## 2010-2011



## Reading

Mathematics
Writing
Science
Social Studies
PRACTICE
TEST BOOKLET


## DIRECTIONS

Read the passage. Then read each question about the passage. This session has 7 multiple-choice questions worth 1 point each, 2 short-answer questions worth 2 points each, and 1 open-ended question worth 4 points. For each multiple-choice question, decide which is the best answer.

## Hopi Rain



Weekends, far from the four walls of the classroom
And the artificial blue of the computer screen, I return to the open azure sky of Old Oraibi, To the parched face of my ancestral desert home.

5 "Modern ways are a little helpful," Grandfather often intones When I come to meet him in the cornfields at dawn.
"But we Hopi have lived off this land for thousands of years." I watch the rising eastern light creep over deep contours, weathered ridges . . . His ancient face becoming fully illuminated, illuminating . . .

10 "Corn is our mother," he tells me, "the central sustenance of our Hopi lives."
He opens his hand and sprinkles four small paths of corn meal-
One for each direction of the world-upon the arid land.
"We offer a way for the rain to arrive, for rain is what we need most."
In school I learn how temperature, currents, and moisture coalesce ${ }^{1}$ to form precipitation.
15 In the fields I listen to Grandfather invoke ancient Hopi prayers for rain.
He implores me to face the rising sun with a cheerful spirit,
To free my mind of anxious thoughts,
To think only of rain.
"Science explains much," he says, sweeping his arm to denote the endless expanse

[^0]20 Of horizon-"but not that much."
We crouch and hollow out rows of six-inch holes.
Into each we place a dozen grains of corn, some blue, some white, some mixed.
We cover them with the sandy earth and tamp down hard to keep out worms and mice.
All day we feel the slow arc of the sun creep across our backs.
25 All day we squint and etch the crow's feet deep into the corners of our eyes.
All day we think only of rain in the bleached desert world.
On our walk back to the village at dusk,
I pause to listen to the rattle of the desiccated sagebrush leaves chafing in a gentle breeze.
"I can see those textbooks have made you a bit of a skeptic," Grandfather says.
30 "But that is not the sound of deprivation you hear; it is the sound of anticipation."
When the rain finally arrives a few weeks later, I know what it means to be Hopi.

1 What is the topic of the first stanza?

A A contrast between modern and ancient surroundings
B An example of how truth is universal
C An explanation of the deprivation of a culture

D A lesson about the benefits of scholarship

2 Which literary device does the author use in line 4 of the poem?

A Simile
B Personification
C Irony
D Onomatopoeia
(3) The imagery in the second stanza of the poem primarily appeals to the sense of -

A smell
B hearing
C sight
D touch
4. How does the author use dialogue in this poem to help the reader understand the poem's meaning?

5 Grandfather's attitude toward the speaker's kind of knowledge is best expressed in which line from the poem?

A "'Modern ways are a little helpful,' Grandfather often intones"
B "'But we Hopi have lived off this land for thousands of years.'"
C "His ancient face becoming fully illuminated, illuminating . . ."
D "In the fields I listen to Grandfather invoke ancient Hopi prayers for rain."

6 The phrase "deep contours, weathered ridges," found in line 8, connects to -

A Hopi symbols Grandfather uses in the cornfields
B the speaker's heart and the ancestral desert home
c Hopi traditions and the speaker's weekday activities
D the desert landscape and Grandfather's face
(7) Identify one example of figurative language from the poem, and explain its function within the poem.

8 Which of these most nearly means the same as the word desiccated, as it is used in stanza 7 ?

A Dehydrated
B Deafening
C Fateful
D Obvious
(9) What is the main source of anticipation in this poem?

A Whether the rain will come in response to the Hopi's prayers
B Whether the grains of corn will grow or be eaten by worms and mice
C Whether the speaker will ever return to the desert
D Whether the speaker and Grandfather will finish the planting in time
(10) How does the poem establish the difference between the speaker's world and Grandfather's world? Use details from the poem to support your response.

## DIRECTIONS

Read each question or problem carefully. Then answer the question or work the problem. This session has $\mathbf{6}$ multiple-choice questions worth 1 point each and 2 short-answer questions worth 2 points each. For each multiple-choice question, decide which is the best answer. Be sure to mark, write, or draw your answers.
(1) Collin drew a scatter plot to show the correlation between the price of a used computer and its age.


Which of the following statements is a valid interpretation of the data shown in the scatter plot?

A There appears to be no correlation between the age and price of computers.
B There appears to be a positive correlation between the age and price of computers.
C There appears to be a negative correlation between the age and price of computers.
D There appears to be a constant correlation between the age and price of computers.
(2) Mr. Anderson created a true-false history test. The ratio of false answers to true answers is 2:3.

Which of the following is closest to the percent of the number of false answers on Mr. Anderson's true-false history test?

A $23 \%$
B $40 \%$
C $60 \%$
D $67 \%$
(3) Brian paid $\$ 2.70$ for 8 apples and 1 pear at the same time Martha paid $\$ 9.00$ for 8 pears and 1 apple.

What was the cost of 1 pear?

A $\$ 0.30$
B $\$ 0.65$
C $\$ 1.00$
D $\$ 1.10$
(4) Chris used lumber to build a ramp. A side view of his ramp with its dimensions is shown below.


What is $h$, the height of the ramp?

A 6 feet
B 8 feet
C 9 feet
D 12 feet
(5) The formula below can be used to determine $t$, the approximate number of seconds for one complete swing of a pendulum, where $l$ represents the length, in feet, of the pendulum.

$$
t=2 \pi \sqrt{\frac{l}{32}}
$$

Which is closest to the number of seconds it will take for one complete swing of a pendulum that is 4 feet?

A 0.8 second
B 1.6 seconds
C 2.2 seconds
D 17.7 seconds
(6) The sales tax that is added to a dress being purchased at a store is $8 \frac{1}{4} \%$. Next month, the sales tax will increase $\frac{1}{2} \%$.

If the price of a dress is $\$ 29.98$, which is closest to the price of the dress, including tax, after the sales tax increase?

A $\$ 32.53$
B $\$ 32.60$
C $\$ 33.58$
D $\$ 34.78$
(7) Ben's family is planning a vacation. While trying to select a destination, Ben becomes curious about the favorite vacation destinations of the people in his town.
A. Name and describe two methods Ben could use to gather data about the favorite vacation destinations for people in his town.
B. Which of the two methods you described for Part A would be the best to use? Be sure to justify your answer.

8 Loretta has three equations that can be used to represent the streets Pecan Avenue, Nevada Street, and Rock Creek Road. She plans to graph the three equations on the coordinate grid shown below.

- Pecan Avenue: $2 x-3 y=-15$
- Nevada Street: $9 x+6 y=12$
- Rock Creek Road: $4 x-6 y=0$

A. Which describes the relationship between the graphs of Pecan Avenue and Nevada Street when correctly graphed on a coordinate grid: parallel, perpendicular, or neither? Use words, numbers, or diagrams to justify your answer.
B. Which describes the relationship between the graphs of Pecan Avenue and Rock Creek Road when correctly graphed on a coordinate grid: parallel, perpendicular, or neither? Use words, numbers, or diagrams to justify your answer.


## DIRECTIONS

Read each question or problem carefully. Then answer the question or work the problem. This session has 5 multiple-choice questions worth 1 point each, 1 short-answer question worth 2 points, and 1 open-ended question worth 4 points. For each multiple-choice question, decide which is the best answer. Be sure to mark, write, or draw your answers.
(9) When a missile is launched, the vertical height from the ground can be approximated by the formula shown below. In the formula, $v_{0}$ is the initial velocity in meters per second, $t$ is the number of seconds, and $h$ is the height of the missile from the ground.

$$
h=-4.9 t^{2}+v_{0} t
$$

If a missile is launched with an initial velocity of 40 meters per second, which is closest to its height from the ground after 8 seconds?

A 6 m
B 24 m
C 28 m
D 36 m

10 For a science project, Sharon was keeping a graph of the temperature each day. The graph below shows six days of data with a line of best fit.


Based on the graph, what is the expected temperature for Day 8?

A $53^{\circ} \mathrm{F}$
B $50^{\circ} \mathrm{F}$
C $45^{\circ} \mathrm{F}$
D $42{ }^{\circ} \mathrm{F}$
(11) Sara has a bag that contains only black and white marbles. The marbles are all the same size. Sara randomly chooses one marble, records its color, and returns it to the bag. She repeats this 250 times. The results are listed in the table below.

Marble Experiment

| Color | Frequency |
| :---: | :---: |
| Black | 175 |
| White | 75 |

Based on the results, what is the experimental probability that the next marble chosen from the bag is a black marble?

A $70 \%$
B $60 \%$
C $40 \%$
D $30 \%$
(12) Stacey was given the equation of a parabola, as shown below. She needs to determine the equation for the line of symmetry for the parabola.

$$
f(x)=x^{2}-x
$$



What is the equation that defines the line of symmetry for the given equation of the parabola?

A $x=1$
B $\quad x=\frac{1}{2}$
C $x=-\frac{1}{2}$
D $x=-1$
(13) Figure 2 on the coordinate grid below was created by a single transformation of Figure 1.


Which of the following best describes the single transformation used to create Figure 2?

A Figure 1 was reflected across the line $x=-3$.
B Figure 1 was reflected across the line $y=3$.
C Figure 1 was translated 2 units up.
D Figure 1 was translated 12 units up.
(14) Fred lives in the town of Afton and needs to drive to the town of Colby. On the map, Afton and Colby are 4.25 centimeters apart. The town of Brent is 1.5 centimeters from Afton. Fred knows the actual distance from Afton to Brent is 24 miles.


What is the distance, in miles, from Afton to Colby? Use words, numbers, or diagrams to justify your answer.
(15) The picture below shows how two identical volleyballs are tightly packaged in a rectangular prism-shaped box. The volleyballs touch the sides of the box as well as each other at one point.

A. If each volleyball has a radius of 4 inches, what is the volume of each volleyball? Use words, numbers, or diagrams to justify your answer.
B. What is the volume, in cubic inches, of the rectangular prism-shaped box that is used to package the two volleyballs? Use words, numbers, or diagrams to justify your answer.

A delivery company wants to redesign the box so that four identical volleyballs are tightly packaged and touching the sides of the box as well as each other at one point.
C. What could be the dimensions of one of the redesigned boxes? Use words, numbers, or diagrams to justify your answer.

## DIRECTIONS Read each sentence. The sentence with words that are underlined may have a mistake in punctuation, capitalization, or word usage. If you find a mistake, choose the answer that is the best way to write the underlined section of the sentence. If there is no mistake, choose Correct as is. The sentence without underlined words may have a mistake in sentence structure. If you find a mistake, choose the answer that is written most clearly and correctly. Choose Correct as is if there is no mistake. Multiple-choice questions are worth 1 point each.

(1) I enjoy listening to Aunt Susan, mom, and my uncle reminisce about their childhoods.

A Aunt Susan, mom, and my Uncle
B Aunt Susan, Mom, and my uncle
C aunt Susan, mom, and my Uncle
D Correct as is

2 Planning her vacation carefully, many sites could be seen by Ann in a limited amount of time.

A Ann, planning her vacation carefully while visiting many sites in a limited amount of time.

B By planning her vacation carefully, Ann was able to visit many sites in a limited amount of time.
C In a limited amount of time, the vacation which was planned carefully allowing Ann to visit many sites.
D Correct as is

# DIRECIONS A word, phrase, or sentence is underlined because it may contain a mistake in grammar, usage, punctuation, capitalization, or spelling. Look carefully at each underlined word, phrase, or sentence. If there is a mistake, make the correction. If there is no mistake, write the word "OK" over the underlined word, phrase, or sentence. 

## Hera and Echo

Hera, the wife of Zeus, was known far and wide for her jealous rages. One day, in a particularly bad mood, she went in search of her husband. Hera could not find him, and she assumed that he was with another woman. She headed for the forest, the home of the beautiful wood maidens; thinking that she would find him there.

Upon reaching the woods, Hera saw no sign of her wayward husband. She did, however; find several beautiful maidens. She began questioning them sternly.
"Have you seen my husband?" Hera asked each one in turn.
They all replied that they had not and excused themselves. Finally, only one young maiden was left. Her name was Echo. When Hera asked Echo if she had seen Zeus, Echo replied truthful that she had not. Hera did not accept the answer. She was too angry to be reasonable, and she took her anger out on Echo. She decided that the girl would never again speak her own words. Instead, Echo would repeat only what was said to her. Hera thought this punishment fitting because she remembered hearing Echo's happy chatter when she entered the forest.

Echo, whom always approached life with a smile on her face, was not greatly upset by her punishment until a few days later. On that day Narcissus, the man Echo loved, entered the forest.
"Is anyone here?" he called.
"Here, here," she answered, but he could not see her.
"Come here!" he called.
"Come here," she answered.

Narcissus was becoming angry. He was not the type of man who did anyone elses bidding.

I will never give you power over me, he yelled, and he left the forest.
Echo hid herself in shame and despair. After many long years had passed, nothing remained of her but her voice.


## DIRECTIONS

Read each question carefully. This session has 3 multiple-choice questions worth 1 point each, 2 short-answer questions worth 2 points each, and 1 open-ended question worth 4 points. For each multiple-choice question, decide which is the best answer.
(1) Oil flows slower than water when poured from the same container under similar conditions. Which of the following properties best explains this behavior?

A Density
B Ductility
C Viscosity
D Turbidity
(2) The cell organelle shown below produces ATP and is found in most eukaryotic cells that require large amounts of energy.


The highest concentration of such organelles would be found in which type of human cell?

A Bone
B Skin
C Muscle
D Fat
(3) The graph below shows the average resting body temperatures of Gila monsters in the southwestern United States by month.


Which of the following conclusions is supported by the graph?

A Gila monsters are most active when environmental temperatures are highest.
B Gila monster populations are largest when environmental temperatures are highest.
C Increases in Gila monster body temperatures directly affect the environmental temperature.
D Increases in environmental temperatures cause Gila monster body temperatures to increase.
(4) Some farmers are planning to use hog manure from local farms to produce electrical energy for their farms. The hog manure is usually left on the ground, but in this system, it is placed into a digester, as shown below.


Explain 2 ways this system could impact the local community.

5 The diagram shows the temperature in different areas of a room after the electric heater has been on for two hours.

A. Identify to which part of the room most of the heat will be lost.
B. Explain your answer for Part A.
(6) The graph shows the data from an experiment that tested the effects of temperature on the heart rate of a species of crustacean.

A. Using the graph, describe how the heart rate changes as the temperature changes.
B. Predict the heart rate if the temperature reaches $30^{\circ} \mathrm{C}$. Explain your answer.

# DRECHONS Read each question carefully. This session has 2 multiple-choice questions worth 1 point each, 3 short-answer questions worth 2 points each, and 1 open-ended question worth 4 points. For each multiple-choice question, decide which is the best answer. 

(7) Which of the following best describes the process producing most of the sun's energy?

A Hydrogen combusts to produce energy.
B Helium atoms split in a fission reaction, forming hydrogen atoms and releasing energy.
C Hydrogen atoms fuse to form helium atoms, releasing energy.
D Helium atoms decompose in a chemical reaction, producing energy.

8 Which question cannot be answered using scientific methods?

A What is the most nutritious food for cats?
B How far is Jupiter from the sun?
C Who deserves to be vaccinated in a time of crisis?
D Which fuel source is the most economical to replace coal?
(9) Clownfish are small, brightly colored fish that live among the tentacles of sea anemones, as shown in the picture.


The clownfish is coated with mucus that protects it from the stinging cells of the anemone. The clownfish cleans the anemone and chases away predators of the sea anemone.

Identify the type of symbiotic relationship between the clownfish and the anemone. Explain your answer.

10 The diagram shows overhead views of two different plate boundaries. The arrows indicate the direction of movement for each plate.


Explain which plate boundary would be more likely to result in volcanoes and why.
(11) Flying fish do not actually fly but jump and glide with specially adapted fins.


Flying Fish
A student hypothesizes that if a food source were introduced several feet above the ocean's surface, flying fish might eventually evolve wings as an adaptation for reaching the food source.

Explain why this hypothesis would be difficult to support with a scientific investigation.

12 The object shown in the picture is made of porcelain, a hard, glassy substance.


The manufacture of porcelain begins with clay. After the clay has been shaped, it is exposed to high temperatures. This causes chemical and physical changes, which lead to the hardened final product.

A teacher asked her class to compare and contrast the making of porcelain with the natural formation of rocks.

Name 2 of the three major types of rocks, and for each one describe 1 way its formation is similar to the process of making porcelain.

## DIRECTIONS

Read each question carefully. This session has 5 multiple-choice questions worth 1 point each and 2 short-answer questions worth $\mathbf{2}$ points each. For each multiple-choice question, decide which is the best answer.
(1)


What effect did headlines such as this have on public opinion in the United States?

A The government sought to limit freedom of the press.
B The government worked to form an alliance with Spain.
C Citizens were convinced that war with Spain was necessary.
D Citizens were convinced that trade restrictions were necessary.
(2)

African Colonial Possessions, 1902


How did the colonial divisions of Africa affect 20th-century African history?

A By furthering education systems
B By developing international alliances
C By prompting independence struggles
D By promoting economic advancements
(3) Which federal lands in New Mexico were set aside to manage and protect the environment?

A Air Force bases
B National forests
C Indian reservations
D National testing grounds

4 During the Industrial Revolution, the rise of labor unions was a response to -

A the threat of global war
B harsh working conditions
C socialist economic systems
D the need for wealthy investors
(5) New Mexico Landscape


Which economic activity is most suited to this environment?

A Forestry
B Ranching
C Heavy industry
D Commercial fishing
(6) - Explain why an isolated gasoline station in a rural area can sell gasoline at higher prices than a station in an urban area.

- Describe conditions that would lead to a decrease in gasoline prices in the rural area.

7 That whenever any form of government becomes destructive ... [of the rights of the people], it is the right of the people to alter or to abolish it, and to institute new government . . .

- Why was this principle of government included in the Declaration of Independence?
- Discuss an example of how this principle is represented in the modern United States government.


## DIRECIIONS <br> Read each question carefully. This session has 5 multiple-choice questions worth 1 point each, 2 short-answer questions worth 2 points each, and 1 open-ended question worth 4 points. For each multiple-choice question, decide which is the best answer.

8
Which area in Brazil most likely has the highest population density?

A Swamp region in the west
B Highlands region in the south
C Rain forest region in the north
D Coastal plains region in the east
(9) The state of New Mexico is an inseparable part of the federal union...

> —New Mexico Bill of Rights, Section 1

What does this section of the New Mexico Constitution express about the relationship between the states and the national government?

A The national government was created by the states.
B The states are united by the national government.
C The states can dissolve the national government.
D The national government can dismiss the states' complaints. Why does the President of the United States appoint numerous advisors who are not subject to Senate approval?

A To limit the President's authority
B To train the President's successor
C To provide trusted support for the President
D To minimize public dependence on the President
(11) In the United States, what typically occurs when the government increases the amount of money in circulation?

A Jobs are lost.
B Exports are reduced.
C Consumer prices rise.
D Industrial production falls.
(12)
U.S. free market practices would support which international trade policy?

A Low tariff rates
B Low export levels
C High surplus levels
D High exchange rates
(13) Explain how the rise of nationalism was a cause of World War I.

- Give one example to support your explanation.

14 In 1920, the U.S. Census showed for the first time that the majority of people in the United States lived in urban rather than rural areas.

Describe two ways that this population shift affected society in the United States.
(15)

Navajo Code Talkers


Trinity Test Site


- Analyze the significance of these two photographs.
- Describe how each reveals a role of New Mexicans during World War II.

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[^0]:    ${ }^{1}$ coalesce (kō'ว-lĕs') intr. v.: to grow together; fuse

