

# Section 1 – Reading

## Instructions

You will see passages (or groups of two passages), followed by one or more questions relating to the passages. Read the passages, then select the best answer, keeping in mind any accompanying graphics you see alongside the passages.

You have **65 minutes** to complete this section (52 questions).

### Questions 1–10 refer to the following passage.

The following is an excerpt from a novel. In this passage, the narrator, Mr. Lawrence Haynes, reunites with his daughter-in-law and grandchildren in the wake of a tragedy.

- 1 In my twilight decrepitude, I am beset with a wisdom King Solomon himself would not have sought. To see and know, at last hearing the thousand melodies sung by the crickets in  
5 the crabgrass, the sonnets of skylarks, the elegy of a ticking timepiece, the dirge of dreams. Yet not to act, neck wading in the shallows, inert forevermore: so unfolds the tantalizing sagacity of the very old.
- 10 Meribeth Haynes now stoops to smell a marigold that is, to her young ears, mute as the grave: she is herself a secret Father Time whispering in my ear long after his battle hymns are sung, the dead buried, his triumph

- 15 complete, my execution fast encroaching. Memory, that tainted window that my sclerosis sullies till the vista is all but lost, conjures a dim shadow of a boyish figure with braids whipping pell-mell in the wind. That long  
20 forgotten Meribeth, a ragged weed, once stood before me as the putative bride of my heir. I felt myself insulted by their union, and how I railed, blasting the very sun of my winter into exile. Having retreated, sun and weed, to weath-  
25 er my storming passions, a mightier shower even than my reckoning doused this Apollo in his glory: friendly fire, swift bullet to the brain. Would that such a kindness had been paid to father, not son, but Death is rare to bargain.
- 30 Whether the lady knew, dictating her hasty telegram, how dark a declamation she breathed across the wire following her score and three years banishment, even this eleventh hour wisdom cannot ascertain. Nevertheless,  
35 as I watched this sometime weed descend onto

the tarmac, holding fast a tinderbox brimful of our dreams between her two gloved hands, I found sprouting in the place of this sometime weed a Calla Lily arrayed in midnight hues: a  
40 lusty, tight-lipped bloom.

Ending the sentence of discord I once decreed, Mrs. Haynes eloquently commended me to her progeny, her voice — light and sweet as sugar water — betraying none of that

45 Georgia molasses that stained the memory of our last encounter. Lavishing me with undeserved praise, she raised her children to meet my gaze, and they wore countenances not unlike their father's. So it was that these  
50 wavering hands again clasped a golden mane and felt — long after reason had put aside hope for such a gift — the rays of filial love warming the day with unabashed shining.

This lily now graces my garden, but I, a  
55 veritable Methuselah, have not the words to bestow my grateful contrition. What grace she dispenses on these dusty bones by visiting will go unsung, for while my mind yet weaves agile prose, my wane lungs lack the wind to  
60 give them voice. We each imitate the vegetation of my garden: she is winsome as wisteria, I mute as moss.

To have outlived utility must be acknowledged as a grief beyond my reckoning. Yet,  
65 were there even a whisper of assurance that her happiness might yet be recovered, I would endure a hundred years of silence to atone. Would that the burdens cloaked by her blithe smiles were mine to bear, that the widow  
70 might rise above our present sorrows. "Come, daughter, lay your burden on me," would I say if only I could speak.

1.

Which choice best describes a major theme of the passage?

- A) The emotional damage of war
- B) The restorative power of nature's beauty
- C) The joy of parenting
- D) The pains of regret

2.

As compared with her younger self, Mrs. Haynes is portrayed as having more

- A) refinement.
- B) contrition.
- C) bitterness.
- D) fragility.

3.

Which statement best describes the technique that the narrator uses to represent himself when he first met Mrs. Haynes?

- A) He demonstrates his unrelenting wrath by likening himself to a storm.
- B) He underscores his former vitality by comparing himself to the sun shining.
- C) He implies his fondness for her by pretending to bargain with Death.
- D) He emphasizes his previous intelligence by contrasting it with his current state as a "ragged weed."

**4.**

Because Mrs. Haynes is “Ending the sentence of discord I once decreed” (lines 41-42), Mr. Haynes wants the reader to think she is

- A) erudite.
- B) forgiving.
- C) literate.
- D) powerless.

**5.**

According to the narrator, one consequence of how Mrs. Haynes treats Mr. Haynes upon her return is that he

- A) increasingly pities the loss of his biological child.
- B) begins tending his garden after years of disuse.
- C) regrets not spending more time with her while he was able-bodied.
- D) feels sorry for having treated his daughter-in-law poorly.

**6.**

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 49–53 (“So it... unabashed shining”)
- B) Lines 54–56 (“This lily... grateful contrition”)
- C) Lines 56–60 (“What grace... them voice”)
- D) Lines 60–62 (“We each... a moss”)

**7.**

What function does the second paragraph (lines 10–29) serve in the passage as a whole?

- A) It describes Mr. Haynes’ character by using a series of metaphors.
- B) It introduces Mrs. Haynes by describing what she looked like as a child.
- C) It characterizes Mr. Haynes’ relationship with Mrs. Haynes by providing a family history.
- D) It reveals that the source of Mrs. Haynes’ animosity for Mr. Haynes.

**8.**

In describing the relationship between Mrs. and Mr. Haynes, Mr. Haynes contrasts

- A) her curiosity with his age.
- B) her grace with his ineptitude.
- C) her bitterness with his wit.
- D) her sorrow with his numbness.

**9.**

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 3–6 (“To see... of dreams”)
- B) Lines 19–24 (“That long... into exile”)
- C) Lines 34–40 (“Nevertheless as... tight-lipped bloom”)
- D) Lines 60–62 (“We each... as moss”)

**10.**

As used in line 70, “present” most nearly means

- A) gifted.
- B) aware.
- C) manifest.
- D) current.

**Questions 11–21 refer to the following passage.**

### **Metal Tariffs**

This passage is adapted from Joe Deaux, Thomas Biesheuvel, and Steven Frank, *Will Trump Tariffs Help Steel in America's Rust Belt?* © 2018 by Bloomberg News and *Jeepa's Creepers: A New Trade Deal Between the EU and Japan* © 2017 by The Economist.

1 Recently, American legislators proposed  
new tariffs on imported metal: 25% for steel  
imports and 10% for aluminum. In other  
words, if a national metal supplier were to sell  
5 steel to an American corporation, the national  
supplier would have to give 25% of the final  
sale price to the U.S. government for the  
privilege of accessing American buyers.

Those in favor of high tariffs are often  
10 called protectionists, since they purport to  
protect the interests of domestic companies  
and workers. According to protectionism, tar-  
iffs are necessary in order to ensure domestic  
producers remain competitive. Think of it this  
15 way: an American company must comply with  
a series of codes to maintain the wellbeing  
of their workers and the environment. They  
have to provide health care for all full-time  
employees, dispose of waste in environmen-  
20 tally-friendly ways, and pay a wage that the  
federal government, state government, and  
any local unions deem appropriate. All these  
restrictions are established to improve the  
standard of living in America and protect the  
25 planet. Unfortunately, they have the result of  
increasing the cost of production. By contrast  
another country like China—one of the world's  
leading steel manufacturers—may not choose  
to adopt the same restrictions in order to

30 maintain low operating costs. If international  
companies sell their goods for lower prices,  
protectionists argue, then domestic companies  
are hamstrung by otherwise beneficial domes-  
tic regulations. The protectionist solution? To  
35 increase the cost of doing business for interna-  
tional companies by imposing tariffs.

Opponents to protectionism and advocates  
of free trade argue that this approach does  
not lead to the outcome protectionists desire:  
40 namely, the growth of the U.S. economy. Free  
trade advocates affirm that when costs are  
lower, no matter who is selling the goods in  
question, everybody wins. To return to the  
example of steel and aluminum, a U.S. car  
45 manufacturer can make more cars and sell  
them for less money when the cost of steel is  
lower. As a result, the American car company  
can make more cars, open more factories,  
employ more workers, and pay workers wages  
50 that allow them “create demand” by purchas-  
ing goods and services that appeal to them. If  
protectionists want to keep American busi-  
nesses strong, free trade advocates insist they  
should be looking for ways to lower costs for  
55 domestic and international companies alike.

To arrive at an arrangement that satisfies  
all players, nations band together to create  
trade agreements, where they outline the  
restrictions that can or cannot be placed on  
60 various imports and exports. As an example,  
in 2017 Japan and the European Union nego-  
tiated the Japan-E.U. Economic Partnership  
Agreement (JEEPA) to reduce restrictions  
placed on goods the two parties often buy  
65 from and sell to one another. According to this  
agreement Japan lowers tariffs on E.U. shoes  
from 30% to 21% in the first year, then down  
to 0% within ten years. In other areas, Japanese

diplomats were less willing to compromise, especially when it came to cheese tariffs. Many European nations are famous for regional varieties of fine cheeses: feta from Greece, Mozzarella from Italy, and Camembert from France are but a few of the delectable exports the E.U. boasts. While the Japanese market only consumes 2kg (4.4 lbs.) of cheese per person per year, Japan maintained tariffs on cheeses that the country produces domestically in order to remain competitive.

When it comes to imported metals, American legislators face many of the same trade-offs negotiated in JEEPA. However, it is unlikely that the nations exporting steel to the United States will be offered a place at the table this time around. While tariff debates directly address economic benefits and disadvantages, additional geopolitical tensions often underlie the decision of whether or not to impose a tariff. Whenever the federal government broaches the subject of tariffs the question ultimately arises: with whom does the United States wish to do business? Which nations would we like to see prosper as a result of our economic activity? Since protectionist policies often harm the domestic markets they claim to protect, free trade sceptics increasingly reframe protectionism not as a safeguard for domestic interests but as a protection against the prosperity of a distrusted foreign body.

Figure 1

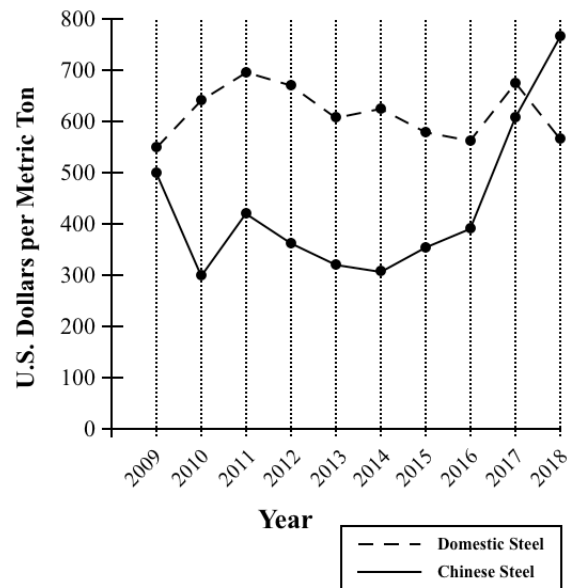
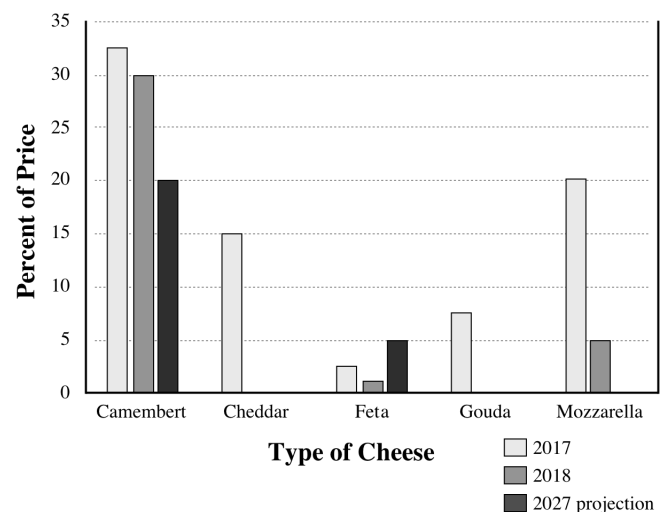
**Average cost of steel per year**

Figure 2

**Japanese Cheese Tariffs Over 10 Years**

**11.**

The main purpose of the passage is to

- A) examine the impact tariffs have on whether American companies export goods.
- B) advocate for Japan and the E.U. to enter into trade agreements with the U.S.
- C) encourage lawmakers to lower the price of steel in the U.S. market.
- D) present two sides of a debate on how to regulate international trade.

**12.**

According to protectionists, domestic regulations for employees and the environment result in

- A) increasing the cost of production.
- B) decreasing environmental sustainability.
- C) employees losing their jobs.
- D) bankrupting domestic companies.

**13.**

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 22–26 (“All these... of production”)
- B) Lines 26–30 (“By contrast... operating costs”)
- C) Lines 30–34 (“If international... regulations”)
- D) Lines 40–43 (“Free trade... everybody wins”)

**14.**

The primary purpose of lines 47–51 (“As a result... to them”) is to

- A) address a common misconception.
- B) illustrate a concept.
- C) make a new claim.
- D) explain a technical phrase.

**15.**

As used in line 72, “fine” most nearly means

- A) decent
- B) current
- C) local
- D) luxurious

**16.**

Which of the following best characterizes a free trade advocate’s attitude towards Japan’s “cheese tariffs” (line 70)?

- A) She would be worried about the imminent decrease in revenue for Japanese cheese-makers.
- B) She would be unconcerned about their effect on the economy.
- C) She would be disappointed that Japan did not eliminate them.
- D) She would be optimistic that they would increase European cheese production.

**17.**

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 3–8 (“In other... American buyers”)
- B) Lines 12–14 (“According to... remain competitive”)
- C) Lines 47–51 (“As a result... to them”)
- D) Lines 51–55 (“If protectionist... alike”)

**18.**

As used in line 84, “place” most nearly means

- A) location.
- B) seat.
- C) point.
- D) situation.

**19.**

According to Figure 1, when did domestic steel have a lower price than Chinese steel within the U.S.?

- A) 2009–2017
- B) 2011–2017
- C) 2014
- D) 2018

**20.**

Which statement is supported by Figure 2?

- A) Half of all cheeses represented on this figure had a 0% tariff in 2018.
- B) Camembert experienced its greatest expected tariff reduction between 2017 and 2018.
- C) Of all cheese tariffs, those on Mozzarella are expected to decrease by the greatest value between 2017 and 2027.
- D) As a percentage of price, Feta is expected to have the highest tariff in 2027.

**21.**

Which additional information, if presented in Figure 2, would be most useful in evaluating the statement in lines 75–79 (“While the... remain competitive.”)?

- A) The competitive prices of European cheese imports in 2017, 2018, and 2027
- B) The amount of each cheese Japan expects to produce in 2027
- C) The types of cheeses with no tariffs in 2017
- D) The list of cheeses historically produced in Japan



**Questions 22–31 refer to the following passage.**

### Wool to Live

This passage is adapted from Ike Swetlitz, *Brave New Wool? Artificial Womb Sustains Premature Lambs for Weeks* © 2017 by Scientific American.

1        Could artificial wombs soon carry pre-  
mature human babies to term? At the Children’s  
Hospital of Philadelphia, Dr. Alan Flake and  
his team recently completed a successful study  
5        with lamb fetuses that suggests this possibility  
may soon be a reality.

      In Flake’s study, eight lambs were put in  
personal biobags for a duration of 3–4 weeks  
each. The scientists wanted to determine  
10       whether these lambs could develop normally  
under synthetic conditions. The biobags or  
“wombs” themselves are strewn with elaborate  
tubes so that the salinous fluid inside can be  
exchanged constantly. Each lamb was removed  
15       from its mother via Caesarean section and  
placed in the bag with their umbilical cord still  
attached to the fetus body. Not only did the  
lambs survive this transfer, but all exhibited  
brain and muscle development similar to  
20       lambs who reach full gestation inside their  
mother’s womb. After reading the results of  
Flake’s study, Dr. George Mychaliska, a pedi-  
atric and fetal surgeon at C.S. Mott Children’s  
Hospital exclaimed, “The duration of support  
25       is outstanding!”

      If similar results can be replicated with  
human fetuses, this device could be revolu-  
tionary. Currently premature infants born at  
22–23 weeks have a 50% chance of survival  
30       even when they receive the highest quality

medical intervention. The advent of this  
technology could greatly reduce the mortality  
rate of infants born in the second trimester of  
pregnancy.

35       Nevertheless, biobags could not be intro-  
duced to obstetricians without controversy.  
Doctors report that parents of neonates would  
be greatly unsettled to see an infant whisked  
away only to be stuffed into plastic bag for a  
40       month. While the snapshots of fetal lambs that  
Flake and his team proliferated in their report  
seem only to have encouraged those who saw  
them, there is no guarantee that the American  
public will embrace this technology if it is  
45       applied to humans.

      Luckily for detractors, it will be at least  
three years before biobags are tested on human  
subjects. In the meantime, Flake and his col-  
leagues hope to run a series of tests with other  
50       animal species, especially those with greater  
developmental similarities to humans. Lamb  
fetuses have developed a greater percentage  
of their overall brain matter than their human  
counterparts will have at a comparable stage  
55       of development. Until studies with rabbits,  
gibbons, and chimpanzees produce successful  
results, artificial human gestation is only a  
fantasy.

      A seldom discussed but widely acknowl-  
60       edged downside to testing medical equipment  
like these biobags is the high rate of animal  
deaths they incur. To study the effectiveness of  
this particular device, Flake and his team had  
to euthanize and dissect the eight lambs within  
65       twelve hours of their removal from the bags.  
Without euthanizing the lambs, it would be  
impossible to determine how much the lambs  
developed while gestating inside the biobag as  
opposed to how much they developed in the



70 days and weeks following extraction.

However, in a surprising turn of events, one lamb was spared its bloody fate. Another fetus, whose results were not presented in Flake's report, won the heart of a researcher in Flake's lab. After some discussion, it was decided that this lamb would be exempted from the study and donated to the local farm where the specimens were originally bred. One of the researchers who witnessed the decision remarked, "You hear about scapegoats, but it was surreal to see this lamb go free." As Flake and his team continue to make strides in the medical field, this specimen frolicking in the Pennsylvania countryside is an auspicious reminder of incipient advancements in health care.

**22.**

The main purpose of the passage is to

- A) describe how artificial wombs support lamb gestation.
- B) discuss the impacts of premature mortality rates on animal testing.
- C) explain research on lamb fetuses and the implications it has for humans.
- D) illustrate how euthanasia is necessary to conduct scientific research.

**23.**

The author includes the quotation "The duration of support is outstanding!" (lines 24–25) to

- A) show that the procedure is promising for humans.
- B) suggest that the process will benefit local farms that raise lambs.
- C) raise important ethical issues.
- D) suggest that the research is inconclusive.

**24.**

What can reasonably be inferred about the concerns Flake has for the study?

- A) It might be impossible to secure further funding.
- B) The supply of lambs is limited.
- C) Controversy about animal testing might set the project back.
- D) The public might be disgusted by procedures it does not yet understand.

**25.**

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 40–45 ("While the... to humans")
- B) Lines 48–51 ("In the... to humans")
- C) Lines 75–78 ("After some... originally bred")
- D) Lines 81–86 ("As Flake... health care")

**26.**

What is the most likely reason the author includes the “50% chance of survival” in line 29?

- A) To demonstrate the scale of the issue this device may mitigate.
- B) To present recorded data on how many lambs in the study survived artificial gestation.
- C) To provide infant mortality rates when humans use the biobags.
- D) To show how dangerous it is to remove lambs from biobags before 3–4 weeks.

**27.**

What does the author imply about rabbits, gibbons, and chimpanzees?

- A) Parents in these species bond with their infants in the first days following birth.
- B) Their fetuses have similar gestation periods to that of a lamb fetus.
- C) Their fetuses develop brain matter at a similar rate to human fetuses.
- D) These species are more prone to birth complications than sheep.

**28.**

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 37–40 (Doctors report... a month”)
- B) Lines 46–48 (“Luckily for... human subjects”)
- C) Lines 48–51 (“In the... to humans”)
- D) Lines 66–70 (“Without euthanizing... following extraction”)

**29.**

What is the main idea of the sixth paragraph (lines 59–70)?

- A) The lambs would have been slaughtered for food if they did not participated in the study.
- B) Lambs continue to develop following artificial gestation.
- C) Euthanasia and dissection are necessary in this field of study.
- D) Flake and his team euthanized the lambs themselves.

**30.**

The author uses the phrase “surprising turn of events” in line 71 most likely to

- A) address the unlikely success of the artificial gestation periods.
- B) imply Flake’s happiness that a lamb was spared.
- C) indicate that things usually run according to plans once a study has begun.
- D) suggest that animals used in scientific research usually perish.

**31.**

As used in line 74, “won” most nearly means

- A) conquered.
- B) melted.
- C) achieved.
- D) completed.

**Questions 32–41 refer to the following passage.**

### **The Treaty of New Echota**

Passage 1 is adapted from a letter to Georgia's Governor by John Ridge, written in 1883.

Passage 2 is adapted from a letter to the United States Senate and House of Representatives by John Ross in 1836. In the years following the Indian Removal Act, there arose factions within Cherokee leadership on the best way to approach relations with the U.S. Government.

#### **Passage 1**

1       What once presents itself as loathsome  
may, by trying circumstances, be rendered a  
sweet alimentation; furthermore, such times as  
these appear to be upon us now. The Cherokee  
5    nation, celebrated by the U.S. as a friend and  
ally, has been assailed these three years past  
by violations of property, person, and dignity  
in a manner thoroughly inconsistent with the  
founding principles of your nation. Our men  
10   and women amble through our Georgia lands  
in a state of distraction, either reeling from the  
molestations enacted by our white neighbors  
or dreading their trammelled fate. In our  
previous correspondence, you will recall these  
15   privations compelled me to reject President  
Jackson's Indian Removal Act of 1830. Our  
right of occupancy, though contested, has been  
documented in numerous treaties with the  
U.S. These lands being ours by right, I have  
20   been ill-disposed to engage in compromise.

However, acknowledging the change that  
these events have occasioned in my own views,  
should you desire to negotiate a Cession with  
the Cherokee nation, I would be honored to

25   facilitate such an agreement. Our treatment  
to date contradicts in every way President  
Jackson's benevolent and salubrious intentions  
upon issuing this act. At such a time as this,  
the welfare of the Cherokee people depends  
30   not on freedom at all costs but rather on the  
spirit of diplomacy that has characterized our  
relations to this point. Under the auspices  
of U.S. troops, the Cherokee's journey to the  
west shall not be beset with the ravages of  
35   bandit violence--such is my dearest hope and  
expectation.

Sir, be advised that I and several other  
members of Cherokee leadership are prepared  
to negotiate a treaty for the mutual benefit of  
40   both our nations; consequently, the time to act  
is nigh. Already, seeking to thin our numbers,  
the Ross Party has undertaken a series of  
detestable acts, whose name I never suspected  
to write in relation to my own people: murder.  
45   In his obstinance, John Ross would rather see  
the Cherokee nation die on the hills of Georgia  
than flourish in the woods of Tennessee. Our  
guards, by grace, have forestalled my assassina-  
tion on multiple occasions, but I would rather  
50   resolve this matter quickly than tempt fate with  
interminable discussion.

#### **Passage 2**

52       Unprincipled, ill-gotten, murderous pages  
penned by a hand so damned it might as well  
have emerged from the pits of Hell itself: the  
55   treaty ratified by the Senate and approved by  
the President lacks a modicum of legitimacy,  
having not been approved by the proper  
channels within Cherokee administration.  
Though a delegation did approach your  
60   government, only a sophomoric or malevolent

statesman would have assented to negotiate with these usurping miscreants. Whenever your forebears sought an arrangement with the Cherokee people, they—as is right and just  
65 in every state—gained the assent of the higher authority before commencing discussion with any lesser power. Yet, this viper’s brood of self-acclaimed gentlemen, these Senators, in haste to despoil my people of their private  
70 possessions, have circumvented the laws of men and nature.

This treaty, deceitfully wrought, strips the Cherokee people of every attribute of freedom and entitlement to legal representation. It  
75 makes the wants and whims of U.S. citizens lord over what, in the eyes of any higher power, is the inalienable property of Cherokee individuals: our lands throughout Georgia which, but a few years ago, the U.S.  
80 government acknowledged as our rightful holdings. For several years, plundering and violence committed on our persons has been our treatment under common law, yet now these abuses are codified and exalted  
85 as the result of peaceable negotiations. Denationalized, disenfranchised, and denigrated by these words we are deprived of membership in the human family!

To such a document as this, be not so  
90 depraved as to affix the venerated, even sacred appellation of treaty. It is not to be endured; it shall not be endured.

**32.**

As used in line 10, “amble” most nearly means

- A) chatter.
- B) stroll.
- C) walk.
- D) wander.

**33.**

In Passage 1, Ridge implies that U.S. treatment of the Cherokee people has had which impact on his views?

- A) He is now unwilling to negotiate with the U.S.
- B) He thinks it is expedient to negotiate with the U.S.
- C) He is surprised by the despondent reaction of the Cherokee people.
- D) He realizes that the Cherokee people have a legal right to their land.

**34.**

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 9–13 (“Our men... trammled fate”)
- B) Lines 19–20 (“These lands... in compromise”)
- C) Lines 21–25 (“However, acknowledging... an agreement”)
- D) Lines 32–36 (“Under the... and expectation”)

**35.**

As used in line 59, “delegation” most nearly means

- A) lawyer.
- B) group.
- C) assignment.
- D) chieftain.

**36.**

In Passage 2, Ross strongly suggests that the treaty is invalid because

- A) the person who wrote it is a convicted criminal.
- B) all appropriate authorities have not yet agreed to it.
- C) it robs the Cherokee people of their private possessions.
- D) it violates the precedent set by common law.

**37.**

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 52–58 (“Unprincipled... Cherokee administration”)
- B) Lines 72–74 (“This treaty... legal representation”)
- C) Lines 74–78 (“It makes... Cherokee individuals”)
- D) Lines 81–85 (“For several... peaceable negotiations”)

**38.**

Both authors would most likely agree that U.S. treatment of the Cherokee people has been

- A) a grave violation of the basic rights to life and property.
- B) unlikely to be circumvented regardless of their response.
- C) in keeping with the broader history of U.S.-Cherokee relations.
- D) likely to result in federal assistance for Georgia and Tennessee.

**39.**

Ridge in Passage 1 would most likely characterize the comment made by Ross in lines 78–81, Passage 2 (“our lands... rightful holdings”) as

- A) a rhetorical flourish intended to villainize Ross’s enemies.
- B) a detail irrelevant to the conversation about this treaty.
- C) a factual summary of the properties’ legal status.
- D) an indication of the Ross Party’s violent political agenda.

**40.**

Which choice best describes the ways that the two authors conceive of the appropriate strategy for negotiating with the U.S. in the wake of the Indian Removal Act?

- A) Ridge believes a treaty is necessary for securing U.S. protection in the Cherokee people’s journey west, while Ross believes that a treaty would strip the Cherokee people of their rights.
- B) Ridge believes that the Cherokee people are defined by their shared cultural tradition, while Ross believes that they are defined by their unique possessions and landholdings.
- C) Ridge believes that all American Indians have been mistreated by the U.S. government, while Ross believes that the Cherokee people have been singled out with violence.
- D) Ridge believes that the governor of Georgia is the appropriate person to negotiate a treaty, while Ross believes that the higher Cherokee authorities should be its primary authors.

**41.**

Based on Passage 2, Ross would most likely say about Ridge's desire to achieve the "mutual benefit of both our nations" (lines 39–40, Passage 1)?

- A) It cannot be achieved while the U.S. Senate acts in bad faith.
- B) It is the first step towards a happy compromise.
- C) It unintentionally advances the cause of the Cherokee people.
- D) It guarantees the failure of the Cherokee people's migration west.

**Questions 42–52 are based on the following passage.**

### **Evolving Theories**

This passage is adapted from Chris Baraniuk, “How do we know evolution really happened?” ©2015 by BBC Earth. The theory of evolution was proposed by Charles Darwin in *On the Origin of Species*, first published in 1859. It provides a scientific explanation of how life forms came into existence.

1 Evolution is widely discussed among scientists and lay people alike. While years of observation and experiments have enshrined evolution with full acceptance in the scientific  
5 community, many are still confused by the assertions that come together to form this theory. How can people be descended from apes when our bodies look so different? If apes were human ancestors historically, why don’t  
10 apes give birth to humans today? Questions like these about the details of evolution prevent many otherwise scientifically minded individuals from accepting the theory of evolution lock, stock, and barrel.

15 However, a closer look at the mechanics of evolution offers answers that will reassure any reader that the scientific community has not overlooked any obvious contradictions. Two factors come together to make evolution  
20 possible: random gene mutation and a lot of time (3 billion years). Every living being has a biological set of instructions for how to build its body, and the building blocks of those “instruction manuals” are genes. Every time  
25 a being reproduces, its genetic information is copied for their child. Whenever copying takes place, there is a chance that the instruction manual will change or, in scientific terms,

develop a mutation. Some mutations like  
30 different eye colors are harmless. Others, like being born without limbs, make it hard for the child to survive. Still others, like the ability to run faster, give the child an advantage. When it comes time to reproduce, only the organisms  
35 best-suited to their natural environment will have survived and, in the case of sexual reproduction, choose a mate. Over many generations, many small mutations build up in the gene pool of that group of organisms, known  
40 as its species. Added together, these mutations often make an organism’s great-great-great etc. grandchild look and act very different from their ancestors.

Scientists have proven that this process,  
45 called natural selection, accounts for the great diversity of life on earth. By reviewing fossil records, they have observed that every species develops differences over time. Some even change so much that they can no longer  
50 reproduce with other members of their species. When this happens, that group of organisms is declared its own species. One of my favorite examples of “transitional links” — proof of an organism on the boundary between two spe-  
55 cies — is the microraptor. This small dinosaur with a large, feathery tail lived thousands of years ago and is the ancestor of all birds.

Speciation, the process of a group of organisms becoming its own species, is often  
60 expedited when some members of a species start to live in isolation from the rest of the species. Rather than contributing their mutations to the general species gene pool year after year, these organisms pass mutations only  
65 amongst themselves. This separation makes it more likely for the two subgroups of the species to diverge.

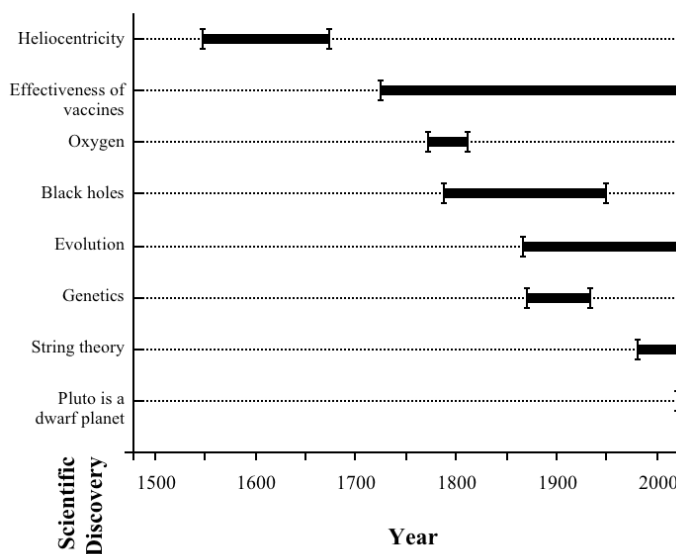


One example of speciation that we can see today is the medium ground finch, a bird that only lives on Daphne Major, an island of the Galapagos archipelago. When scientists analyzed the genes of this finch, they discovered many similarities to the finches on other islands. However, unlike the other finches, these birds have a unique beak shape and sing different songs.

To return to the original questions about how evolution affects people, the answers should be clear. Apes do not give birth to humans today because they never have: evolution happens slowly, with only a handful of mutations cropping up in each generation. And we don't look like apes because modern apes have slowly developed mutations that give them their own distinctive characteristics. And we have developed our own unique traits too!

If you ever think a scientific discovery contradicts common sense, it is a good idea to research the details, since complex ideas rarely make sense at first glance. A great many scientific advances have been rejected at first; however, theories gleaned from careful observation of the natural world often stand the test of time. When theories are debunked, they usually turn out to have been the result of speculation or flawed data collection rather than well-conducted scientific inquiry.

Years from Scientific Discovery to the Public's General Acceptance



## 42.

Over the course of the passage, the main focus shifts from

- A) a technical account of the theory of evolution to a description of it aimed a broad audience.
- B) a history of Charles Darwin's discovery to other work within the field of evolution.
- C) an explanation of the mechanics of evolution to a suggestion of how to interpret scientific findings.
- D) an analysis of the field of evolution to a discussion of its reception in the scientific community.

**43.**

The author refers to “instruction manuals” (line 24) primarily to

- A) cite another scientific authority.
- B) contrast a part with its whole.
- C) add humor to a scientific discussion.
- D) shed light on the function of an entity.

**44.**

The author most strongly suggests that the reason the general public does not fully accept the theory of evolution is that

- A) it has little empirical basis.
- B) it only applies to animals that reproduce sexually but claims to apply universally.
- C) it contradicts widely accepted teachings in religion.
- D) it contradicts their personal observations of the natural world.

**45.**

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 7–8 (“How can... so different”)
- B) Lines 33–37 (“When it... a mate”)
- C) Lines 52–55 (“One of... the microraptor”)
- D) Lines 87–90 (“If you... first glance”)

**46.**

The author claims one reason speciation occurs is that

- A) some members of the species live apart from the rest.
- B) transitional links leave a fossil record.
- C) beneficial mutations enter the species’ gene pool.
- D) apes and humans share a common ancestor.

**47.**

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 33–40 (“When it... its species”)
- B) Lines 46–52 (“By reviewing... own species”)
- C) Lines 58–62 (“Speciation... the species”)
- D) Lines 79–82 (“Apes do... each generation”)

**48.**

Which statement best describes the technique the author uses to advance the main point of the sixth paragraph?

- A) She dispels common misconceptions by answering questions posed earlier.
- B) She articulates the realizations she had that convinced her evolution was true.
- C) She lists the differences between apes and humans to emphasize the public’s doubts about evolution.
- D) She celebrates the differences between the gene pools of apes and humans.

**49.**

As used in line 93, “stand” most nearly means

- A) endure.
- B) permit.
- C) believe.
- D) take.

**50.**

What purpose does the graph serve in relation to the passage as a whole?

- A) It indicates that the scientific community's slow acceptance of the theory of evolution was typical.
- B) It places the discussion of the reception of the theory of evolution into a broader context.
- C) It demonstrates that the theory of evolution is regarded differently than all other discoveries.
- D) It clarifies the ways in which the theory of evolution represented a major discovery.

**51.**

Which statement is best supported by the data presented in the graph?

- A) Heliocentricity was commonly accepted before the discovery of Oxygen.
- B) Evolution is the oldest scientific discovery yet to be accepted by the general public.
- C) String theory and the effectiveness of vaccinations were commonly accepted at roughly the same time.
- D) The existence of Oxygen was slower to be commonly accepted than the theory of genetics.

**52.**

Based on the graph, the author's depiction of the theory of evolution in 1840 is most analogous to which scenario?

- A) By 2010, most people acknowledged that Pluto was only a dwarf planet.
- B) In 1840, scientists either believed in the effectiveness of vaccinations or in black holes.
- C) String theory has yet to be accepted by the general public to this day.
- D) In 1500, no one believed that the earth revolved around the sun.

# **STOP**

**IF YOU FINISH BEFORE TIME IS  
CALLED, YOU MAY CHECK YOUR  
WORK ON THIS SECTION ONLY.**

**DO NOT TURN TO ANY OTHER  
SECTION ON THE TEST.**

## Section 2 – Writing

### Instructions

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.

**You have 35 minutes to complete this section.** (44 questions)

Questions 1–11 are based on the following passage.

### Uncharted Kingdoms

Biologists have a tendency to prefer animals over fungi and plants when emphasizing the beautiful intricacy of the natural world. Many people think plants and fungi are insignificant. However, these often (1) many times neglected organisms contain biological secrets that have an (2) effect on our broader understanding of the planet we occupy.

In 1735, when Carl Linnaeus published *Systema Naturae* and gathered all life forms into five levels of classification, fungi and plants were mistakenly lumped into the same kingdom. But, with the advent of additional scientific discoveries about their genes, (3) what their ancestors were, and diverse capabilities, we now know that fungi are a kingdom unto themselves. All along, fungi have been (4) attracting parasites like termites to trees using brightly colored patterns. A short list of trees that depend on fungi for survival include oak, aspen, willow, (5) birch, and Scots pine.

1.

- A) NO CHANGE
- B) frequently
- C) repeatedly
- D) DELETE the underlined portion.

2.

- A) NO CHANGE
- B) affect on
- C) effect to
- D) affects on

3.

- A) NO CHANGE
- B) unique ancestry
- C) who their ancestors were
- D) inheriting

4.

- Which choice most effectively sets up the list of examples that follows in the next sentence?
- A) NO CHANGE
  - B) using the sugars trees create via photosynthesis as fuel.
  - C) providing trees with nutrients found deep in the earth.
  - D) coexisting peacefully without encroaching on the space trees need to grow.

5.

- A) NO CHANGE
- B) birch; and
- C) birch:
- D) birch and,

All these trees **(6)** creates habitats for additional life, and hereby help promote, biodiversity. Fungi also offer an organic alternative to email by sending electric pulses across its interconnected web of hyphae, which allows trees to **(7)** change information about fires and disease across long distances.

<sup>[1]</sup> A study by Monica Gagliano revealed that plants, like fungi, are smarter than we usually assume. <sup>[2]</sup> Gagliano **(8)** proving that the *mimosa pudica* could remember the difference between harmful and benign touch stimuli for at least a month based on when it closed its leaves. <sup>[3]</sup> This in turn suggests that even life that is not conscious can possess long-term memory. <sup>[4]</sup> The implications of this study reveal the limitations of thinking that only beings with centralized nervous systems can display intellect. <sup>[5]</sup> Moreover, the lines of inquiry pursued in Gagliano's study are far from exhausted. Rick Karban, plant ecologist at U.C. Davis, contends that the levels of intellect plants possess is a hugely contentious issue and an area where ecology has a lot of room to grow. **(9)**

**6.**

- A) NO CHANGE
- B) create
- C) has created
- D) creating

**7.**

- A) NO CHANGE
- B) switch
- C) exchange
- D) revise

**8.**

- A) NO CHANGE
- B) who proves
- C) proves
- D) proved

**9.**

- To make this paragraph most logical, sentence 1 should be placed
- A) where it is now.
  - B) after sentence 2.
  - C) after sentence 3.
  - D) after sentence 4.



Though Karban hopes for further research into plant intelligence, some biologists remain skeptical. Daniel Chamovitz, an Israeli biologist, has suggested that we should be “wary of any studies that hint at parallels between animal senses and plant senses.” **(10)** For as long as plants and fungi are treated like second-class specimens, there will be a vast blind spot in humanity’s understanding of the ecosystem. **(11)** Therefore, we should continue to support research into the intelligence and ecology of fungus and plant life in order to further our understanding of these mysterious and intricate organisms.

**10.**

At this point, the writer is considering adding the following sentence: “*Interestingly, 85% of all plant life dwells in the ocean.*” Should the writer make this addition here?

- A) Yes, because it undercuts the quote offered by biologist Daniel Chamovitz.
- B) Yes, because it reinforces the passage’s point about unexpected qualities of plant or fungal life.
- C) No, because it undermines the passage’s central claim about undiscovered properties of plant or fungal intellect.
- D) No, because it blurs the paragraph’s focus by introducing irrelevant information.

**11.**

- A) NO CHANGE
- B) Alternatively,
- C) For instance,
- D) Nevertheless,

Questions 12–22 are based on the following passage and supplementary material.

### A Basic Idea

Because the industrial revolution has resulted in increasing rates of innovation, **(12)** more rapid invention, and automation, economists have begun to fear that the number of jobs available for humans to do will soon be permanently on the decline. While people historically have created work opportunities whenever old jobs went **(13)** away—from buggy driving to computer programming, no society has been faced with accommodating a primarily unemployed workforce. In the face of massive unemployment, we may need to institute a universal basic income that will replace lost wages. **(14)** Accordingly, legislators should begin implementing these changes, since it is the responsibility of the government to ensure the welfare of the citizens it was created to protect.

Critics of instituting a basic income argue that **(15)** a stitch in time saves nine and basic income delays the inevitable restructuring of society.

12.

- A) NO CHANGE
- B) also faster invention
- C) in addition to invention
- D) invention

13.

- A) NO CHANGE
- B) away from
- C) away, from
- D) away; from

14.

- A) NO CHANGE
- B) However,
- C) Still,
- D) Likewise,

15.

Which choice best establishes the argument that follows?

- A) NO CHANGE
- B) too many cooks spoil the broth and basic income culls unnecessary contributors from the workforce.
- C) necessity is the mother of invention and free money is the death knell for any productive society.
- D) half a loaf is better than none and redistributing earnings offers an incomplete solution.

Since employment has been integral to human understanding of society throughout **(16)** history. Detractors struggle to believe in the efficacy of extensive government handouts. However, this argument ignores ample cases of people applying themselves in situations without much or any monetary compensation. People take on low-paying non-profit work and volunteer activities **(17)** whether they earn a lot of money or not. Legislators with an eye to the future should recognize that money is just a means to the end of survival rather than the only **(18)** treat for hard work.

As it is currently understood, basic income would function as **(19)** follow: working citizens would be taxed at a high rate; their funds would be distributed among all citizens; and the employed and unemployed alike would have enough money for the basic necessities of life. Some citizens may choose to work for a little more money or a new experience, choosing work opportunities suited to their desired lifestyle.

**16.**

- A) NO CHANGE
- B) history; detractors
- C) history detractors
- D) history, detractors

**17.**

- A) NO CHANGE
- B) regardless of income.
- C) independent of the salary for the non-profit role.
- D) even when the monetary compensation does not address their needs in the same way as a salary in a more lucrative career.

**18.**

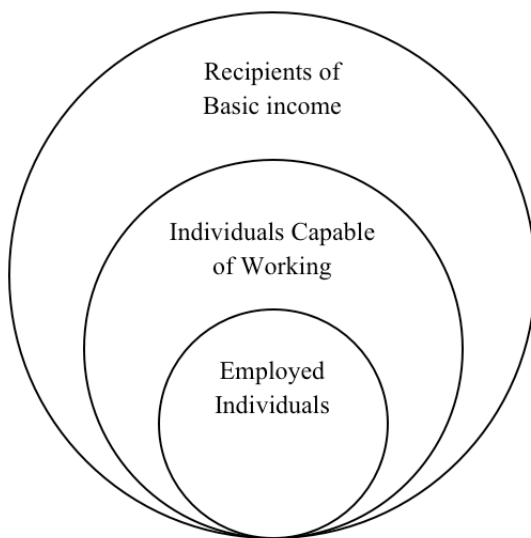
- A) NO CHANGE
- B) reason to work hard.
- C) motivator.
- D) thing that gets people out of bed in the morning.

**19.**

- A) NO CHANGE
- B) follows
- C) following
- D) followed

(20) In the meantime, the figure below illustrates a simple yet comprehensive model for basic income created for a presentation to Congress. As the figure suggests, (21) all employed individuals are included in the income distribution, while only a few are actually capable of working and fewer still are recipients of basic income.

**Basic Income Framework**



One advantage advocates predict is a flourishing of the arts. From the perspective of a citizen, devoting time to creating art becomes less (22) risky, when there is a guaranteed financial support system in place. Additionally, without the limitations of strict work schedules, citizens have more time to read, listen to music, and attend theater. For the government, basic income allows legislators to cut funding towards arts endowments, since taxpayer money will already be in the pockets of artists and art enthusiasts alike. This exciting development has the potential to shift the center of society from what individuals must work on to what they choose to pursue.

20.

- A) NO CHANGE
- B) Notwithstanding,
- C) Consequently,
- D) DELETE the underlined portion and begin the sentence with a capital letter.

21.

Which choice makes the writer's description of the figure most accurate?

- A) NO CHANGE
- B) all people are capable of working, while only a few seek employment and fewer still receive basic income.
- C) all individuals receive a basic income, while only a few are capable of working and fewer still choose to become employed individuals.
- D) all recipients of basic income are included in the distribution, but only a few work and fewer still remain capable of working.

22.

- A) NO CHANGE
- B) risky:
- C) risky
- D) risky—

Questions 23–33 are based on the following passage.

### New Media

Since 1922, Time Inc. has relied on consumers purchasing individual magazines or subscriptions to generate revenue; **(23)** in particular, as people increasingly turn to the Internet for information, new companies are looking for ways to monetize similar content. To bring news and media into the modern **(24)** age, companies like the Meredith Corporation have begun diversifying how they earn money on print and online content. **(25)**

According to the old way, Time Inc. websites require you to purchase a subscription before viewing the content, and even then users cannot interact with the resources.

**23.**

- A) NO CHANGE
- B) to give an example,
- C) however,
- D) indeed,

**24.**

- A) NO CHANGE
- B) age; companies
- C) age: companies
- D) age. Companies

**25.**

At this point, the writer is considering adding the following sentence: “*Meredith Corporation is sometimes called the ugly duckling, since it began as a scraggly group that later developed into a vast company different in kind from initial expectations.*” Should the writer make this addition here?

- A) Yes, because it explains the primary difference between Time Inc. and this newer corporation.
- B) Yes, because it reinforces a claim that the writer already has made.
- C) No, because it blurs the paragraph’s focus by introducing a new comparison that is poorly explained.
- D) No because it distracts from the paragraph’s emphasis on Time Inc.’s success in previous decades.

By contrast, from its inception Meredith Corporation's food blog, Allrecipes, **(26)** had adjusted its content to cater to an online readership. The recipes featured on Allrecipes are free to view, sponsored by advertisements rather than costly user subscriptions. Additionally, the content is interactive: users are encouraged to comment with their **(27)** suggestions such as more salt or less baking time after preparing the recipe themselves. If Allrecipes functioned like most websites under Time Inc., **(28)** users would have to pay for each recipe individually.

**26.**

- A) NO CHANGE
- B) adjusts
- C) will adjust
- D) has adjusted

**27.**

- A) NO CHANGE
- B) suggestions, such as more salt or less baking time,
- C) suggestions such as, more salt or less baking time,
- D) suggestions, such as more salt or less baking time

**28.**

Which choice most effectively supports the central point of the paragraph?

- A) NO CHANGE
- B) people would not be able to distinguish between the two websites.
- C) people would not know how other users modified the recipe.
- D) users would probably bypass the Internet altogether.

At first Allrecipes only offered (29) their free online content. It was a quick tool for people looking to (30) improve the quality of the food they were serving. Allrecipes emphasized the community aspect of the social network rather than positioning itself as a culinary authority. However, as its database of recipes and user comments (31) widened, business consultants wondered (32) why, the company was sitting on valuable user data? Others argued that, while the online resource might be useful for neophytes, it was unsuitable for culinary masters, who take their time on each meal rather than hurriedly checking the Internet before beginning. The trade-off between content quality versus access is at the heart of how to provide information in the digital age.

Responding to criticism, Allrecipes leveraged its online content to create printed cookbooks. Selecting the most popular recipes from its website and carefully curating the comments to find the best choices, Allrecipes published beautiful cookbooks that describe their best recipes in detail. Since cookbook readers tend to spend more time on each page, the content is embellished with beautiful photographs, anecdotes, and suggestions of other dishes that complement each recipe. Between its free, voluminous, online content and curated cookbooks available in stores, Allrecipes showed you can have the best of both worlds when it comes to monetizing information. (33) Unfortunately, its parent group, Meredith Corporation, recently acquired Time Inc. and plans to apply its hybrid business model to the classic magazines that have made Time Inc. a knight of the old guard.

29.

- A) NO CHANGE
- B) there
- C) its
- D) it's

30.

- A) NO CHANGE
- B) put better food on the table faster.
- C) optimize the culinary experience they were providing.
- D) contribute exquisite fare to the meals they were furnishing for their loved ones.

31.

- A) NO CHANGE
- B) dilated
- C) grew
- D) ripened

32.

- A) NO CHANGE
- B) why the company was sitting on valuable user data?
- C) why the company was sitting on valuable user data.
- D) why, the company was sitting on valuable user data.

33.

- A) NO CHANGE
- B) Nevertheless,
- C) Furthermore,
- D) Similarly,



Questions 34–44 are based on the following passage.

### Bootlegger's Bumble

On Christmas 1926, 31 people in New York City died from alcohol poisoning and an additional 60 were treated at New York City's Bellevue Hospital. Surprisingly, these deaths were the direct result of government efforts to poison the illegal alcohol supply. Charles Norris, the (34) Chief Medical Examiner of New York City, called it "our national experiment in extermination." During the height of Prohibition, (35) The New York Times ran several articles suggesting that the government was poisoning the alcohol it confiscated during speakeasy raids. Since (36) stolen from the U.S. government's confiscated supply of illegal alcohol was a common method of obtaining liquor, the negative impact of these efforts were widespread and deadly.

34.

- A) NO CHANGE
- B) Chief Medical Examiner of New York City called it
- C) Chief Medical Examiner of New York City called it,
- D) Chief, Medical Examiner of New York City, called it,

35.

The writer wants to add a supporting detail to indicate that the story was uncontested. Which choice best accomplishes this goal?

- A) NO CHANGE
- B) the U.S. Treasury Department acknowledged that it was adding gasoline, chloroform, methyl alcohol and other noxious liquids to the alcohol it confiscated.
- C) Bellevue Hospital opened additional beds and hired full-time nurses to confront the increase in alcohol poisoning fatalities, which were allegedly the fault of the U.S. government poisoning its confiscated supply.
- D) Vice President Charles Dawes publicly denied all allegations that the Coolidge Administration was poisoning the alcohol it confiscated during speakeasy raids.

36.

- A) NO CHANGE
- B) that stealing
- C) stealing
- D) steal

Despite the impact of this practice, modern historians have largely forgotten that the government went **(37)** so far to kill its own citizens. **(38)** On the other hand, Pulitzer Prize winning journalist Deborah Blum recalls, “My first reaction was that I must have gotten it wrong. ‘I never heard that the government poisoned people during Prohibition, did you?’ I kept saying to friends, family members, colleagues.” The government did not cover up their efforts by burying the **(39)** story. Over time, they gave newspapers fewer and fewer incidents to report.

**37.**

- A) NO CHANGE
- B) as far
- C) as far an
- D) so far as

**38.**

- A) NO CHANGE
- B) In 1929,
- C) For her part,
- D) Afterwards,

**39.**

Which choice most effectively combines the sentences at the underlined portion?

- A) story, but, over time, they gave newspapers fewer and fewer incidents to report.
- B) story, giving, over time, fewer and fewer incidents for the newspapers to report.
- C) story; over time, they gave newspapers fewer and fewer incidents to report.
- D) story, but gave newspapers fewer incidents to report over time.

<sup>[1]</sup> Proof of the endeavor is plentiful, **(40)** but Congressmen willing to speak out against the policy were scarce. <sup>[2]</sup> In New York City alone, the death toll climbed from 400 confirmed alcohol poisoning fatalities in 1926 to 700 in 1927. <sup>[3]</sup> Blum points out that deaths disproportionately impacted impoverished communities, since high-end speakeasies had access to safer liquor. <sup>[4]</sup> Then Senator James Reed of Missouri went so far as to say, “Only one possessing the instincts of a wild beast would desire to kill or make blind the man who takes a drink of liquor, even if he purchased it from one violating the Prohibition statutes.” <sup>[5]</sup> According to the highest estimates, the total death count reached **(41)** many more than 10,000 people by the time Prohibition ended in 1933. <sup>[6]</sup> Even members of the government spoke out against the Coolidge Administration for poisoning the alcohol it confiscated. **(42)**

**40.**

Which choice best establishes the main idea of the paragraph?

- A) NO CHANGE
- B) making outrage at the time all the more understandable.
- C) and most of the statistics we have today come from that era.
- D) with the majority of deaths taking place in urban areas.

**41.**

- A) NO CHANGE
- B) much more than
- C) much more then
- D) many more then

**42.**

To make this paragraph most logical, sentence 4 should be placed

- A) where it is now
- B) after sentence 1.
- C) after sentence 5.
- D) after sentence 6.

Blum describes how she suspects this story was lost to the sands of time: this practice tapered off slowly throughout Prohibition, giving the media and American **(43)** citizens being eager to forget and move on, the chance to put these events behind them. Blum also suggests that Prohibition was **(44)** not unlike wartime politics in that it was characterized by extensive subterfuge and violence. The American public wanted to put every detail of the past behind them when that chapter of history finally closed.

**43.**

- A) NO CHANGE
- B) citizens, they were
- C) citizens,
- D) citizens

**44.**

Which choice most effectively signals the comparison the writer is making between the two groups mentioned?

- A) NO CHANGE
- B) unlike
- C) not like
- D) different from

# **STOP**

**IF YOU FINISH BEFORE TIME IS  
CALLED, YOU MAY CHECK YOUR  
WORK ON THIS SECTION ONLY.**

**DO NOT TURN TO ANY OTHER  
SECTION ON THE TEST.**

# Section 3 – Math (no calculator)

## Instructions

For questions 1-15, find the correct answer from the choices provided, and complete the corresponding bubble on your answer sheet. For questions 16-20, enter the correct answer in the grid on your answer sheet. Instructions are provided on how to fill out the grid. You may fill your booklet with scratchwork if necessary.

## Notes

You may not use a calculator on this section.

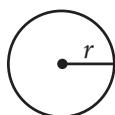
All expressions and variables refer to real numbers unless otherwise specified.

Figures provided in this test are drawn to scale unless otherwise indicated.

All figures exist in a plane unless otherwise specified.

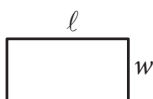
Unless otherwise specified, the domain of a given function  $g$  is the set of all real numbers  $x$  for which  $g(x)$  is a real number.

**You have 25 minutes to complete this section (20 questions).**

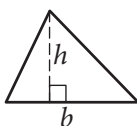


$$A = \pi r^2$$

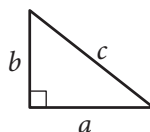
$$C = 2\pi r$$



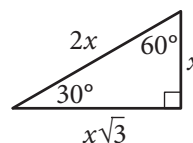
$$A = \ell w$$



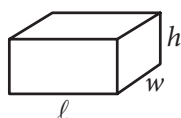
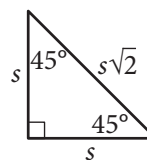
$$A = \frac{1}{2}bh$$



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



Special Right Triangles



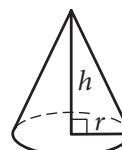
$$V = \ell wh$$



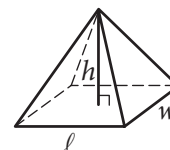
$$V = \pi r^2 h$$



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



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



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

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

The number of radians of arc in a circle is  $2\pi$ .

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

1.

$$1a + 0.75b = 15$$

The equation above relates the number of apples,  $a$ , and the number of bananas,  $b$ , that Bella purchases on a trip to the supermarket. The cost of each apple is \$1 and the cost of each banana is \$0.75. In the equation, what does the number 15 represent?

- A) The number of apples Bella purchases
- B) The number of bananas Bella purchases
- C) The total cost of the bananas and apples that Bella purchases
- D) The number of apples Bella purchases for each banana she purchases

2.

Which of the following is equivalent to  $2(3x + 4) - 9$  ?

- A)  $6x - 10$
- B)  $6x - 5$
- C)  $6x - 1$
- D)  $24x - 9$

3.

$$x = y + 6$$

$$\frac{x}{3} + 2y = 2$$

Which ordered pair  $(x, y)$  satisfies the system of equations shown above?

- A)  $(-4, -10)$
- B)  $(6, 0)$
- C)  $(6, 2)$
- D)  $(9, 5)$

4.

Which of the following complex numbers is equal to  $(5 + i) - (10i^2 - 6i)$ , for  $i = \sqrt{-1}$  ?

- A)  $-15 - 7i$
- B)  $-1 - 25i$
- C)  $1 + 25i$
- D)  $15 + 7i$



5.

If  $f(x) = \frac{x^2 - 4x + 10}{x + 1}$ , what is  $f(2)$  ?

- A) 2
- B) -2
- C) 7
- D) -7

6.

A food distribution company purchased a truck for \$48,000 on January 1, 2010. The truck depreciates in value at a constant rate for 20 years, at which point it is considered to have no monetary value. How much will the truck be worth on January 1, 2025?

- A) \$36,000
- B) \$24,000
- C) \$12,000
- D) \$2,400

7.

$$x^2 - 10x + 23$$

Which of the following is equivalent to the expression above?

- A)  $(x - 5)^2 + 2$
- B)  $(x - 5)^2 - 2$
- C)  $(x + 5)^2 + 2$
- D)  $(x + 5)^2 - 2$

8.

Carly was asked to bake 180 cupcakes for a charity bake sale. For the first five batches, Carly made 12 cupcakes per batch. On the sixth batch, Carly decided to reduce the amount of batter in each cupcake, and now can make 15 cupcakes in every subsequent batch. How many total batches of cupcakes does Carly need to make?

- A) 15
- B) 14
- C) 13
- D) 12

**9.**

Mr. B is a high school math teacher, and has been given a budget from his boss to purchase new devices to use in his classes. Mr. B has a total of \$15,600 to spend, and needs to buy a minimum of 24 devices. Tablets cost \$400 each and laptops cost \$700 each. Mr. B is required to purchase at least 6 tablets and at least 5 laptops. If  $t$  represents the number of tablets and  $l$  the number of laptops, which of the following systems of inequalities represents the conditions described?

A)  $400t + 700l \geq 15,600$

$t + l \leq 24$

$t \geq 6$

$l \geq 5$

B)  $400t + 700l \leq 15,600$

$t + l \geq 24$

$t \geq 6$

$l \geq 5$

C)  $400t + 700l \geq 15$

$600t + l \geq 10$

$t \leq 6$

$l \leq 5$

D)  $400t + 700l \leq 15$

$600t + l \leq 10$

$t \leq 6$

$l \leq 5$

**10.**

$$ax^3 + bx^2 + cx + d = 0$$

In the equation above,  $a$ ,  $b$ ,  $c$ , and  $d$  are constants. If the equation has roots  $-6$ ,  $4$ , and  $7$ , which of the following is a factor of  $ax^3 + bx^2 + cx + d$ ?

A)  $x - 6$

B)  $x + 6$

C)  $x + 4$

D)  $x + 7$

**11.**

The expression  $\frac{a^{-\frac{5}{4}}b^{\frac{3}{2}}}{a^{-4}b^{\frac{1}{2}}}$ , where  $a > 1$  and  $b > 1$ , is

equivalent to which of the following?

A)  $\frac{ab}{\sqrt[4]{a}}$

B)  $\frac{a^{24}\sqrt{a}}{b}$

C)  $\frac{b^4\sqrt{a}}{a^3}$

D)  $\frac{a^3b}{\sqrt[4]{a}}$

**12.**

The function  $f$  is defined by  $f(x) = (x + 3)(x + 1)$ . The graph of  $f$  in the  $xy$ -plane is a parabola. Which of the following intervals contains the  $x$ -coordinate of the vertex of the graph of  $f$ ?

- A)  $-3 < x < -2$
- B)  $-6 < x < 2$
- C)  $2 < x < 6$
- D)  $1 < x < 4$

**13.**

Which of the following expressions is equivalent to

$$\frac{x^2 - 6x + 4}{x + 2} ?$$

- A)  $x + 4 + \frac{20}{x+2}$
- B)  $x + 4 + \frac{12}{x+2}$
- C)  $x - 8 + \frac{8}{x+2}$
- D)  $x - 8 + \frac{20}{x+2}$

**14.**

David is building a rectangular fence around his property. In addition to surrounding the perimeter of the property entirely, David wants to build two sliding gates, which each require an additional 20 feet of fencing. If David has determined that he needs 1,240 feet of fencing, and the length of his property is twice the width, which of the following is equal to the length of the property?

- A) 400 ft.
- B) 207 ft.
- C) 200 ft.
- D) 413 ft.

**15.**

The expression  $\frac{1}{4}x^2 - 3$  can be rewritten as

$$\frac{1}{4}(x - a)(x + a), \text{ where } a \text{ is a positive constant.}$$

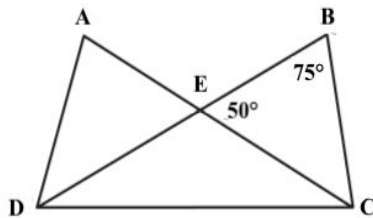
What is the value of  $a$ ?

- A) 3
- B) 12
- C)  $\sqrt{3}$
- D)  $\sqrt{12}$

16.

If  $6x + 4 = 52$ , what is the value of  $2x + 1$  ?

17.



In the figure above,  $\overline{DB}$  and  $\overline{AC}$  intersect at point  $E$ ,  $AE = BE$ , and  $DE = EC$ . What is the measure, in degrees, of  $\angle BDC$  ? (Disregard the degree symbol when gridding your answer.)

18.

The number of radians in a 540-degree angle can be written as  $a\pi$ , where  $a$  is a constant. What is the value of  $a$  ?

19.

The graph of a line in the  $xy$ -plane passes through the point  $(2,7)$  and crosses the  $y$ -axis at the point  $(0,-3)$ .

The line crosses the  $x$ -axis at the point  $(a,0)$ .

What is the value of  $a$  ?

20.

$$(4147 + 53n^2) + 5(20n^2 + 120)$$

The expression above can be written in the form  $xn^2 + y$ , where  $x$  and  $y$  are constants. What is the value of  $x + y$  ?

# **STOP**

**IF YOU FINISH BEFORE TIME IS  
CALLED, YOU MAY CHECK YOUR  
WORK ON THIS SECTION ONLY.**

**DO NOT TURN TO ANY OTHER  
SECTION ON THE TEST.**

# Section 4 – Math (calculator)

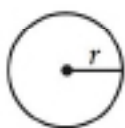
## Instructions

For questions 1–30, find the correct answer from the choices provided, and complete the corresponding bubble on your answer sheet. For questions 31–38, enter the correct answer in the grid on your answer sheet. Instructions are provided on how to fill out the grid. You may fill your booklet with scratchwork if necessary.

## Notes

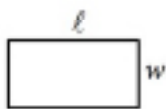
- **You may use a calculator on this section.**
- All expressions and variables refer to real numbers unless otherwise specified.
- Figures provided in this test are drawn to scale unless otherwise indicated.
- All figures exist in a plane unless otherwise specified.
- Unless otherwise specified, the domain of a given function  $g$  is the set of all real numbers  $x$  for which  $g(x)$  is a real number.

## Reference



$$A = \pi r^2$$

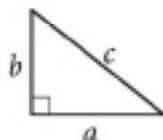
$$C = 2\pi r$$



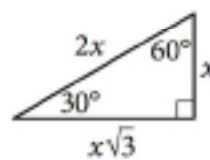
$$A = \ell w$$



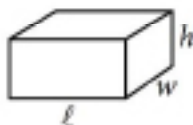
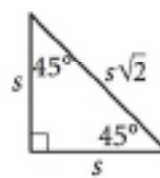
$$A = \frac{1}{2}bh$$



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



Special Right Triangles



$$V = \ell wh$$



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



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



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



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

**You have 55 minutes to complete this section** (38 questions).

1.

	Only water	Water and fertilizer	Total
Plant A	8	24	32
Plant B	19	7	26
Total	27	31	58

The table above shows the nutrients that are provided to the samples of two different species of plants in a laboratory. What fraction of the Plant B samples are provided with only water?

- A)  $\frac{19}{58}$
- B)  $\frac{19}{26}$
- C)  $\frac{27}{58}$
- D)  $\frac{8}{27}$

2.

$$(2x^2 - 5) - (-6x^2 + 7)$$

Which of the following expressions is equivalent to the one above?

- A)  $8x^2 - 12$
- B)  $8x^2 - 2$
- C)  $-4x^2 - 12$
- D)  $-4x^2 - 2$

3.

A recipe for a pitcher of lemonade requires 5 oz. of sugar. What is the maximum number of pitchers of lemonade that can be made with 35 lbs. of sugar? (1 lb. = 16 oz.)

- A) 7
- B) 80
- C) 112
- D) 175

4.

The marketing department of a large airline selected 300 people at random from a list of all passengers who flew on the airline in the past year. They asked each person whether or not they were happy with the entertainment options onboard their most recent flight. Of those surveyed, 88% said they were unhappy with the entertainment options on the flight. Which of the following inferences can appropriately be drawn from this survey result?

- A) At least 88% of people who fly any airline will be unhappy with the entertainment options.
- B) At least 88% of people who fly this airline will be unhappy with the entertainment options.
- C) Most people who flew any airline in the past year were unhappy with the entertainment options.
- D) Most people who flew this airline in the past year were unhappy with the entertainment options.

**5.**

Which of the following ordered pairs  $(x,y)$  satisfies the inequality  $9x - 4y < 6$  ?

- I.  $(2, 8)$
- II.  $(4, 2)$
- III.  $(1, 1)$

- A) I only
- B) II only
- C) I and III only
- D) I, II, and III

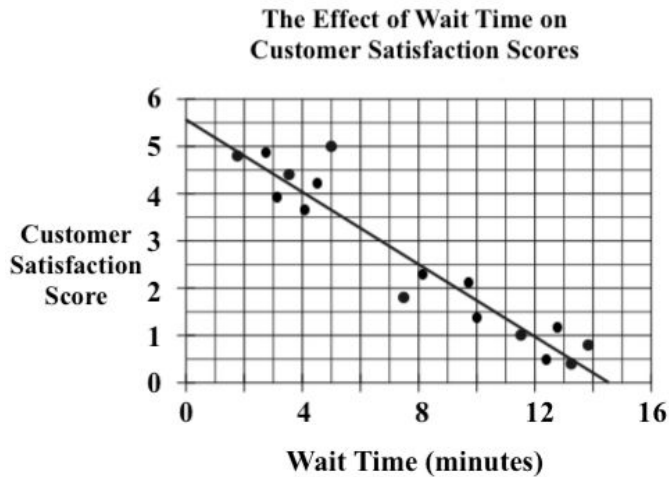
**6.**

In the equation  $(ax - 4)^2 = 64$ ,  $a$  is a constant. If  $x = 2$  is one solution to the equation, what is a possible value of  $a$  ?

- A) 34
- B) 18
- C) 6
- D) -2



Questions 7 and 8 refer to the following information.



The scatterplot above shows the wait times for food and customer satisfaction scores for a selection of customers that ate at a fast food restaurant on a given day. The customer satisfaction scores are measured on a 6-point scale, with a 6 being the best possible score and 0 being the worst possible score. The line of best fit is also shown.

7.

According to the scatterplot, which of the following statements is true about the relationship between wait times and customer satisfaction scores?

- A) Longer wait times tend to lead to lower customer satisfaction scores.
- B) Longer wait times tend to lead to higher customer satisfaction scores.
- C) The customer satisfaction score of an individual that waited twice as long as someone else is half the score of the other customer.
- D) The customer satisfaction score is unrelated to wait time.

8.

The manager of the fast food restaurant would like to bring the average wait time down to approximately 6 minutes per customer. According to the line of best fit, which of the following best approximates the customer satisfaction scores that the restaurant will receive, given a 6-minute wait time?

- A) 0.7
- B) 1.2
- C) 3.3
- D) 4.5

9.

$$6ax - 6b + 7 = 55$$

Based on the equation above, what is the value of  $ax - b$  ?

- A) 8
- B) 16
- C) 19
- D) 36

10.

Deanne runs for 30 minutes every day. If 6% of her run is spent sprinting, how many seconds does Deanne sprint for each day?

- A) 1.8
- B) 6
- C) 18
- D) 108

11.

An office supply store sells college-ruled paper and wide-ruled paper. The college-ruled paper comes in packages of 300 sheets, while the wide-ruled paper comes in packages of 225 sheets. A teacher comes into the store, looking to purchase 15,000 sheets of paper. She purchases 65 packages of paper in total. Which of the following systems of equations can be used to determine the number of college-ruled packages,  $c$ , and the number of wide-ruled packages,  $w$ , that were purchased?

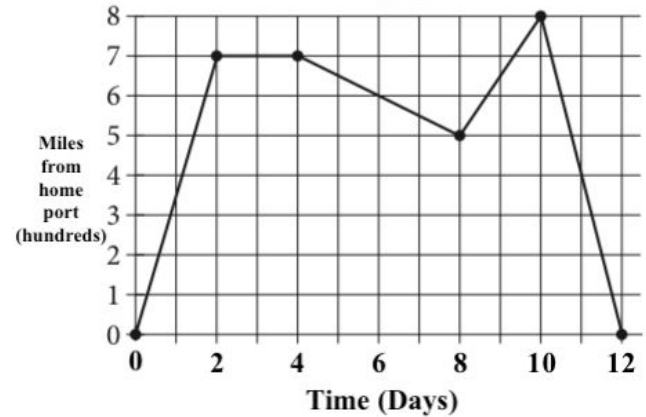
- A)  $65 - c = w$   
 $300c + 225w = 15,000$
- B)  $65 - c = w$   
 $225c + 300w = 15,000$
- C)  $c - w = 65$   
 $262.5(c + w) = 15,000$
- D)  $c - w = 65$   
 $300c + 225w = 15,000$

12.

Jordan ordered take-out food one night, and paid a total of \$46.71 after an 8 percent delivery charge was added. What was the price of the take-out food before the delivery charge was added?

- A) \$38.71
- B) \$43.25
- C) \$45.91
- D) \$46.53

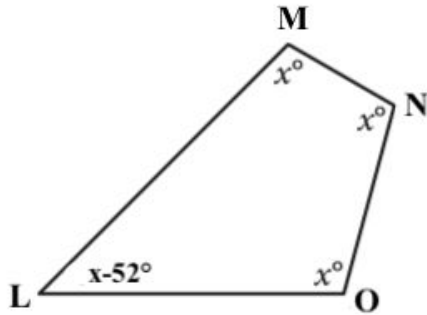
13.



The graph above shows the distance away from a cruise ship's home port during a 12-day voyage. According to the graph, which of the following statements is NOT true concerning the cruise ship's voyage?

- A) The ship stopped in a destination port for two days.
- B) The ship spent more of the voyage traveling away from its home port than it did traveling towards its home port.
- C) The ship sailed at a constant speed during the last two days of the voyage.
- D) The ship reached a maximum distance away from its home port during the last four days of the voyage.

14.



In the figure above, what is the value of  $x$  ?

- A) 60
- B) 80
- C) 100
- D) 103

15.

If 45 medium-sized apples weigh approximately 14.5 lbs., which of the following is closest to the number of medium-sized apples it would take to fill a wagon with 150 lbs. of medium-sized apples?

- A) 300
- B) 450
- C) 900
- D) 1000

16.

If  $x + y = 50$  and  $\frac{y}{3} = 12$ , what is the value of  $y - x$  ?

- A) -22
- B) -14
- C) 14
- D) 22

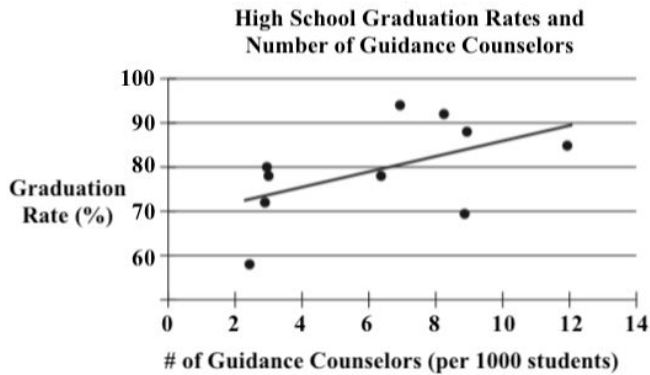
17.

$$y = 5.50 + 0.75x$$

The equation above represents the total amount  $y$ , in dollars, that Caroline spent at Chili Fest. The total amount consists of an entrance fee plus a charge for every sample of chili. When the equation is graphed in the  $xy$ -plane, what does the  $y$ -intercept of the graph represent in terms of the model?

- A) An entrance fee of \$5.50
- B) A price per sample of \$0.75
- C) A price per sample of \$5.50
- D) Total charges of \$6.25

18.



The scatterplot above shows data relating to the high school graduation rate at ten different schools and the number of guidance counselors for every 1000 enrolled students. For the school with the lowest graduation rate, which of the following is closest to the difference of the actual percentage and the percentage predicted by the line of best fit?

- A) 20%
- B) 15%
- C) 10%
- D) 5%

Questions 19 and 20 refer to the following information.

$$P = \frac{\sqrt{3ab}}{40} \quad P = \frac{10+b}{25}$$

19.

Two equations are given above. Based on the second equation, what is  $b$  in terms of  $P$  ?

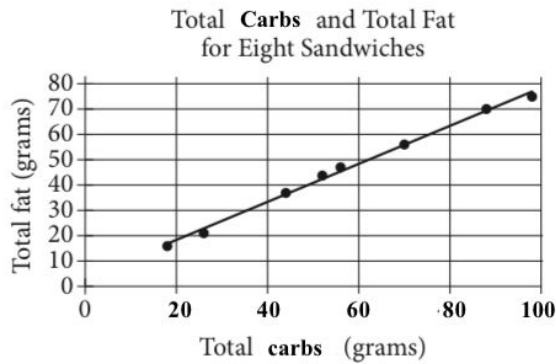
- A)  $b = 25P - 10$
- B)  $b = 25P + 10$
- C)  $b = 25(P - 10)$
- D)  $b = 25(P + 10)$

20.

If both equations provide the same estimate for  $P$  , which of the following expressions is equivalent to  $\sqrt{3ab}$  ?

- A)  $\frac{8(10+b)}{5}$
- B)  $\frac{10+b}{1,000}$
- C)  $\frac{5(10+b)}{8}$
- D)  $\frac{8(10+b)^2}{5}$

21.



The scatterplot above shows the numbers of grams of both total fat and total carbs for eight sandwiches on a restaurant menu. The line of best fit for the data is also shown. According to the line of best fit, which of the following is closest to the predicted increase in total fat, in grams, for every increase of 1 gram in total carbs?

- A) 1.25
- B) 1.0
- C) 0.75
- D) 0.5

22.

Percent of Students Who Passed the Math Exam	
Class ID	Percent of students
10001	68.7%
10002	84.3%
10003	81.2%
10004	69.5%
10005	78.6%
10006	89.2%
10007	61.4%
10008	77.0%
10009	72.9%

All eighth-grade math teachers in a certain state are required to have their students sit for a mandatory exam. The results from 9 of the classes in the state are given in the table above. The median percentage of students that passed the exam in the state was 74.6%. What is the difference between the median percent of students who passed the exam for these 9 classes and the median for all students in the state?

- A) 0.4%
- B) 2.4%
- C) 1.3%
- D) 4.0%

**23.**

A cylindrical thermos contains ice cubes and water. The base of the thermos has an area of  $50 \text{ in}^2$ , and the height of the thermos is 13 in. If  $450 \text{ in}^3$  of water will fill the thermos to the top, which of the following is closest to the total volume of the ice in the thermos?

- A)  $6.5 \text{ in}^3$
- B)  $63 \text{ in}^3$
- C)  $200 \text{ in}^3$
- D)  $650 \text{ in}^3$

**24.**

$$h(t) = -4.9t^2 + 482$$

The function above models the height  $h$ , in meters, of an object above ground  $t$  seconds after being dropped from the top of a cliff by the sea. What does the number 482 represent in the function?

- A) The height of the cliff, in meters, above ground
- B) The minimum height, in meters, of the object
- C) The initial speed, in meters per second, of the object
- D) The minimum speed, in meters per second, of the object

Questions 25 and 26 refer to the following information.

Elevation	kPa	psi
Mt. Everest Summit	33.7	4.89
Earth sea level	101.3	14.69
Dead Sea level	106.7	15.48

The table above gives the atmospheric pressure at three different elevations on Earth, expressed in both kilopascals (kPa) and pounds per square inch (psi).

25.

If  $k$  kilopascals is equivalent to  $p$  pounds per square inch, of the following, which best represents the relationship between  $k$  and  $p$  ?

- A)  $k = 0.14p$
- B)  $k = 6.9p$
- C)  $p = 6.9k$
- D)  $kp = 6.9$

26.

Another unit for measuring atmospheric pressure is the atmosphere, or atm. If  $101.3 \text{ kPa} = 1 \text{ atm}$ , which of the following best approximates the difference in pressure, in atmospheres, at the Dead Sea level and the Mt. Everest Summit?

- A) 0.33 atm
- B) 0.72 atm
- C) 1.05 atm
- D) 1.39 atm

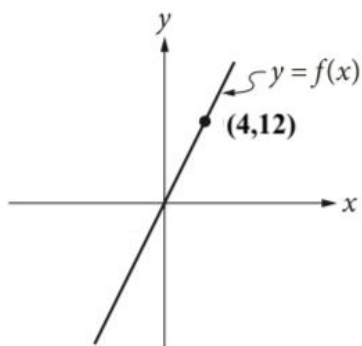


27.

A population of bacteria grows at an average rate of 6.8% every month. At the end of a given month, the population of the bacteria was 9 million. Which of the following functions represents the population,  $B$ , in millions of bacteria,  $m$  months after the measurement?

- A)  $P(t) = 9(1.068)^t$
- B)  $P(t) = 9(6.8)^t$
- C)  $P(t) = 1.68t + 9$
- D)  $P(t) = 1.068t + 9$

28.



In the  $xy$ -plane above, a point (not shown) with coordinates  $(a, b)$  lies on the graph of the linear function  $f$ . If  $a$  and  $b$  are positive integers, what is the ratio of  $a$  to  $b$ ?

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

29.

A circle in the  $xy$ -plane has equation  $(x - 4)^2 + (y + 2)^2 = 25$ . Which of the following points does NOT lie in the interior of the circle?

- A)  $(0, 0)$
- B)  $(4, -2)$
- C)  $(7, -2)$
- D)  $(10, -1)$

30.

Year	Hotel Revenue
2010	\$4,000,000
2015	\$5,500,000

The general manager of a hotel is looking at historical revenue data from 2010 to 2015. The general manager estimated that the percent increase in revenue from 2010 to 2015 would be half of the percent increase from 2015 to 2020. How much revenue did the general manager expect to earn in 2020?

- A) \$6,531,250
- B) \$9,625,000
- C) \$11,000,000
- D) \$13,500,000

31.

A gift supply store sells ribbon by the foot. The price per foot of ribbon is \$1.50. If a customer came in and purchased \$306 worth of ribbon, what was the length, in yards, of the piece of ribbon? (1 yard = 3 feet)

32.

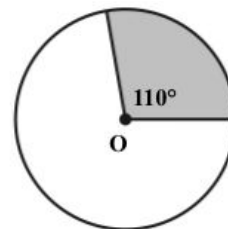
$x$	$f(x)$
$-5$	$-\frac{15}{2}$
$1$	$-3$
$9$	$3$

Three points on the line  $f(x)$  are given in the table above. What is the slope of  $f(x)$  ?

33.

A student's score on an advanced math exam is calculated by multiplying the number of correct answers by 6, and subtracting the number of incorrect answers from that product. If the test has 32 questions and the student received a score of 108, how many questions did the student answer incorrectly?

34.



Point  $O$  is the center of the circle above. What fraction of the area of the circle is the area of the shaded region? Round your answer to the nearest hundredth.

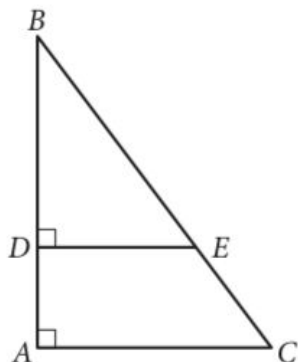
35.

$$y = x^2 + 5x - 8$$

$$y = 9x - 11$$

If the ordered pair  $(x, y)$  satisfies the system of equations above, what is one possible value of  $x$ ?

36.



In the figure above,  $\tan B = \frac{5}{12}$ . If  $BC = 26$  and  $DA = 6$ , what is the length of  $\overline{DE}$ ?

Questions 37 and 38 refer to the following information:

	Red	Blue	Green	Yellow	Orange	Total
Trial 1	4	3	4	5	4	20
Trial 2	2	5	5	4	4	20
Trial 3	5	4	3	3	5	20
Total	11	12	12	12	13	60

Jeremy was conducting an experiment with a colored spinner, consisting of five equal segments: one red, one blue, one green, one yellow, and one orange. Jeremy conducted three trials, and in each trial, he spun the spinner 20 times and recorded the number of times that the needle landed on each color. The results of Jeremy's experiment are shown in the table above.

37.

If a single spin is selected at random, what is the probability that the spin would be from Trial 2 and the needle landed on the green section?

38.

If an additional color was added to the spinner, and the sizes of the different sections were all adjusted to once again be equal with each other, what would the expected value for the number of times that the spinner lands on red or blue over the course of 60 spins?

# **STOP**

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## Section 5 – Essay

### Directions

The essay asks you to demonstrate how effectively you can understand and analyze a passage. Your essay should show you have understood the passage, presented a clear and organized analysis, and used language effectively.

You must write your essay on the lines provided in your answer booklet; you will also have access to Planning Paper for preliminary brainstorming. Try to write legibly so that your writing can be understood by other readers. There is enough space for a full essay if you do not skip lines, avoid wide margins, and maintain a reasonable size for your handwriting.

### Reminder

Write your essay on the lines of the pages in your answer booklet.

**You have 50 minutes to read the passage and write an essay in response to the prompt provided inside this booklet.**

As you read the passage below, consider how the author uses

- evidence, such as facts or examples, to support claims.
- reasoning to develop ideas and to connect claims and evidence.
- stylistic or persuasive elements, such as word choice or appeals to emotion, to add power to the ideas expressed.

*Adapted from Ivy Liu, "Traits of an Effective Team." © 2017 by Millennial Innovations. Originally published March 4, 2017.*

(1)

On the surface, it may seem as though leadership and management are one and the same, but this is entirely untrue. The qualities possessed by good leaders and good managers, although similar, are not necessarily the same. Possessing traits of one does not mean you will possess the characteristics of the other.

(2)

A good leader is someone who anticipates outcomes and understands people as well as their motives. A leader must understand this and be able to work with and around it. A good leader must also be able to fix situations if things start to go south. For example, in the 1980s, cyanide capsules were mysteriously placed inside Tylenol pill bottles, resulting in the deaths of seven people. This caused widespread panic and backlash against the company that produced Tylenol. In response, the company took the lead, first by accepting responsibility for fixing a problem it did not cause. Then, the company's leadership led the entire industry to protect consumers by designing Tylenol bottles that had security features that other companies followed. Other pharmaceutical companies were motivated to provide safe medicines, too. In essence, good leadership involves paving the way for others.

(3)

A good manager must also work to accomplish change, but he must understand people in a different way than a good leader. While a good leader inspires others to move forward, a good manager must also organize, direct, and advise his team when it comes to achieving a specific vision. The manager must take care of his or her team and meet its needs. If problems arise, he or she should solve them by creating systems, providing resources, and establishing procedures for getting work done. For example, if a police chief needs to station someone in a crowded area while the weather is poor, it would be wise to equip the stationed officer with the necessary gear to stay healthy during the shift. The difference between equipping the officer or not could mean the difference between the officer having the stamina to provide public safety or not.

(4)

That being said, it is fallacious to say that a good leader cannot also be a good manager. Often, people must be a bit of both to be successful in their fields. For example, cancer research lab directors are leaders because they design innovative new experiments and technology in science, but they are also managers because they govern a team of assistants and other scientists. Indeed, the skills involved in excellent leadership and management are both important to master. Nevertheless, the two should not be confused as being one and the same.

Write an essay in which you explain how the author builds an argument to persuade her audience that leadership and management are distinct. In your essay, analyze how the author uses one or more of the features listed above (or features of your own choice) to strengthen the logic and persuasiveness of his argument. Be sure that your analysis focuses on the most relevant features of the passage.

Your essay should not explain whether you agree with the author's claims, but rather explain how he builds an argument to persuade her audience.

# **STOP**

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