

# READING

**DIRECTIONS:** Read this letter and then answer questions 1 through 6.

7890 E. First Street  
Douglas, Arizona 85607  
February 24, 2005

Ms. Arlene Yamamoto, Director  
International Parks and Zoos Information Center  
5225 N. 34<sup>th</sup> Avenue  
Phoenix, Arizona 85000

Dear Ms. Yamamoto:

Recently my fourth grade class had a guest speaker from South Africa talk to us about an incredible animal called an aardvark. My classmates and I learned many interesting facts about the aardvark which will help us write our animal reports.

There are many unbelievable things about the aardvark. The most amazing is the length of its tongue. It can be as long as 30 centimeters! The aardvark's body is also unusual. Its head has a long nose and rabbit-like ears. The largest part of the body looks like a bear, and its webbed feet have sharp claws. It can dig down into the ground to create a shelter in minutes because it is very strong. The aardvark is a very shy animal. However, when a more aggressive animal attacks, the aardvark will defend itself with its front claws. Sometimes it will lie on its back and fight with all four claws.

Another name for the aardvark is "anteater". This is because it eats ants and termites. The long tongue can reach into the passage of an anthill and get its food. It is because of its diet that I am writing this letter. If I owned an aardvark, I could keep it well fed and it could get rid of the ant problem in my back yard. Do you know where I could get one? I look forward to your reply.

Sincerely,

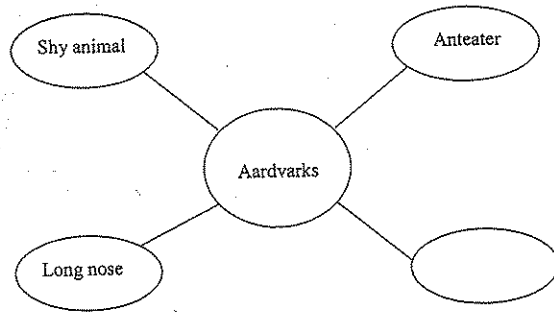
*Mike Wingle*

Mike Wingle



Most aardvarks live in the savannas of Africa south of the Sahara desert, but some make their homes in the rain forests.

1 Look at the web.



Which of these statements belongs in the web?

- A short tongue
- B aggressive
- C dull claws
- D termite eater

2 Which of these books would be best to find more information about aardvarks?

- A *Ants and Termites*
- B *Animals Attack*
- C *A is for Anteaters*
- D *Termites in Africa*

3 Mike wrote the letter to Ms. Yamamoto to –

- A find out where to get an aardvark.
- B warn her about how aardvarks attack.
- C explain how an aardvark's claws dig.
- D tell her what an aardvark's tongue is like.

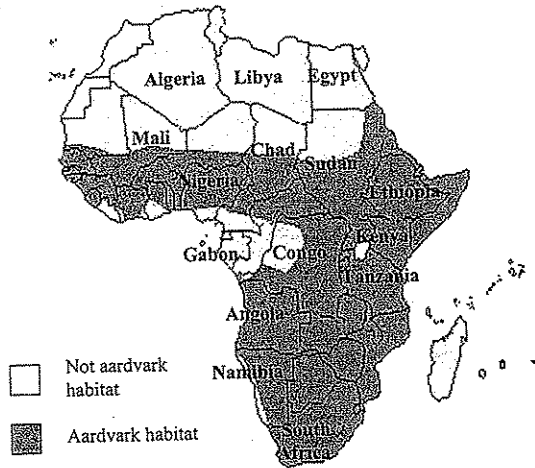
4 What is the main idea of the second paragraph of Mike's letter?

- A Why are aardvarks' ears so big?
- B How do aardvarks use their claws?
- C How does an aardvark build a home?
- D What are some interesting aardvark facts?

5 According to the letter, what causes the aardvark to lie on its back?

- A It is defending itself.
- B It is very tired.
- C It is making shelter.
- D It is finding food.

6 The map below shows some of the countries in Africa where aardvarks live.



In which of the following countries would an aardvark most likely make its home?

- A Egypt
- B Libya
- C Gabon
- D Kenya

**DIRECTIONS:** Read this passage and then answer questions 7 through 14.

The Gift

“Happy Birthday!” Nathan awoke to the voice of his mother. “It’s time to get up and drive out to your grandfather’s ranch.”

“Why do we have to go there? And how long is the drive anyway?” he asked with a dismal look in his eyes.

“About two hours....and don’t worry, we’ll bring your birthday presents with us.” His mother walked out of his room and left him to get ready.

In less than an hour, the car was loaded and Nathan, his mother, and his father were on their way. Thoughts of what the colorful, birthday packages had inside filled his head. He was certain that one had the baseball glove he wanted, while others would contain wondrous things that he had only dreamed about. His attention shifted to the passing trees, and he tried to remember the last time that he had seen his grandfather. His thoughts returned to his gifts, and he wondered what his birthday present from his grandfather might be.

“We’re here,” his mother said, breaking him from his thoughts.

As the car slowed and turned, Nathan looked down the dirt road that led to his grandfather’s ranch. “Since my grandfather has a ranch, then he must have a lot of money, and the bigger his present for me will be,” Nathan whispered to himself.

Finally, they arrived at a huge ranch house. There was a stable with a large corral to the right of the house. In the corral, three horses galloped over to the fence as

fast as lightning. Grandfather appeared in the doorway of the house and waved at Nathan and his mother to come inside. With arms full of presents, Nathan and his mother entered the house.

“Put those packages down and come over here and give your grandpa a hug.” His grandfather motioned with his hand where to place the gifts. Plopping them down on the hall table, Nathan ran to the outstretched arms.

Hugging his grandfather, he excitedly exclaimed, “I’ve missed you! You know, today’s my birthday. Did you get me a present?”

“I have missed you, too. Yes, I know it’s your birthday, and I have a very special present for you that I would like you to open first.”

He went over to the fireplace and took a small box off the mantle. Placing the box in Nathan’s hand, he quietly said, “This is a very important gift. I hope you will treasure it as much as I have.”

Nathan looked at the small box, thinking money or jewels might be inside....but what did his grandfather mean, “treasure it as much as I have”? Opening the box, Nathan was surprised to see only a stone. It was a very beautiful, polished stone, but was it valuable?

Grandfather spoke more slowly than before, “Nathan, when your grandma and I were first married, we had very little money.

She wanted to give me something special for my birthday, so she found this beautiful rock

and polished it day and night until it shined. It was the greatest gift I ever received because it came from your grandma's heart.

Now, I want you to have it because it comes from my heart."

Nathan held the stone in his hand and felt the love of his grandfather. "This is a wonderful gift....thank you, Grandfather." As Nathan hugged him, he knew he had received the best gift ever.

- 7 Read this phrase from the passage.
- galloped over to the fence as fast as lightning
- This phrase is an example of --
- A simile
  - B idiom
  - C metaphor
  - D personification
- 8 How did Nathan feel after his Grandfather explained the gift?
- A He was sorry it was such a small present.
  - B He wished he had another present.
  - C He thought it was a very special present.
  - D He was disappointed with his present.

- 9 Who is the main character in "The Gift"?
- A Mother
  - B Nathan
  - C Father
  - D Grandma
- 10 "The Gift" is an example of --
- A short story
  - B drama
  - C poetry
  - D autobiography
- 11 When does "The Gift" take place?
- A on Grandpa's birthday
  - B on Nathan's birthday
  - C when Grandpa got married
  - D when Nathan was riding a horse

- 12 Which lesson can be learned from "The Gift"?
- A People should get a lot of birthday gifts.
  - B It is sad to visit relatives.
  - C All polished stones are valuable.
  - D The best birthday gifts don't have to be expensive.
- 13 Read the following sentence from the passage.
- "Since my grandfather has a ranch, then he must have a lot of money, and the bigger his present for me will be," Nathan whispered to himself.
- This shows that Nathan is--
- A tired
  - B greedy
  - C thoughtful
  - D noisy
- 14 Who is telling "The Gift"?
- A Nathan
  - B Grandfather
  - C Mother
  - D Narrator

**DIRECTIONS:** Read this passage and then answer questions 15 through 21.

### Kids in the Kitchen

Before making anything in the kitchen, some rules must be observed. By following these simple rules, you will have success and probably be invited back to prepare another treat.

#### Rules for the Kitchen:

- Always ask an adult if you can use the kitchen.
- Make sure you have all the needed items before you start.
- Wash your hands before you touch food.
- Wear an apron or towel to keep your clothes clean.
- Always clean up when you are finished.

### Worms in Dirt

- Needed Items:**
- 1 16-ounce package of cream-filled cookies
  - 2 cups of cold milk
  - 1 small package of chocolate instant pudding
  - 1 8-ounce tub of whipped topping (softened)
  - 1 package of gummy worms
  - 1 sealable plastic bag
  - 1 rolling pin
  - 1 large bowl
  - 1 large spoon
  - 8 individual serving cups

- Directions:**
1. Crush cookies in the sealed plastic bag with the rolling pin.
  2. Pour cold milk into the large bowl.
  3. Add pudding mix and beat with large spoon for two minutes.
  4. Let mixture stand for five minutes.
  5. Stir in whipped topping and  $\frac{1}{2}$  of the crushed cookies.
  6. Place about 1 large spoonful of crushed cookies into each cup.
  7. Fill cups about  $\frac{3}{4}$  full with pudding mixture.
  8. Top each cup with the remaining crushed cookies.
  9. Refrigerate until ready to serve.
  10. Arrange gummy worms on top just before serving.

**Serves:** 8 people

- 15 If you wanted to make Worms in Dirt, which list would you most likely take to the store?

- A Serves
- B Directions
- C Needed Items
- D Rules for the Kitchen

- 16 Adding re- to the word seal makes a word that means --

- A seal again
- B seal before
- C always seal
- D not seal

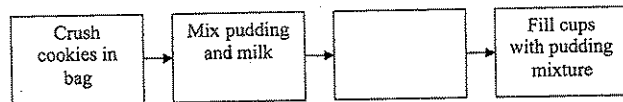
- 17 If you wanted to find information on real worms, what would be the best resource to use?

- A encyclopedia
- B thesaurus
- C atlas
- D almanac

- 18 What is the purpose of the rolling pin in this passage?

- A to fill the cups
- B to mix the pudding
- C to crush the cookies
- D to stir the whipped topping

- 19 Look at the chart of the steps to make Worms in Dirt.



Which step belongs in the empty box?

- A Arrange gummy worms on top
  - B Refrigerate until ready to serve
  - C Put crushed cookies on top
  - D Stir in whipped topping and cookies
- 20 According to the passage, what should you do just before serving your Worms in Dirt?
- A Clean up when you are finished.
  - B Arrange gummy worms on top.
  - C Refrigerate until ready to serve.
  - D Ask an adult if you can use the kitchen.
- 21 The author wrote "Kids in the Kitchen" to tell --
- A what worms do to pudding
  - B how to make a fun treat
  - C how good whipped topping is
  - D what a mess you can make

**DIRECTIONS:** Read this poem and then answer questions 22 through 23.

Cookies

Chocolate chip cookies  
Fresh from the oven today  
Can't wait to eat one

5 Goopy chocolate mess  
Sticky Brown Swirls and soft crumbs  
On my face and hands

Sweet chocolate cookie  
So crispy on the outside  
So chewy within

10 Chocolate chip cookies  
Warm, delicious and messy  
I'll have another.

- 22 The imagery in the poem "Cookies" makes the reader want to --
- A eat chocolate chip cookies
  - B bake peanut butter cookies
  - C sell chocolate chip cookies
  - D buy peanut butter cookies
- 23 How many stanzas are in the poem "Cookies"?
- A 12
  - B 10
  - C 4
  - D 1

**DIRECTIONS:** Read this letter and then answer questions 24 through 28.

December 18, 2004

Dear Principal Sandoval,

The fourth graders have a problem with the playground at school. I have talked with every student in the fourth grade classrooms about this matter. All of us want to have some new things to play on. Last year when we played on the primary playground, we had swings, slides, and monkey bars. Now all we have is a soccer field and a basketball court. Only a few kids even use these areas. Most of us just wander around being bored. Some of the kids even get into trouble because there is nothing to do.

Part of the soccer field should be used to put in the new equipment. This area should also be covered. If we had this, we would have fun and those kids who cause problems would probably behave better, too. The fourth graders deserve this because we will be at this school for another two years and we can't survive that long without better equipment.

If you would like to talk more about this, the fourth graders have lunch at 11:40 in the cafeteria. We would all be there to answer any questions you might have.

Sincerely,

*Lyndsey Moore*  
Lyndsey Moore

24 Which of these phrases is an exaggeration?

- A part of the soccer field should be used
- B we can't survive that long
- C some kids even get into trouble
- D had swings, slides, and monkey bars

25 Which of the sentences from the passage is an opinion?

- A This area should also be covered.
- B The fourth graders have lunch at 11:40 in the cafeteria.
- C Now all we have is a soccer field and a basketball court.
- D The fourth graders have a problem with the playground at school.

26 Why did Lyndsey write this letter?

- A to inform the fourth graders about basketball
- B to describe the school lunch program
- C to persuade the principal to get new equipment
- D to entertain the reader with a story about monkey bars

27 Lyndsey believes that the fourth graders --

- A need a new soccer field
- B want a bigger basketball court
- C need an earlier lunch time
- D want a nicer playground

28 According to this letter, Lyndsey believes that if the fourth graders have new playground equipment they will --

- A have fun
- B be bored
- C be sincere
- D have problems







# Mathematics Sample Test

## Grade 4

### Directions:

Read each problem and select the best answer.

- 1 Johnny used the rule "double the number" to create the pattern below.

3, 6, 12, 24, ...

Which pair of numbers is part of the pattern?

- A 36, 72
- B 48, 72
- C 96, 144
- D 96, 192

- 2 Jay arranged 48 books into 4 equal piles to help him find the quotient of  $48 \div 4$ . How can Jay use this method to find the quotient of  $189 \div 9$ ?

- A Put 189 books into 4 equal piles.
- B Put 189 books into 9 equal piles.
- C Add 189 to 48 books. Put them into 4 piles.
- D Add 189 to 48 books. Put them into 9 piles.

- 3 Martha is going to make bracelets to sell for a fundraiser. She bought 8 meters of yarn. She wants to cut it into pieces that are 16 centimeters long for each bracelet. How many bracelets can Martha make?

- A 2
- B 6
- C 50
- D 128

- 4 The table below shows the number of baseball cards Tika collected during four months.

Tika's Baseball Cards

Month	Cards Collected
March	145
April	99
May	212
June	187

What is the best estimate for the number of baseball cards Tika collected in all?

- A between 400 and 500
- B between 500 and 600
- C between 600 and 700
- D between 700 and 800

- 5 Which number has the same value as 0.14?

- A 0.14%
- B 1.40%
- C 14.0%
- D 140.0%

Go On ►

6 Look at the calendar below.

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

What **best** describes the dates that are on Saturdays?

- A multiples of 2
- B multiples of 3
- C multiples of 4
- D multiples of 7

7 Stacey used cutouts of two triangles to make the figures below.



Figure 1

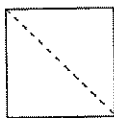


Figure 2

Which statement is true about the figures?

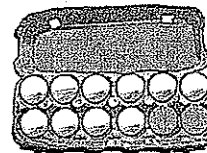
- A Both figures have the same area.
- B Both figures have the same perimeter.
- C Both figures have the same number of sides.
- D Both figures have the same number of vertices.

8 Randy creates a pattern using the rule "divide by 3." Which pattern uses Randy's rule?

- A 120, 90, 60, 30
- B 342, 114, 38, 12
- C 366, 180, 33, 6
- D 540, 180, 60, 20

Go On ►

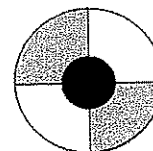
9 Mary used some of the eggs from the carton below to make breakfast.



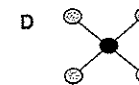
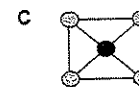
What portion of the eggs did Mary use to make breakfast?

- A  $\frac{2}{12}$
- B  $\frac{2}{10}$
- C  $\frac{2}{6}$
- D  $\frac{10}{12}$

10 Look at the map below.



Which vertex-edge graph represents this map?



Go On ►

- 11 Juan wants to solve the problem shown below.

$$27 - 21 \div 3$$

Which step should Juan do first?

- A  $21 \div 3$
  - B  $27 \div 3$
  - C  $27 - 3$
  - D  $27 - 21$
- 12 John has 10 pairs of white socks and 1 pair of blue socks in his drawer. There are no other socks in the drawer. Without looking, he takes 1 pair out of the drawer. What are his chances of choosing a white pair of socks?
- A certain
  - B impossible
  - C likely
  - D unlikely
- 13 Nicki's class needs to raise \$89.45 in order to have a pizza party. So far, she has collected \$62.90. How much more money does Nicki's class need to buy the pizza party?
- A \$17.45
  - B \$26.55
  - C \$27.55
  - D \$152.35

- 14 Look at the number pattern.

972, 324, 108, 36, ...

If the pattern continues, what will be the 6<sup>th</sup> number in the pattern?

- A 3
  - B 4
  - C 9
  - D 12
- 15 Mike left school at 3:40 p.m. He arrived at home at the time shown on the clock below.



How long did it take Mike to get home from school?

- A 20 minutes
  - B 25 minutes
  - C 30 minutes
  - D 35 minutes
- 16 What is the solution to the equation?

$$\frac{3}{5} - \frac{2}{5} =$$

- A 0
- B  $\frac{1}{5}$
- C 1
- D  $\frac{5}{5}$

Go On ►

- 17 On Monday, Joel had 17 treats to give his puppy. He gives his puppy 2 or 3 treats each day. The table below shows the number of treats Joel has left at the end of each day.

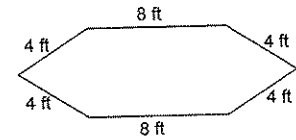
Puppy Treats

Day	Number of Treats Left
Monday	15
Tuesday	12
Wednesday	10
Thursday	7

Based on the information in the table, which prediction will **most** likely happen if Joel continues to give his puppy 2 or 3 treats each day?

- A Joel may only have 1 treat left to give his puppy on Sunday.
  - B Joel will not have any treats to give his puppy on Sunday.
  - C Joel will have 7 treats to give his puppy on Sunday.
  - D Joel may have 4 treats left on Saturday night.
- 18 Jim has \$7.00 that he uses to purchase school lunch. He spends the same amount of money each day. Which expression can be used to show how much Jim can spend on lunch each day?
- A  $7 + d$
  - B  $7 - d$
  - C  $7 \times d$
  - D  $7 \div d$

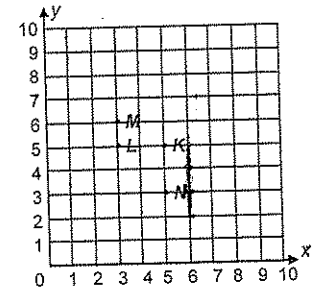
- 19 Look at the diagram of Laura's yard.



Which expression can Laura use to find the perimeter of her yard?

- A  $(4 \times 4) + (2 \times 8)$
- B  $(4 \times 8) + (2 \times 8)$
- C  $(4 + 4) + (2 + 8)$
- D  $(4 \times 8) + (2 \times 4)$

- 20 Look at the coordinate plane.

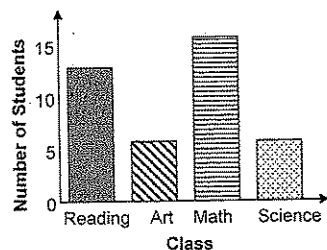


Which point is located at (3, 5)?

- A K
- B L
- C M
- D N

Go On ►

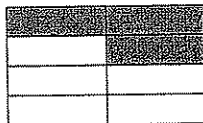
- 21 Anna asked her class which subject they liked best. She graphed the results.



Based on the graph, which statement is true?

- A More students like Math than Science.
  - B Reading and Math are liked the same.
  - C More students like Science than Art.
  - D Reading is liked best by all students.
- 22 The rule for finding the cost of any number of tickets ( $t$ ) is multiply  $t$  by \$4. How many tickets will \$20 buy?
- A 3 tickets
  - B 4 tickets
  - C 5 tickets
  - D 6 tickets
- 23 Which list shows all factors of 72?
- A 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72
  - B 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72
  - C 1, 2, 3, 4, 8, 9, 18, 24, 36, 72
  - D 2, 3, 4, 6, 8, 9, 12, 18, 24, 36

- 24 Look at the figure.



Which fraction represents the shaded part of the figure?

- A  $\frac{3}{8}$
  - B  $\frac{3}{5}$
  - C  $\frac{5}{8}$
  - D  $\frac{5}{3}$
- 25 Lizeth is having a birthday party. She invited 19 people. She will buy enough juice boxes so each person can have at least 1. If the juice boxes come in packs of 6, how many packs should Lizeth buy?

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

- 26 Which expression will not solve  $59 \times 20$ ?

- A  $(50 \times 20) + (9 \times 20)$
- B  $(59 \times 10) + (59 \times 10)$
- C  $(59 \times 10) + (1 \times 20)$
- D  $(60 \times 20) - (1 \times 20)$

Go On ►

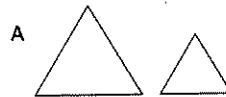
- 27 Marcus bought a pet frog. He went to a pet store to buy some supplies for the frog's home. He found a list of frog rules in the pet store.

- Small sized frogs need to live in a 10 gallon tank.
- All frogs need warm light or sunshine.
- All frogs need water to keep their skin moist.
- Frogs eat 5 bugs and worms per day.

What information should the pet store owner ask Marcus before he sells him the supplies?

- A How big is your frog?
- B What is your frog's name?
- C When did you get your frog?
- D Do you like bugs and worms?

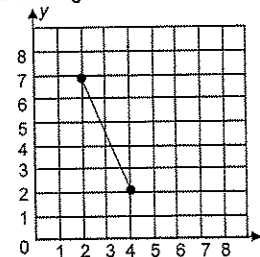
- 28 Which pair of figures appears to be congruent?



- 29 Dylan had a whole cupcake in his lunch bag. He ate only  $\frac{1}{4}$  of his cupcake. How much of the cupcake does he have left?

- A  $\frac{1}{4}$
- B  $\frac{1}{2}$
- C  $\frac{1}{3}$
- D  $\frac{3}{4}$

- 30 What are the coordinates of the endpoints of the line segment?



- A (7, 4) and (2, 4)
- B (2, 7) and (4, 2)
- C (2, 4) and (7, 2)
- D (4, 2) and (7, 2)

- 31 Which list is in order from greatest to least?

- A 0.87, 0.75, 1.25, 0.15
- B 1.20, 1.00, 0.91, 0.95
- C 1.52, 1.05, 0.84, 0.06
- D 0.08, 0.79, 1.02, 1.19

Go On ►

32 Sandy solved the problem below in her math class.

$$\begin{array}{r} 78 \\ \times 15 \\ \hline 390 \\ + 780 \\ \hline 1170 \end{array}$$

What is another way that Sandy could solve the problem?

- A Sandy can determine  $78 \times 10$ , then add that to  $78 \times 5$ .
- B Sandy can determine  $70 \times 10$ , then add that to  $8 \times 5$ .
- C Sandy can determine  $78 \times 10$ , then add that to  $5 \times 10$ .
- D Sandy can determine  $70 \times 10$ , then add that to  $15 \times 10$ .

33 Look at the data set.

51, 35, 28, 49, 28, 46, 29

What is the median of the data set?

- A 23
- B 28
- C 35
- D 38

34 What is the solution to the equation?

$$3 \times 10 + (9 \times 2) =$$

- A 48
- B 78
- C 84
- D 114





Arizona's Instrument to Measure  
Standards  
AIMS Science

Sample Test  
Grade 4



Arizona Department of Education  
Tom Horne, Superintendent of Public Instruction

Assessment Section  
602-542-5031

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**Directions** Read the information about Regina's experiment, look at the illustrations and Table 1, then answer questions 1 – 3.

Regina explored the strength of a magnetic field by testing the number of paperclips the magnet could hold by following these steps:

Step 1 - She opened a large paperclip to make a hook.

Step 2 - She placed the hook on the magnet at the edge of the magnet's north pole.

Step 3 - She added one paperclip at a time until the hook fell off the magnet.

Step 4 - She recorded the highest number of paperclips the hook could hold.

Steps 5 through 10 - She repeated this test every 2 cm until she reached the magnet's south pole and recorded the data each time (see Table 1).

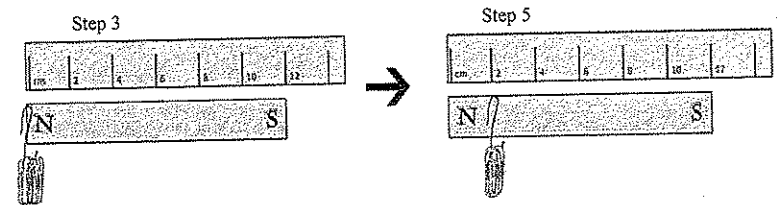
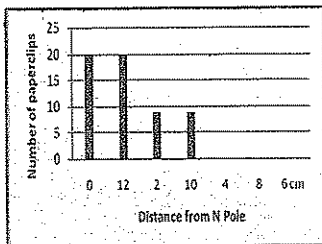


Table 1: Regina's data

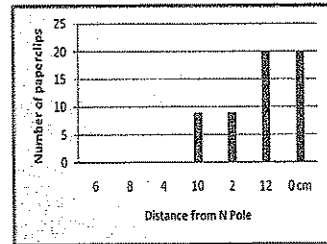
Distance from N pole of magnet	Number of paperclips held
0 cm	20
2 cm	9
4 cm	0
6 cm	0
8 cm	0
10 cm	9
12 cm	20

- 1 What did Regina need to keep the same so that her test was fair?
- A type of magnet used and the type of hook used
  - B distance from the north pole and the type of hook used
  - C type of magnet used and the number of paperclips used
  - D distance from the north pole and number of paperclips used

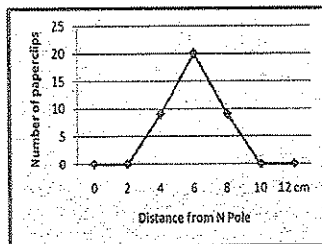
2 Which of the following graphs best display the data Regina collected?



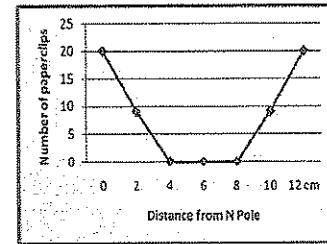
A



C



B



D

3 Based on the data collected, what can Regina conclude about the strength of magnetic fields?

- A Magnetic fields are stronger at the north pole of a magnet and weaker at the south pole.
- B Magnetic fields are stronger at the south pole of a magnet and weaker at the north pole.
- C Magnetic fields are stronger near the poles and get weaker as you move away from the poles.
- D Magnetic fields are weaker near the poles and get stronger as you move away from the poles.

4 Television provides some benefits. What is one way that television has helped people?

- A Television manufacturing uses many toxic chemicals.
- B The ads on television show many popular toys that kids want.
- C Television provides information about current weather conditions.
- D The electricity used to run televisions is one use of natural resources.

5 Which of the following best conserves natural resources that are used to make a television?

- A repair your broken television
- B buy a television that is on sale
- C throw old televisions in the trash
- D donate a new television to your school

6 Alex looked at an electric toothbrush that had a plug with three metal prongs. Why are these prongs made out of metal?

- A Metal doesn't get hot and melt when you plug it into the outlet.
- B Metal is strong and is less likely to break when you plug it into the outlet.
- C Metal is an insulator and prevents shocks when you plug it into the outlet.
- D Metal is a conductor and completes a circuit when you plug it into the outlet.

7 Electricity to play your radio can be made using renewable or nonrenewable resources. Which of the following resources are renewable?

- A wind and oil
- B wind and sunlight
- C natural gas and oil
- D natural gas and coal



**Directions**

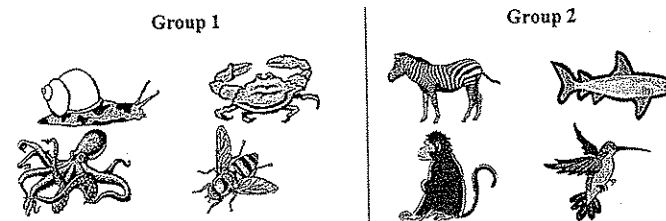
Read the information about wind erosion then answer questions 8 – 10.

Wind can cause erosion that changes the surface of the Earth. Wind erosion can have negative effects on the environment by removing soil and polluting the air during dust storms.

- 8 What is one way to prevent wind erosion?
- A People can drive off-road bikes across the desert.
  - B Ranchers can let their cattle graze in areas with little plant growth.
  - C Construction workers can wet the ground before driving on it or digging.
  - D Farmers can remove all plant material in the soil between planting seasons.
- 9 Which of the following land forms are created by wind erosion?
- A arches and faults
  - B sand dunes and arches
  - C meanders and moraines
  - D moraines and sand dunes
- 10 Walter wanted to find out if faster wind speeds increased the amount of wind erosion. Which instrument should he use to measure wind speed?
- A anemometer
  - B barometer
  - C rain gauge
  - D thermometer
- 11 Kerry made a simple flashlight. She recorded the following statements in her lab book. Which statement is an inference?
- A The wire was 35 cm long.
  - B The flashlight contained a battery.
  - C The plastic switch was better than the metal switch.
  - D The bulb was lit for 20 minutes before it burned out.

- 12 Sam poured water on a pile of dirt and observed that some dirt eroded from the pile. Which question could he test to learn more about erosion?
- A How long will the dirt stay wet?
  - B What types of animals live in the dirt?
  - C Will adding more water change the type of dirt?
  - D Do different types of dirt wash away at different rates?
- 13 All animals need air to survive. An insect gets air through tiny holes on the sides of its body. A whale breathes through a blow hole. What body part do fish use to breathe?
- A gills
  - B skin
  - C nose
  - D mouth

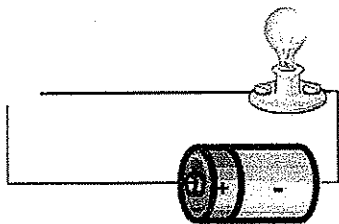
14 The pictures below show animals separated into two groups.



The animals are grouped by whether they have a backbone or not. Which of the following belongs in Group 1?



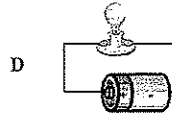
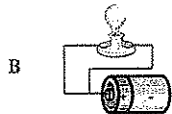
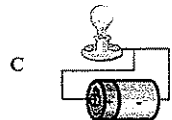
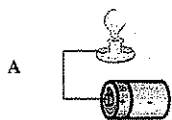
15 Carlos connected a battery, bulb, and wires as shown in the drawing below.



If the free ends of both wires touch the following objects, which object will allow the bulb to light?



16 Each picture shows a light bulb connected to a battery. Which bulb will light?



17 Scientists claim that the area around the Grand Canyon was once covered by an ocean. What evidence would support their claim?

- A Dinosaur footprints were found near the Grand Canyon.
- B Fish were found living in the rivers of the Grand Canyon.
- C Fossils of ocean animals were found at the Grand Canyon.
- D Bones from desert animals were found at the Grand Canyon.

18 How do the spines of a cactus help it survive?

- A Spines help the cactus get moisture.
- B Spines anchor the cactus in the ground.
- C Spines protect the cactus from animals.
- D Spines support the stems and branches of the cactus.

19 A glacier is a slow moving river of ice. How does a glacier help create soil?

- A It scrapes small particles off large rocks.
- B It carries plants down mountains and to oceans.
- C It melts and becomes part of streams and rivers.
- D It freezes small particles of dirt to form large rocks.

20 Ducks live near ponds and lakes. The shape of a duck's foot helps it swim and walk on muddy ground. Which factor is most important in determining the shape of a baby duck's foot?

- A the shape of the parent ducks' feet
- B the temperature of the pond water
- C the amount of mud in the bottom of the pond
- D the amount of rain that fell before the duck was born

21 While Anna was testing a circuit, she dropped a light bulb. What is the safest thing Anna can do?

- A get a new bulb to finish the test
- B push the broken glass under a table
- C tell her teacher that she broke the bulb
- D ask her partner to help pick up the broken glass

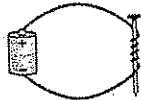
22 A bicycle is a system of parts that work together.



Not every part of the bicycle is needed for it to move. Some parts make it easier or safer to ride. Which of the following parts is needed to make the bicycle move?

- A brakes
- B handlebars
- C seat
- D wheels

23 The diagram below shows an object made from a battery, a nail, and some wire.



What will happen if you touch a metal paperclip to the nail?

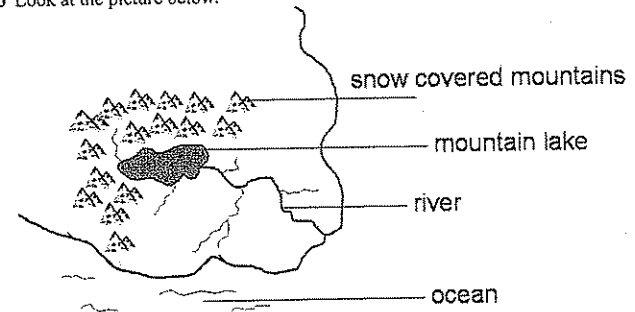
- A The wires will melt.
  - B The battery will spark.
  - C The nail will give you a shock.
  - D The paperclip will stick to the nail.
- 24 Tyrone put two stones in a plastic bottle of water and shook it. After he stopped shaking the bottle, he observed that small pieces of the stones were floating in the water. What is the best prediction he can make based on this observation?

- If shaking the bottle causes pieces of stones to break off,
- A then using cold water will break off more pieces.
  - B then using hot water will make the stones change colors.
  - C then shaking for a longer amount of time will break off more pieces.
  - D then shaking for a shorter amount of time will make the rocks change colors.

25 Four students tried to find out which magnet was the strongest. They each shared one idea. Which idea shows scientific thinking?

- A We can pick the longest magnet.
- B We can pick the heaviest magnet.
- C We can measure the strength of the magnets.
- D We can vote for the magnet that we think is the strongest.

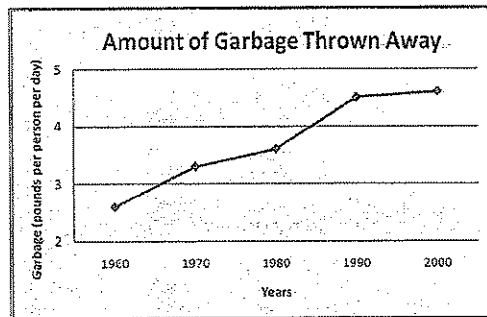
26 Look at the picture below.



Where would you find the saltiest water?

- A river
- B ocean
- C mountain lake
- D snow covered mountains

- 27 A scientist wanted to see if the amount of garbage that Americans threw away changed over time. He collected information and then showed his results in the graph below.



Based on this graph, what could the scientist say about the amount of garbage that each person threw away?

- A It increased over time.
  - B It decreased over time.
  - C It increased the most in 1980.
  - D It decreased the most in 1990.
- 28 Many life scientists study only one kind of animal their entire career. Which type of life scientist would likely study the animal shown below?



- A fish scientist
- B snail scientist
- C insect scientist
- D reptile scientist

- 29 A refrigerator uses electricity to create a cold place to store food. What negative impact does refrigerator use have on the environment?

- A The electricity needed to keep food cold can be expensive.
- B If the electricity goes out, the food will spoil and make you sick.
- C Storing food longer reduces grocery store trips and gasoline use.
- D Old refrigerators contain chemicals and take up space in landfills.

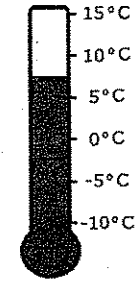
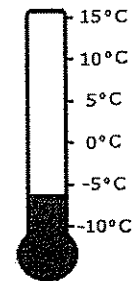
- 30 Which statement is a description of weather?

- A Summers in Tucson are hot and dry.
- B Winters in Flagstaff are cold and snowy.
- C The temperature is 55° F in Winslow today.
- D The Sun will set in Yuma today at 6:45 p.m.

- 31 Maria checked the outside temperature before and after school. According to the thermometers below, how much did the temperature change during the day?

before school temperature

after school temperature



- A It increased by 2° C.
- B It increased by 14° C.
- C It decreased by 2° C.
- D It decreased by 14° C.

32 The table below shows the temperature and precipitation (rain or snow) in four different cities on the same day.

	Atlanta	Boston	Chicago	Dallas
Lowest temperature	2° C	-10° C	-8° C	12° C
Highest temperature	16° C	-2° C	4° C	25° C
Precipitation (rain or snow)	0 cm	6 cm	0 cm	3 cm

In which city did it snow?

- A Atlanta
- B Boston
- C Chicago
- D Dallas

