea with, he saw a white spider struggling in the stream. Quickly he scooped out the spider and placed it gently on the leaves of a yerba tree."
"Isn't this yerba mate made from the leaves of a yerba tree?" Celina asked.
"That's right," Tía Lidia said with a smile. "Every day, when Juan went to fill up the water jugs, he saw the white spider waiting for him. He began to think of the spider as a friend to whom he could tell all his troubles. One day he told the spider about a lovely woman with whom he had fallen in love. However, in those days, it was the custom in Paraguay for a woman's father to choose her husband. This woman's father had said, 'I want to
make sure my daughter is well cared for. Whoever brings forth the most wonderful and original gift shall win her hand.' Juan was very sad. He knew he could never afford such a gift. The next day, however, when he returned to the spring, he saw that his friend was almost finished spinning a fragile silk cloth. Juan could see that it was the most exquisite lace mantilla he had ever seen. Juan knew the mantilla would look lovely draped around the shoulders of the woman he adored.
"The patterns of the mantilla were of all the native flowers of the area. Leaves and vines and drops of dew then surrounded the flowers. Instantly Juan understood what the spider had done. He ran off to present his gift. When he reached the village and placed the mantilla upon the woman, her face immediately lit up. She was radiant. Everyone around her gasped. They all knew at once that this mantilla was the most wonderful gift a woman could receive. Juan and the woman were married right away."
"From then on," finished Tía Lidia, "the women of Paraguay have tried to duplicate the delicate lace. We have woven the lace for years, but no one has been able to equal that made by the white spider. Still, our lace is famous for its splendor."

Celina smiled at the wonderful tale she had just heard. "Now that I know the story of the white spider, perhaps it is time I learned to make lace."

21 Celina puts the small piece of lace over her face because she -

A doesn't want her aunt to see that the story is making her sad

B is hoping that her aunt will give her the piece of lace

C wants to see whether the lace is as thin as the lace she has seen at the shops

D thinks it looks like the material used for wedding veils

22 Paragraph 1 is important because it helps the reader understand -

F the town in which Celina lives
G why Celina likes to visit her aunt's house each day

H how many different foods are eaten in Paraguay

J why most of the mantillas are woven with white material

23 Which of these is the best summary of this story?

A Celina walks to her aunt's house. She sees many things along the way, including beautiful lace called ñanduti. Her aunt also makes the lace.

B Celina goes to her aunt's house, where she learns to make ñanduti. She and her aunt make $\tilde{n} a n d u t i$ to sell at local markets.

C Celina hears a story about a boy named Juan, who is trying to find a gift for his girlfriend. He gives the woman some lace.
D Celina visits her aunt, who makes lace. Her aunt tells her a story about how ñanduti came to be. Celina decides she wants to learn how to make the lace.

24 The reader can tell that when Celina is older, she will probably -

F be too busy to weave lace
G teach her daughter how to make lace
$\mathbf{H}$ think that lace is not very pretty
J buy all her lace from a store

25 The reader can tell that Tía Lidia -
A makes the finest lace in Paraguay
B thinks that women should not sell their lace

C learned to make lace from her mother
D weaves lace that is better than the white spider's

26 Paragraphs 2 through 4 are important because they help the reader understand -

F why circles and designs are drawn on lace
G that Tía Lidia is a skilled lace maker
H why the lace reminds Celina of a spiderweb

J that tablecloths can be used as veils

27 What is paragraph 3 mainly about?
A The house Tía Lidia lives in
B How long it takes Tía Lidia to make lace
C The threads that Tía Lidia removes
D How Tía Lidia makes lace

28 Which of these sentences in the story shows the reader that Paraguay is known for its fine lace?

F Most of the lace mantillas were white, but some were more colorful.

G Tía Lidia made everything from small lace collars to long, flowing dresses.
$\mathbf{H}$ "We have woven the lace for years, but no one has been able to equal that made by the white spider."
J "Still, our lace is famous for its splendor."

29 Juan needs a special gift to -
A make the woman fall in love with him
B convince the woman's father to let her marry him

C thank the woman's father for saving his life

D show the woman's father how rich he is

30 In paragraph 10, why is Juan sad?
F Juan thinks the woman will marry someone else.
G Juan has promised the spider he will never give the lace away.

H Juan thinks that the woman doesn't want to marry him.

J Juan doesn't want to give his fine lace mantilla away.

31 Juan lifts the spider out of the water because it -

A has promised to make a gift for his girlfriend
B looks as if it is drowning
C has been a very good friend to him
D is the best lace weaver in the town

32 The white spider makes the mantilla for Juan because -

F the spider wants everyone to see the wonderful lace it weaves

G Juan tells the spider that his aunt can make better lace
H the spider wants to thank Juan for saving its life
J Juan promises to pay the spider a lot of money

## PLAYFUL PEOPLE-PLEASERS

Washington, D.C., is well known for its VIPs (very important people). Kings, queens, and even presidents of foreign countries often visit our nation's capital. Recently, however, some visitors of another kind made a big arrival. Make that a giant arrival! These visitors are VIPs, too-very important pandas. Tian Tian (t-YEN t-YEN) and Mei Xiang (may sh-ONG) are giant pandas that traveled thousands of miles from their home in the mountains of China. They will live at the National Zoo for 10 years. They will then be returned to China.

Tian Tian, or Tian for short, is three years old and weighs about 217 pounds. His name means "more and more." Mei Xiang, or just Mei, is two years old and weighs about 139 pounds. Her name means "beautiful fragrance." These young pandas won't stop growing until they're about five years old. By then, Tian will probably weigh around 250 pounds. Mei is expected to weigh about 220 pounds when she reaches maturity.

Pandas are such familiar animals that many people think that there are lots of
 them in the wild, but the truth is that these animals are now endangered. There are several reasons that there are a small number of pandas left in the world. One reason is that people are taking over many of the areas where pandas live and get their food. Another reason is that pandas are often hunted for their fur. Today there are fewer than 1,000 pandas left. The Wolong Nature Reserve in China is home to about 100 of these pandas. The reserve was created to protect the pandas and other animals. Both Tian and Mei were born there.

For many years scientists could not decide how to classify giant pandas. For a while scientists thought that pandas were more like raccoons than bears. However, some experts now agree that giant pandas are more like bears. Scientists think pandas are closely linked to a kind of bear that lives in South

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America. Both the South American bears and pandas have dark markings around their eyes.

Pandas are unique in more ways than their appearance, though. These rare creatures love to "talk." They make human-like noises that sound like words. Each sound has a different meaning. For example, pandas make a bleating sound to call to each other. A panda "honks" if it is frightened or gets in trouble. If a panda feels it must defend itself, it makes a chomping sound. To do this, the panda rapidly opens and closes its mouth so that its teeth hit together. It also may bark to scare someone or something away. The sound that no one wants to hear is a squeal. This usually means the panda is in pain.

In the wild, giant pandas eat mostly bamboo. Besides bamboo, zookeepers feed Tian and Mei special biscuits. Sometimes they are also given other treats, such as carrots, boiled yams, and apples.

Like people, each panda has its own personality. Tian is very outgoing, but Mei is shy. Tian eats his food as fast as he can and starts looking for more. Zookeepers sometimes call him the vacuum cleaner because he eats so fast. However, Mei takes her time eating. She often smells what she eats. Once she was given a bottle of almond flavoring and poured it all over herself.

Both Tian and Mei are playful, friendly, and get along well with people. In fact, they are so likable that the people in China hated to see them go. However, as playful as these pandas are, zookeepers do not go inside their pens, because Tian and Mei are large, strong animals.

The pandas' day begins at 7:00 A.m. By then Tian is pacing back and forth in his sleeping area. He calls for the zookeeper with his bleating sound. He wants to be let out into the main panda area. Mei, however, tends to sleep late. After her door is opened, Tian often goes in to wake her up. A gentle push will sometimes do the job. Other mornings, even when Tian is persistent and continues to bother her, Mei refuses to leave her warm bed.

Thousands of people visit the pandas at the National Zoo each week. So far Tian and Mei seem to have adjusted to their new home. Zookeepers are doing everything they can to make sure that the giant pandas' long visit here will be comfortable.

33 What is this article mainly about?
A Zoos in the United States and other countries

B The sleeping habits of giant pandas
C Two new pandas at the National Zoo
D The Wolong Nature Reserve in China

34 In paragraph 9, the word persistent means -
F determined
G careful
H tired
J thoughtful

35 Which is the best summary of this article?
A Two giant pandas have arrived at the National Zoo. Their names are Tian Tian, which means "more and more," and Mei Xiang, which means "beautiful fragrance."
B There are fewer than 1,000 pandas left in the world. Many of these pandas live in the Wolong Nature Reserve in China. Some also live in zoos.

C Two giant pandas from China will live at the National Zoo in Washington, D.C., for 10 years. Pandas are related to bears. They "talk," play, and sometimes act lazy.
D The two giant pandas at the National Zoo are playful and like people. However, zookeepers do not go into the pandas' living area because the pandas may be dangerous.

36 In paragraph 3, endangered means -
F at risk of disappearing
G becoming popular
H very violent
J being hidden

37 What can the reader tell about giant pandas from information in this article?

A Pandas can live only in warm climates.
B South American bears are also called pandas.
C Pandas can be found only in nature reserves.

D Male pandas probably grow to be larger than female pandas.

38 The reader can tell that Mei Xiang -
F is much smaller than most pandas
G has a name that fits her behavior
$\mathbf{H}$ is more outgoing than most pandas
J has visited the United States once before

39 How are some South American bears like giant pandas?

A They are from the same nature reserve.
B There aren't any of them left in zoos.
C They feed mostly on bamboo.
D The markings on their face are similar.

40 Which sentence from this article tells readers that Tian and Mei are separated at night?

F These young pandas won't stop growing until they're about five years old.
G If a panda feels it must defend itself, it makes a chomping sound.
H Tian eats his food as fast as he can and starts looking for more.
J After her door is opened, Tian often goes in to wake her up.

41 Look at this diagram of information from the article.


Which of these belongs in the blank?
A Will stop growing in about two years
B Will weigh more than 200 pounds when completely grown
C Likes things that smell nice
D Sometimes likes to sleep late in the morning

42 The number of pandas has decreased because -

F many are being sold to zoos in the United States

G they have lost many of the areas where they once lived
H scientists think pandas are just ordinary bears
J they are being captured to prevent them from hurting people

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## SCIENCE

Read each question and choose the best answer. Then fill in the correct answer on your answer document.

SAMPLE A

| Objects That <br> Conduct Heat | Objects That Do <br> Not Conduct Heat |
| :--- | :---: |
| Silver spoon | Plastic fork |
| Copper pan | Glass block |
| Iron nail | Wooden handle |
| Gold ring | $? ? ?$ |

The chart shows some objects that conduct heat and some that do not conduct heat. Which of these would complete the column of objects that do not conduct heat?

A Electrical wire
B Water drop
C Cotton glove
D Horseshoe magnet

Plant Growth vs. Time


The graph shows how much a plant grew over four days. According to the graph, how many centimeters did the plant grow between Day 1 and Day 4 ? Record and bubble in your answer on the answer document.

1 Which of the following would be safe to do during a lab activity?

A Running in the classroom
B Leaving a water spill on the floor
C Touching hot surfaces
D Following lab rules


2 The wires connecting the battery and the lightbulb create a closed circuit. What would happen if one of these wires were cut?

F The battery would lose its charge.
G The glass would crack.
H The light would go out.
J The wire would become hot.

3 A student wants to find out which type of soil holds the most water. He uses four identical pots with holes in the bottom. He fills each pot with a different type of soil and waters the pots with the same amount of water. How can he find out how much water stays in the soil in each pot?

A By planting seeds and measuring plant growth in each pot

B By measuring the amount of water that drains from each pot

C By observing which soil looks wettest after the water has been added to the pots
D By feeling the soil before and after adding water to each pot

4 What tool is used to find the temperature at which water boils?


| Nutritional Information |
| :--- |
| Calories: 170 |
| Fat: 1 g |
| Sodium: 200 mg |
| Q |


| Nutritional Information |
| :--- |
| Calories: 210 |
| Fat: 3 g |
| Sodium: 220 mg |
| R |


| Nutritional Information | Nutritional Information |
| :--- | :--- |
| Calories: 200 Calories: 290 <br> Fat: 1 g  <br> Sodium: 23 mg Fat: 4 g <br> Sodium: 200 mg  <br> S T |  |

5 Which of these foods would be the best choice for someone on a low-fat, low-sodium diet?
A Q
B R
C S
D T

6 Some salamanders have a sticky tongue and a wide mouth lined with teeth. These animals most likely feed on -

F insects and other tiny animals
G leaves and other plant structures
H algae and other microorganisms
J dead and decaying materials


7 What is the approximate diameter of this coin?

A 2 millimeters
B 2 centimeters
C 2 meters
D 2 kilometers


8 The picture shows the process of -
F melting
G boiling
H condensing
J freezing


9 Which tools are needed to find how mass affects the distance these boxes will slide?
A Ramp, thermometer
B Balance, ruler
C Stopwatch, ruler
D Balance, string

## Use the picture and what you know about plants and animals to answer questions 10-12.

## Prairie Animals



The prairie region of North America was once home to large herds of grazing animals and other herbivores (plant eaters).

10 Which part of a jackrabbit most helps it escape predators?

F Long legs
G Thick fur
H Short tail
J Small head

11 On the prairie the herbivores would compete most for -

A oxygen
B space
C grass
D soil

12 The prairie is ideal for the growth of grasses because it has rich topsoil. All of these processes help form topsoil EXCEPT -

F decay of trees
G weathering of rocks
H erosion of hills
J movement of oceans

13 Which two planets are closest to Earth?
A Mercury and Saturn
B Mars and Jupiter
C Mercury and Venus
D Venus and Mars


14 Which of these questions can be answered from the results of this experiment?
F Do beans need light in order to grow?
G Can beans grow faster in groups of eight?
H Does seawater affect bean growth?
J How much water is needed for beans to grow?


15 If all of the fish are removed from this food web, which animal population will most likely decrease first?

A Turtles
B Mosquito larvae
C Dragonfly larvae
D Pelicans

16 Light traveling through a pair of eyeglasses is -

F refracted
G transmitted
H absorbed
J reflected


17 This diagram represents water in a container. What process is taking place?

A Freezing
B Condensation
C Melting
D Evaporation

18 Plants can survive in a clear, closed container without animals. Animals cannot survive in a closed container without plants. Why can't animals survive in a closed container without plants?

F Plants and animals need water to survive.
G Plants produce oxygen, which animals need.
H Plants take in and give off water; animals only take in water.
J Plants are stationary; most animals roam freely.

19 Which gas in the air would increase if a large number of trees were cut down?

A Carbon dioxide
B Nitrogen
C Oxygen
D Water vapor


20 This plastic rain gauge is shown before and after a rainstorm. About how much rain in centimeters fell in the rain gauge during the storm? Record and bubble in your answer on the answer document.

21 In an experiment salt and sand are mixed together. Which of these procedures could be used to most easily separate the salt from the sand?

- stir the mixture into a glass of water
A
- pour the mixture in the glass through a filter
- evaporate the water
- pour the mixture onto a piece of paper
B
- brush the mixture into a pile
- drag a magnet through the pile

C

- put the mixture in a pan
- heat the pan for 10 minutes
- let the hot mixture cool slowly
- spread the mixture into a thin layer
D
- look at the mixture through a magnifying glass
- separate the crystals with a pin


22 Sunspots appear to be darker than the rest of the sun's surface because they are -

F partially hidden from view
G in the shadow of the sun's corona
H cooler than the rest of the sun's surface
J made of dark-colored minerals

23 Raccoons living in cities have learned to open lids of garbage cans. This is an example of an animal -

A adapting to its environment
B inheriting the ability to change its diet
C being tamed by humans
D becoming a plant eater

24 Which experiment would best show how different methods of plowing fields on a hill affect erosion?
F




H


J


25 Which of these would be the best way to find whether a softball will roll down a hill faster than a basketball?

A Determining which of the balls has the greater mass

B Observing the balls rolling down the same section of a hill at the same time

C Throwing the balls into the air at the same time to see which goes higher

D Dropping the balls from the same height and observing which hits the ground first


26 Which of these best represents Mars?
F Q
G R
H S
J T

27 A car will skid more on a wet road than on a dry road. This happens because between the tires and the dry road, there is more -

A gravity
B magnetism
C friction
D heat

28 The African baobab tree has a huge trunk that can store as much as 100 kiloliters of water. This adaptation would be an advantage in a climate that is very -

F cold
G dry
H windy
J sunny

29 An uncovered bowl of water was placed in the refrigerator. Each day the amount of water left in the bowl was recorded. Which graph probably shows the results?
A





30 Which of these would best model how the sun's energy warms Earth?

F A pot of water boiling
G A heat lamp keeping food hot
H An oven baking bread
J A spoon getting hot when stirring soup

## Food Production (Photosynthesis)



31 In the diagram above, the label Z represents -
A sugar
B carbon dioxide
C nitrogen
D water vapor

32 Which of the following characteristics would NOT give animals an advantage in the ocean?

F Long body hair
G A smooth body
H Structures that sense movement
J A strong sense of smell

Percent of Water in Common Foods


33 What conclusion can be drawn from this graph?

A A peach contains a lower percent of water than lettuce.

B Lettuce contains a lower percent of water than bread.

C A melon contains a higher percent of water than the other foods.

D Bread contains the highest percent of water.

34 Which of these is a good conductor of electricity?

F Glass
G Metal
H Rubber
J Plastic

35 About how long does it take Earth to make a complete rotation on its axis?

A One day
B One week
C One month
D One year


36 Sound is made when a drumstick hits the drum. This happens because the force of the drumstick on the drum causes -

F vibrations
G electrical currents
H heat energy
J a magnetic charge


37 This experiment was probably set up to answer which of the following questions?

A What is the mass of the ants?
B Will ants go to a dark or a light area?
C How many kinds of ants are there?
D Where do ants get food?

38 Which of the following can be attracted to a magnet?

F Gold ring
G Glass marble
H Iron needle
J Wool sock


39 What is the mass of these rocks?
A 10 grams
B 17 grams
C 19 grams
D 22 grams

40 Which of the following thermometers shows the boiling point of water in a pan?


## BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS ON THE ANSWER DOCUMENT.

TAKS GRADE 5 SPRING 2003

