

Day 2

Non-Traditional Instructional Day Packet

Our county will have the option to call an NTI (Non-Traditional Instructional). In the event that this day is called, you will be required to complete assignments at home. During these days, teacher will be available via email, live grades, or other forms of technology. If you have lost your NTID packet, there are electronic copies on the school's webpage at <http://pphs.maso.k12.wv.us>

Assignments / Directions:

This packet contains material for 5 days. The front of each packet is labeled with a day. They are to be completed in the correct order – If only one NTI day is called, then the student will only do assignments marked with “Day 1.” The next time an NTI day is called, they would then do “Day 2” and so on.

IMPORTANT

Each page that you do as an NTID needs to be completed and returned to the appropriate teacher the first day you are back at school. English is returned to your English teacher, math is returned to your math teacher, science is returned to your science teacher and the government page to your social studies teacher.

Writing and Language Test

35 MINUTES, 44 QUESTIONS

Turn to Section 2 of your answer sheet to answer the questions in this section.

DIRECTIONS

Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a "NO CHANGE" option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Questions 1-11 are based on the following passage.

Whey to Go

Greek yogurt—a strained form of cultured yogurt—has grown enormously in popularity in the United States since it was first introduced in the country in the late 1980s.

From 2011 to 2012 alone, sales of Greek yogurt in the US increased by 50 percent. The resulting increase in Greek yogurt production has forced those involved in the business to address the detrimental effects that the yogurt-making process may be having on the environment. Fortunately, farmers and others in the

Greek yogurt business have found many methods of controlling and eliminating most environmental threats. Given these solutions as well as the many health benefits of the food, the advantages of Greek yogurt **1** outdo the potential drawbacks of its production.

[1] The main environmental problem caused by the production of Greek yogurt is the creation of acid whey as a by-product. [2] Because it requires up to four times more milk to make than conventional yogurt does, Greek yogurt produces larger amounts of acid whey, which is difficult to dispose of. [3] To address the problem of disposal, farmers have found a number of uses for acid whey. [4] They can add it to livestock feed as a protein

2 supplement, and people can make their own Greek-style yogurt at home by straining regular yogurt.

[5] If it is improperly introduced into the environment, acid-whey runoff **3** can pollute waterways, depleting the oxygen content of streams and rivers as it decomposes. [6] Yogurt manufacturers, food

4 scientists; and government officials are also working together to develop additional solutions for reusing whey. **5**

1

- A) NO CHANGE
- B) defeat
- C) outperform
- D) outweigh

2

Which choice provides the most relevant detail?

- A) NO CHANGE
- B) supplement and convert it into gas to use as fuel in electricity production.
- C) supplement, while sweet whey is more desirable as a food additive for humans.
- D) supplement, which provides an important element of their diet.

3

- A) NO CHANGE
- B) can pollute waterway's,
- C) could have polluted waterways,
- D) has polluted waterway's,

4

- A) NO CHANGE
- B) scientists: and
- C) scientists, and
- D) scientists, and,

5

To make this paragraph most logical, sentence 5 should be placed

- A) where it is now.
- B) after sentence 1.
- C) after sentence 2.
- D) after sentence 3.

6 Though these conservation methods can be costly and time-consuming, they are well worth the effort. Nutritionists consider Greek yogurt to be a healthy food: it is an excellent source of calcium and protein, serves 7 to be a digestive aid, and 8 it contains few calories in its unsweetened low- and non-fat forms. Greek yogurt is slightly lower in sugar and carbohydrates than conventional yogurt is. 9 Also, because it is more concentrated, Greek yogurt contains slightly more protein per serving, thereby helping people stay

6

The writer is considering deleting the underlined sentence. Should the writer do this?

- A) Yes, because it does not provide a transition from the previous paragraph.
- B) Yes, because it fails to support the main argument of the passage as introduced in the first paragraph.
- C) No, because it continues the explanation of how acid whey can be disposed of safely.
- D) No, because it sets up the argument in the paragraph for the benefits of Greek yogurt.

7

- A) NO CHANGE
- B) as
- C) like
- D) for

8

- A) NO CHANGE
- B) containing
- C) contains
- D) will contain

9

- A) NO CHANGE
- B) In other words,
- C) Therefore,
- D) For instance,

10 satiated for longer periods of time. These health benefits have prompted Greek yogurt's recent surge in popularity. In fact, Greek yogurt can be found in an increasing number of products such as snack food and frozen desserts. Because consumers reap the nutritional benefits of Greek yogurt and support those who make and sell 11 it, therefore farmers and businesses should continue finding safe and effective methods of producing the food.

10

- A) NO CHANGE
- B) fulfilled
- C) complacent
- D) sufficient

11

- A) NO CHANGE
- B) it, farmers
- C) it, so farmers
- D) it: farmers



Math Test – No Calculator

25 MINUTES, 20 QUESTIONS

Turn to Section 3 of your answer sheet to answer the questions in this section.

DIRECTIONS

For questions 1-15, solve each problem, choose the best answer from the choices provided, and fill in the corresponding circle on your answer sheet. For questions 16-20, solve the problem and enter your answer in the grid on the answer sheet. Please refer to the directions before question 16 on how to enter your answers in the grid. You may use any available space in your test booklet for scratch work.

NOTES

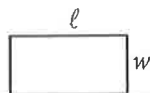
- The use of a calculator is **not permitted**.
- All variables and expressions used represent real numbers unless otherwise indicated.
- Figures provided in this test are drawn to scale unless otherwise indicated.
- All figures lie in a plane unless otherwise indicated.
- Unless otherwise indicated, the domain of a given function f is the set of all real numbers x for which $f(x)$ is a real number.

REFERENCE

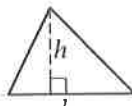


$$A = \pi r^2$$

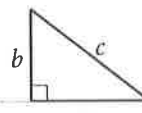
$$C = 2\pi r$$



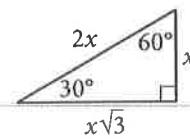
$$A = \ell w$$



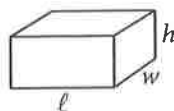
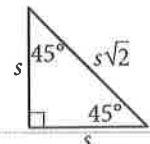
$$A = \frac{1}{2}bh$$



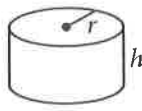
$$c^2 = a^2 + b^2$$



Special Right Triangles



$$V = \ell wh$$



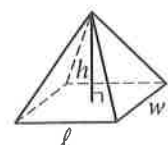
$$V = \pi r^2 h$$



$$V = \frac{4}{3}\pi r^3$$



$$V = \frac{1}{3}\pi r^2 h$$



$$V = \frac{1}{3}\ell wh$$

The number of degrees of arc in a circle is 360.

The number of radians of arc in a circle is 2π .

The sum of the measures in degrees of the angles of a triangle is 180.



8

If $\frac{a}{b} = 2$, what is the value of $\frac{4b}{a}$?

- A) 0
- B) 1
- C) 2
- D) 4

9

$$\begin{aligned} 3x + 4y &= -23 \\ 2y - x &= -19 \end{aligned}$$

What is the solution (x, y) to the system of equations above?

- A) $(-5, -2)$
- B) $(3, -8)$
- C) $(4, -6)$
- D) $(9, -6)$

10

$$g(x) = ax^2 + 24$$

For the function g defined above, a is a constant and $g(4) = 8$. What is the value of $g(-4)$?

- A) 8
- B) 0
- C) -1
- D) -8

11

$$\begin{aligned} b &= 2.35 + 0.25x \\ c &= 1.75 + 0.40x \end{aligned}$$

In the equations above, b and c represent the price per pound, in dollars, of beef and chicken, respectively, x weeks after July 1 during last summer. What was the price per pound of beef when it was equal to the price per pound of chicken?

- A) \$2.60
- B) \$2.85
- C) \$2.95
- D) \$3.35

12

A line in the xy -plane passes through the origin and has a slope of $\frac{1}{7}$. Which of the following points lies on the line?

- A) $(0, 7)$
- B) $(1, 7)$
- C) $(7, 7)$
- D) $(14, 2)$



13

If $x > 3$, which of the following is equivalent

to $\frac{1}{\frac{1}{x+2} + \frac{1}{x+3}}$?

A) $\frac{2x+5}{x^2+5x+6}$

B) $\frac{x^2+5x+6}{2x+5}$

C) $2x+5$

D) x^2+5x+6

14

If $3x - y = 12$, what is the value of $\frac{8^x}{2^y}$?

A) 2^{12}

B) 4^4

C) 8^2

D) The value cannot be determined from the information given.

15

If $(ax+2)(bx+7) = 15x^2 + cx + 14$ for all values of x , and $a+b=8$, what are the two possible values for c ?

A) 3 and 5

B) 6 and 35

C) 10 and 21

D) 31 and 41

4



4

PASSAGE II

The ninth planet of our solar system, Pluto, was discovered in 1930. It is the smallest planet in the solar system, with a surface area more than 300 times smaller than Earth's. Recently, Pluto's categorization as a planet has been debated. Two scientists discuss whether Pluto is a planet or another celestial object.

Scientist 1

Pluto is most certainly a planet. Some astronomers have suggested that Pluto be stripped of its planetary status, arguing that it is more accurately categorized as an asteroid or comet. However, with a 1,413 mile diameter, Pluto is almost 1,000 times bigger than an average comet, and it does not have a tail of dust and gas as comets do. A planet can be described as a non-moon, sun-orbiting object that does not generate nuclear fusion and is large enough to be pulled into a spherical shape by its own gravity. Strictly by definition alone, Pluto is a planet. Pluto is clearly not a moon, as it does not orbit another planet. Although Pluto's orbital path is irregular as compared with the other planets of the solar system, it undisputedly orbits the sun. Pluto does not generate heat by nuclear fission, distinguishing it from a star. It is large enough to be pulled into a spherical shape by its own gravitational force, distinguishing it from either a comet or an asteroid.

Scientist 2

There are many facts about Pluto suggesting that it is actually not a planet but a member of the Kuiper Belt, a group of sizable comets that orbit the sun beyond Neptune. First, Pluto is composed of icy material, as are the comets in the Kuiper Belt, while the other planets of the solar system fall into one of two categories: rocky or gaseous. The four inner planets, Mercury, Venus, Earth, and Mars are rocky planets; Jupiter, Saturn, Uranus, and Neptune are gaseous. Pluto is neither rocky nor gaseous but has an icy composition. In addition, Pluto is much too small to be a planet. It is less than half the diameter of the next smallest planet, Mercury. The Earth's moon is even larger than Pluto. Finally, the eccentricity of Pluto's orbit indicates that it is not a planet. Pluto is generally considered the ninth planet, but for twenty years of its 249 year orbit, it is actually closer to the sun than is Neptune, making it the eighth planet during that period of time. This irregular orbit is shared by over seventy Kuiper Belt comets.

6. Which of the following phrases best describes the major point of difference between the two scientists' viewpoints?
- F. The actual location of Pluto in the solar system.
 - G. The length of Pluto's orbit.
 - H. The shape of Pluto.
 - J. The classification of Pluto as a planet.
7. According to Scientist 2's viewpoint, compared to other planets of the solar system, Pluto's surface is:
- A. less icy.
 - B. more icy.
 - C. more gaseous.
 - D. more rocky.
8. Scientist 1's viewpoint indicates that Pluto differs from asteroids and comets in all of the following ways EXCEPT:
- F. Pluto can generate heat through nuclear fission.
 - G. Pluto is pulled into a spherical shape by its own gravitational force.
 - H. Asteroids and comets have a tail of gas and dust particles.
 - J. Asteroids and comets are much smaller than Pluto.
9. The polar ice caps on Pluto's surface melt one time during every 249-year orbit, exposing Pluto's truly rocky surface, which is similar to that of Mars. Based on the information provided, this finding, if true, would most likely weaken the position(s) of:
- A. Scientist 1 only.
 - B. Scientist 2 only.
 - C. both Scientist 1 and Scientist 2.
 - D. neither Scientist 1 nor Scientist 2.
10. With which of the following statements would both scientists most likely agree?
- F. The size of Pluto indicates that it could actually be a satellite of another planet.
 - G. Pluto should be classified as neither a planet nor a comet; a new category is indicated.
 - H. The surface composition of Pluto is irrelevant and should not be considered in its classification.
 - J. Pluto's erratic orbit differentiates it from all other planets in the solar system.
11. Scientist 1's viewpoint would be weakened by which of the following observations, if true?
- A. Scientists have recently discovered a Kuiper Belt comet with a radius of almost 1,500 miles.
 - B. Pluto only has one moon, Charon, which is half the size of Pluto.
 - C. Planets can be distinguished from comets by the lack of gas and dust particles in the wake of their orbits.
 - D. Comets and asteroids are capable of generating nuclear fission.
12. Which of the following statements best describes how Scientist 2 likens Pluto to a Kuiper Belt comet?
- F. Neither Pluto nor Kuiper Belt comets have identifiable atmospheres.
 - G. Neither Pluto nor Kuiper Belt comets are trailed by a cloud of gases and dust.
 - H. Both Pluto and Kuiper Belt comets have similar eccentric orbital patterns.
 - J. Both Pluto and Kuiper Belt comets are roughly half the size of the next smallest planet, Mercury.

GO ON TO THE NEXT PAGE.

Review for Citizenship Test

1. What is the economic system in the United States?
2. What is the “rule of law”?
3. What are the three branches of the federal government?
4. What stops one branch of government from becoming too powerful?
5. Who is in charge of the executive branch?
6. Who makes federal laws?
7. What are the two parts of the U.S. Congress?
8. How many U.S. Senators are there?
9. We elect a U.S. Senator for how many years?
10. Who are the U.S. Senators for the state of West Virginia?