

PRACTICE TEST

4

Test Reminders

- 1. A #2 pencil is required.
- 2. Follow the time restrictions for each section.
- 3. You are allowed to write on the test.
- Circle your answers to ensure accuracy when filling in the answer sheet, provided on page 317.
- 5. Calculate your estimated score by using the conversion chart on page 319.

Line

(25)

(5)

Reading Test

65 MINUTES, 52 QUESTIONS

Turn to Section 1 of your answer sheet to answer the questions in this section.

1

Directions: Each passage or pair of passages below is followed by several questions. Read each passage or pair, and then choose the best answer to each question based on what is stated or implied in the passage or passages and in any accompanying graphics (such as a table or graph).

Questions 1-10 are based on the following passage.

This passage is adapted from The Economist, "The Great Depression: Root Causes, Lessons from the 1930s." © 2015 by The Economist.

Economists usually work with large samples of data, so they are in a bind when it comes to depressions: there simply haven't been enough to yield predictable patterns. When the world stood on the precipice in 2008, its leaders had only the 1930s as a template.

Today they congratulate themselves on having avoided another Great Depression. Were they right to? Barry Eichengreen argues no. Their reading of the 1930s, he writes, is incomplete, often erroneous and has led them to settle for weak or no growth and for too-timid reform of their

In his new book, Mr. Eichengreen, of the
University of California, Berkeley, recreates the
last century's two great episodes of financial
instability with compelling portraits of bankers
and policymakers and accessible theoretical
explanations. His retelling of America's and

financial systems.

(20) Europe's recent crisis adds little to earlier accounts, but his version of the 1930s is rich with detail and myth-busting insights.

The Great Depression is often blamed on central bankers who stood by and let their banks fail. In fact, for the first year, the Fed filled its lender-of-last-resort job as intended, quickly injecting cash into banks after the stock market crashed, and ring-fencing healthy banks with loans when weaker banks failed.

(30) The real failures came later. In 1931 Austria's government had to let its biggest bank collapse because it couldn't meet foreign powers' conditions for a loan. Gold fled Austria, then Germany, then Britain, and finally America.

(35) Governments responded with monetary and fiscal austerity. The resulting hardship provoked political revolt. Royal Navy sailors protested over proposed pay cuts and Germans elected communists and Nazis. (40) The events from the 1930s were similar to the events from 2008. In fact, many of these events repeated themselves 80 years later. Ireland went bust guaranteeing its oversized banks' liabilities, much as Austria did in 1931. By letting Lehman

(45) Brothers fail in 2008, in order to expunge the moral hazard from earlier bail-outs, American officials reprised the decision to let Guardian Trust fail in 1933.

Today's officials did learn some important (50) lessons from the 1930s. Ben Bernanke, chairman of the Fed and himself a Great Depression scholar, was quick to lend to Europe when its banks were in desperate need of dollars. Most rich countries decided to enact fiscal stimuli in the early years of (55) the crisis.

But in responding so well to the initial instability, "success thus became the mother of failure," Mr. Eichengreen charges. On fiscal policy, he is certainly correct. Within a couple years,

(60) America, Britain and Europe had all pivoted from stimulus to austerity. Unlike their forebears, they couldn't blame the gold standard. Rather, officials were motivated by misplaced fear of bond-market vigilantes, desire for a smaller state, or, in Europe's

(65) case, an insistence that profligate governments tighten their belts in exchange for support.

But Mr. Eichengreen at times stretches the facts to fit his narrative. He accuses the Fed of keeping monetary policy too tight because of a

(70) preoccupation with inflation; but it enacted several rounds of unconventional stimulus.

Because the last crisis was less severe than the Depression, bankers were able to hold firm in resisting radical reform of the financial system. Yet

- (75) Mr. Eichengreen does not explain what more radical reform would accomplish; if anything, tougher regulation of banks would probably hold back their lending, which would make the recovery even weaker.
- (80) Mr. Eichengreen wisely acknowledges that history has many, often conflicting, narratives which make it an imperfect guide to the present. This guarantees that when the next crisis hits, the world will find brand new mistakes to make.

The main purpose of the passage can best be described as

- A) critiquing how bankers and policy makers handled the Great Depression.
- B) analyzing the main points in Barry Eichengreen's book.
- C) expressing an opinion about the quality of Barry Eichengreen's analytical skills.
- D) comparing the differences between America's and Europe's financial crises.

2

The author's tone throughout the passage can best be described as

- A) hopeful and optimistic.
- B) fanatical and overzealous.
- C) judgmental and sarcastic.
- D) respectful and forthright.

3

As used in line 28, "ring-fencing" most nearly means

- A) protecting the assets of a bank.
- B) distributing money between healthy and weaker banks.
- C) fairly distributing funds.
- D) forcing banks into financial agreements.

4

According to the passage, which of the following would describe the relationship between the Great Depression and the financial crisis of 2008?

- A) The Great Depression serves as an accurate blueprint for understanding the financial crisis of 2008.
- B) The Great Depression provided some guidance for the financial crisis of 2008.
- C) The Great Depression and the financial crisis of 2008 were both results of mismanaged spending.
- D) The Great Depression and the financial crisis of 2008 are not related at all.

5

Which of the following provides the best evidence for the answer to the previous question?

- A) Lines 49-50 ("Today's ... 1930s")
- B) Lines 56-58 ("But in responding ... failure")
- C) Lines 72-74 ("Because the last ... system")
- D) Lines 80-82 ("Mr. Eichengreen ... present")

6

The purpose of the fifth and sixth paragraphs (lines 30-48) can best be described as

- A) demonstrating the main failures of a historic event.
- B) providing a historical overview of the Great Depression.
- C) showing a parallel between two historic events.
- showcasing the lessons learned from a historical event.

7

Which of the following provides the best evidence for the answer to the previous question?

- A) Line 30 ("The real ... later")
- B) Lines 36-37 ("The resulting ... revolt")
- C) Lines 40-42 ("The events ... later")
- D) Lines 44-48 ("By letting ... 1933")

8

It can be inferred from the seventh paragraph (lines 49-55) that Ben Bernanke

- A) was a supporter of austerity measures.
- B) did not act upon the lessons of the Great Depression.
- C) comes from a country that supports financial reform.
- D) supported enacting fiscal stimuli in the early years of the crisis.

In line 74, "radical" most nearly means

- A) constitutional.
- B) intrinsic.
- C) essential.
- D) drastic.

10

In the tenth paragraph (lines 72-79), the author offers the opinion that during a depression, radical reform

- A) might not be the best way to resolve a financial crisis.
- B) might be the best way to resolve a financial crisis.
- C) will force lenders to withhold funds.
- D) is a non-issue.

(5)

Questions 11-20 are based on the following passage.

This passage is adapted from The Economist, "Charting the Plastic Waters." ©2014 by The Economist.

The "Great Pacific Garbage Patch" lies off the coast of California. But it is not the only place where a system of rotating ocean currents, known Line as gyres, concentrate floating material, particularly plastic detritus dumped into the sea or washed out from rivers. There is an awful lot of it: at least 268,940 tons, a new report estimates. And there

eye, because the patches of rubbish appear to work (10)like giant shredders, breaking plastic items down into tiny pieces which are then widely dispersed through the world's oceans with potentially devastating consequences for wildlife.

may well be even more, mostly invisible to the

Marcus Eriksen, of the Five Gyres Institute in Los Angeles, worked with an international team (15)of colleagues to build an oceanographic model of floating debris to estimate the amount of plastic in the sea. Their calculations were based on previously published data and observations and

- samples gathered from expeditions to the North (20)Pacific, North Atlantic, South Pacific, South Atlantic, Indian Ocean and other regions, including the Bay of Bengal, Australia's coastal waters and the Mediterranean. Plastic waste was divided into
- (25)four sizes: microplastics of 0.33-1 mm and 1.01-4.75 mm; medium-sized bits of 4.76-200 mm. which would typically include plastic bottles; and larger items of more than 200 mm.

The results, published recently in a scientific (30)journal, found that just over 75% of the 268,940 tons of plastic is accounted for by items measuring more than 200 mm. Chunks of polystyrene were the most commonly observed large items, but by weight, lost fishing gear, such as floats, lines and

(35)nets, accounted for most. As for the number of items in the sea, the researchers calculated this to be 5.25 trillion bits of plastic of all sizes. The vast majority, some 4.8 trillion, are microplastics, and these were spread across the world.

(40)Although the number of microplastics appears huge, it was much lower than the researchers expected. The smallest microplastics ought to be more abundant than larger ones, because the tiny ones are continually being

(45)degraded into fragments thanks to the effects of sunlight and other weathering processes. In fact the opposite was true, suggesting that some other mechanisms are removing the smallest particles from the ocean's surface.

(50)The researchers surmise that those processes include faster-than-expected shredding of already brittle microplastics into particles that are too tiny for their nets to catch, along with particles being washed onto beaches and material finding its way

(55) into the stomachs of marine life and thence their predators. There is also growing evidence that some microbes can bio-degrade tiny pieces of plastic. That means the final resting place of plastic at sea may not be in floating patches of rubbish but in the

(60) sediment by way of numerous marine creatures, with possibly toxic effects in the food chain.

Some schemes have been proposed to try to clean up the plastic waste floating in the sea. But it is hardly practical when more than 90% of that rubbish is smaller than a grain of rice and is

(65)distributed globally, says Dr. Eriksen. Much better, he believes, to prevent plastic from getting into the oceans in the first place.

Providing better incentives for companies (70) and consumers to recycle plastics would help. Fishermen, he suggests, could be paid to recover gear drifting at sea. But in some cases tougher legislation is probably needed. The Five Gyres Institute, for example, is campaigning to phase out

the use of plastic microbeads in facial scrubs and other consumer products in favor of natural alternatives made from such materials as apricot husks. Sewage treatment plants do not capture all the beads which wash down the drain, so some

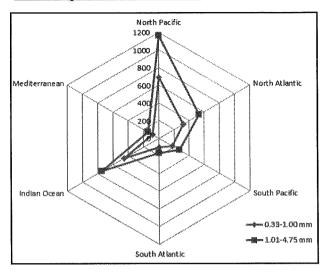
(80) inevitably end up in the sea. And being so small, no one really knows where they are going.

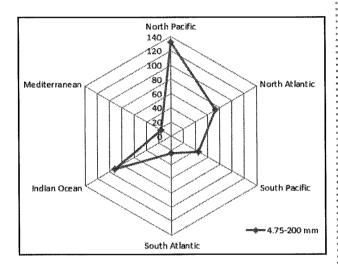
11

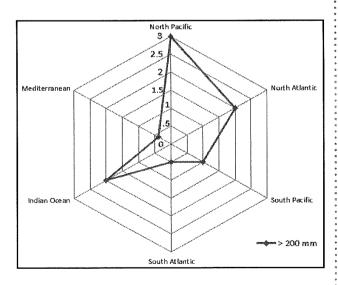
The main purpose of the passage can best be described as

- A) describing the current state of plastic pollution in the ocean.
- providing a comprehensive solution for plastic pollution in the ocean.
- **C**) illustrating how devastating pollution is to our ecosystem.
- D) praising the Five Gyres Institute for its research.

Plastic particles, billions







12

As used in line 46, "weathering" most nearly means

- A) enduring.
- B) raining.
- C) eroding.
- D) bearing.

13

All of the following are reasons that researchers believe they found fewer of the smallest microplastics than expected EXCEPT

- A) the faster-than-expected shredding of microplastics.
- B) particles finding their way into the digestive systems of marine creatures.
- C) the constant deterioration of plastics from sunlight and other weathering actions.
- D) the ability of some microbes to decompose plastic.

14

The purpose of the fifth paragraph (lines 50-61) can best be described as

- A) illustrating how the microplastics can potentially harm the ecosystem.
- B) revealing how microbes consume microplastics.
- exploring possible reasons why fewer of the smallest plastics were found than expected.
- D) articulating just how detrimental plastic pollution is to the ocean currents.

15

As it is used in line 69, "incentives" most nearly means

- A) promises.
- B) encouragement.
- C) plans.
- D) punishment.

16

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

- A) Lines 71-72 ("Fishermen ... sea")
- B) Lines 72-73 ("But in some ... needed")
- C) Lines 73-75 ("The Five Gyres ... scrubs")
- D) Lines 78-79 ("Sewage ... drain")

It can be reasonably inferred from the passage that the author believes which of the following claims about cleaning up plastic pollution in the ocean?

- A) Reforming company and consumer practices alone can solve the problem of plastic pollution.
- B) The government will most likely need to step in to help solve the problem of plastic pollution.
- C) Fishermen being paid to recover gear will be enough to stop plastic pollution.
- D) Deploying microbes to eat the plastic waste in the ocean will greatly reduce plastic pollution.

18

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

- A) Lines 56-57 ("There is ... plastic")
- B) Lines 62-66 ("Some ... Dr. Eriksen")
- C) Lines 71-72 ("Fishermen ... sea")
- D) Lines 72-73 ("But in some ... needed")

19

Which of the following claims is supported by the charts?

- A) The North Atlantic has the most particles of plastic pollution.
- B) The Indian Ocean has the most particles of plastic pollution.
- C) The South Atlantic has the least particles of plastic pollution.
- D) The Mediterranean has the least particles of plastic pollution.

20

Which of the four plastic particle sizes is the second most abundant according to the charts?

- A) 0.33 mm-1.00 mm
- B) 1.01 mm-4.75 mm
- C) 4.76 mm-200 mm
- D) >200 mm

Questions 21-31 are based on the following passage.

Passage 1 is adapted from Tom McGrath, "Is Your Doc Addicted?" ©2010 by Tom McGrath.
Passage 2 is adapted from Scientific American, "Pee in This Cup, Doc: Random Drug Tests Should Be Standard for Physicians." ©2014 by Scientific American.

Passage 1

Had she been a pilot, or a train engineer, or even a bus driver, chances are someone would have discovered, before it was too late, the demons Line Kristen Parker was battling. Unfortunately for the people whose lives she would forever alter, Parker was merely a hospital worker.

The 26-year-old surgical technician was hired by Rose Medical Center, in suburban Denver, in the fall of 2008. While she was required to jump through planty of pre-employment boops, includin

(10) through plenty of pre-employment hoops, including a drug test, there was no random drug testing once she landed the job.

This was tragic, because if hospital officials had periodically screened Parker for drug use the

- (15) way the transportation industry screens millions of its employees every year, they no doubt would have found out the truth sooner. Despite somehow managing to pass that initial test, Kristen Parker had a drug problem. A very serious drug problem.
- (20) Her addiction was so severe, in fact, that within a few days of starting her job, she began treating the drugs available in the medical center's operating rooms as her own personal stash.
- When doctors and nurses in the OR weren't looking, Parker would quietly steal syringes filled with the narcotic Fentanyl, which is up to 100 times as powerful as morphine, and replace them with syringes filled with saline. At first those replacement needles were new and sterilized.
- (30) But as Parker's addiction worsened, she became sloppier and more brazen. Soon she was swapping the Fentanyl syringes for dirty needles she'd used to inject herself.
- Horrifying? Absolutely, especially given this (35) fact: The previous summer, while living in New Jersey, Parker thinks she contracted hepatitis C from using dirty needles to shoot herself up with heroin.
- Parker's behavior eventually aroused (40) suspicions, and she was fired after failing a drug

test. But it wouldn't be until June 2009, after Parker had begun working at yet another Colorado medical facility, that Rose officials, along with the state health department, began piecing together the

(45) damage she had wrought. Ultimately, they calculated, she had exposed nearly 6,000 patients to hepatitis C.

Passage 2

We hold our physicians to high standards because they make life-or-death decisions. Yet

- (50) when it comes to drug addiction, their behavior can be disturbing. Their overall rates of substance abuse are roughly on par with rates for the rest of the population, at about 10 percent. For prescription drugs, abuse rates for doctors in several specialties
- (55) are estimated to be higher—not surprising given their access to addictive medications.

Earlier this year, the inspector general for the U.S. Health and Human Services Department called for mandatory random drug testing for all health

(60) care workers with access to drugs.

The idea is a good one. We require such testing of airline pilots, train conductors, truck drivers and others whose impaired behavior could endanger many lives.

- (65) In November, California could become the first state to mandate that crucial level of safety in health care. The new California initiative, if made into law, would require the state medical board to oversee a drug- and alcohol-testing program. Random tests
- (70) would be carried out by doctors' hospitals. Physicians also would be tested when suspected of substance abuse or after an unexpected patient death or serious injury occurred. Additionally, doctors would have to report colleagues. If doctors
- (75) tested positive, their medical licenses would be suspended, pending investigation.

We know testing can work, and it may act as an effective deterrent. Since 2004 at Massachusetts General Hospital, a random drug-testing

- (80) requirement has been in place for anesthesiology residents. During the first six years, there were four substance abuse cases. In the ten years since testing began, not a single resident has tested positive.
- The goal is not to punish people but to protect (85) patients. Positive test results should not cost physicians their careers. They should be placed in recovery programs, so they may safely return to work.

As used in line 3, "demons" most nearly means

- A) monsters.
- B) setbacks.
- C) stereotypes.
- D) issues.

22

The author of Passage 1 initially believes that the fact that health practitioners do not receive regular drug tests is

- A) ironic.
- B) insignificant.
- C) understandable.
- D) humorous.

23

Which choice provides the best evidence for the previous question?

- A) Lines 1-4 ("Had she ... battling")
- B) Lines 9-12 ("While she ... job")
- C) Lines 25-28 ("Parker ... saline")
- D) Lines 45-47 ("Ultimately ... hepatitis C")

24

As used in line 52, "on par with" most nearly means

- A) higher than.
- B) equivalent to.
- C) somewhat less than.
- D) much different from.

25

The author of Passage 2 would most likely agree with a program that

- A) mandates drug testing of certain health workers.
- B) upholds health workers' privacy.
- C) mandates drug testing of all employees across different fields.
- D) strips doctors of their licenses after they have been caught abusing drugs or alcohol.

26

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

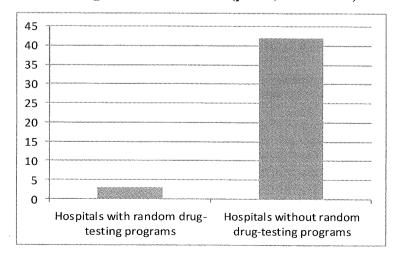
- A) Lines 49-51 ("Yet when ... disturbing")
- B) Lines 57-61 ("the inspector ... one")
- C) Lines 61-63 ("We require ... others")
- D) Lines 65-67 ("In November ... health care")

27

Which of the following describes the overall structure of Passage 2?

- A) A weighing of the two sides of a controversial issue
- B) A presentation of a problem and review of a few proposed solutions
- C) A criticism of a system that allows negligent doctors to go unpunished
- D) A discussion of a few issues facing the medical community

Number of reports of drug-abuse related incidents involving health care workers (per 10,000 workers)



The author of Passage 2 would likely respond to the account in lines 24-33 of Passage 1 ("When doctors ... herself") in all of the following ways EXCEPT

- A) He would have suggested that Parker be admitted to a drug rehabilitation program.
- B) He would have seen it as further evidence for promoting mandatory random drug tests for certain health care workers.
- C) He would have argued that the health of patients must be protected from such behavior.
- He would have recommended that Parker be punished for her behavior and removed from medical service.

29

Both authors would most likely agree with which of the following statements?

- A) Pre-employment drug testing is an insufficient method for screening health care workers.
- B) Drug recovery programs should be established for drug-addicted heath care workers, so they can return safely to the work place.
- C) Random drug testing should be required in places where health care workers have access to drugs.
- D) It is not surprising that doctors become addicted to drugs, considering their easy access to prescription medications.

30

How would the author of Passage 2 likely respond to Parker's being fired for her behavior (line 40)?

- A) By suggesting that she be admitted to a recovery program, not punished for her addiction
- B) By pointing out that, without proper protocols, she will just be hired somewhere else
- C) By agreeing that the best way to deal with problematic health care workers is to prevent them from having a career in health care
- By stating that her actions were criminal since she had endangered the health of patients

31

Based on the information in the chart, which of the following conclusions can be made?

- A) At hospitals which employ random drugtesting programs, fewer than 5 health care workers were involved in drug-abuse related incidents.
- B) There is a total of approximately 30,000 health care workers employed at hospitals that do not have random drug-testing programs.
- C) At hospitals without random drug-testing programs, the number of workers involved in drug-abuse incidents is about 14 times greater than at hospitals with such programs.
- D) Random drug testing does not appear to be an effective deterrent against abuse of drugs by health care workers.

Questions 32-42 are based on the following passage.

This passage is adapted from Italo Calvino, *Invisible Cities*. ©1972 by Italo Calvino.

When a man rides a long time through wild regions he feels the desire for a city. Finally he comes to Isidora, a city where the buildings have Line spiral staircases encrusted with spiral seashells,

- (5) where perfect telescopes and violins are made, where the foreigner between two women always encounters a third, where cockfights degenerate into bloody brawls among the bettors. He was thinking of all these things when he desired a city.
- (10) Isidora, therefore, is the city of his dreams: with one difference. The dreamed-of city contained him as a young man; he arrives at Isidora in his old age. In the square there is the wall where the old men sit and watch the young go by; he is seated in a
- (15) row with them. Desires are already memories.

 There are two ways of describing the city of Dorothea: you can say that four aluminum towers rise from its walls flanking seven gates with spring-operated drawbridges that span the
- (20) moat whose water feeds four green canals which cross the city, dividing it into nine quarters, each with three hundred houses and seven hundred chimneys. And bearing in mind that the nubile girls of each quarter marry youths of other quarters
- (25) and their parents exchange the goods that each family holds in monopoly—bergamot, sturgeon roe, astrolabes, amethysts—you can then work from these facts until you learn everything you wish about the city in the past, present, and future.
- (30) Or else you can say, like the camel driver who took me there: "I arrived here in my first youth, one morning, many people were hurrying along the streets towards the market, the women had fine teeth and looked you straight in the eye, three
- (35) soldiers on a platform played the trumpet, and all around wheels turned and colored banners fluttered in the wind. Before then I had known only the desert and the caravan routes. In the years that followed, my eyes returned to contemplate the
- (40) desert expanses and the caravan routes; but now I know this path is only one of the many that opened before me on that morning in Dorothea."

In vain, great-hearted Kublai, shall I attempt to describe Zaira, city of high bastions. I could tell

(45) you how many steps make up the streets rising like stairways, and the degree of the arcades' curves,

- and what kind of zinc scales cover the roofs; but I already know this would be the same as telling you nothing. The city does not consist of this, but of
- (50) relationships between the measurements of its space and the events of its past: the height of a lamppost and the distance from the ground of the usurper's swaying feet; the line strung from the lamppost to the railing opposite and the festoons that decorate
- (55) the course of the queen's nuptial procession; the height of that railing and the leap of the adulterer who climbed over it at dawn; the tilt of guttering and a cat's progress along it as he slips into the same window; the firing range of a gunboat which
- (60) has suddenly appeared beyond the cape and the bomb that destroys the guttering; the rips in the fish net and the three old men seated on the dock mending nets and telling each other for the hundredth time the story of the gunboat of the
- (65) usurper, who some say was the queen's illegitimate son, abandoned in his swaddling clothes there on the dock.

As this wave from memories flows in, the city soaks it up like a sponge and expands. A description

- (70) of Zaira as it is today should contain all Zaira's past. The city however, does not tell its past, but contains it like the lines of a hand, written in the corners of the streets, the gratins of the windows, the banisters of the steps, the antennae of the lightning rods, the
- (75) poles of the flags, every segment marked in turn with scratches, indentations, scrolls.

39

The narrator's tone throughout the passage can best be described as

- A) wistful and contemplative as he recounts his many travels.
- B) sorrowful and regretful about how many of his travels turned out.
- C) judgmental and concerned about the state of the places he is describing.
- D) mournful about the deterioration that has occurred in the places he is describing.

33

In line 7, "degenerate" most nearly means

- A) disintegrate.
- B) break down.
- C) decay.
- D) mutate.

3.4

What is the relationship between the "man" (line 1) as a young man and as an old man?

- A) As a young man he is traveling in search of the city; as an old man he has given up on trying to find it.
- B) As a young man he spends his time in the city surrounded by gambling and women; as an old man he merely watches others.
- C) As a young man he inhabits the city only in his dreams; as an old man he can only remember those desires.
- As a young man he is guided by his desires; as an old man he can only mourn what he has lost.

35

In line 19, "span" most nearly means

- A) cross.
- B) widen.
- C) overcome.
- D) surround.

36

Which of the following most effectively summarizes the "two ways of describing the city of Dorothea" (lines 16-17)?

- A) One is about architectural detail; the other is about economic exchanges between the families of each quarter.
- B) One is about the style of buildings and types of resources produced in the city; the other is about how foreigners perceive the city.
- C) One is about the design and regularity of the city; the other is about the opportunities which the city provides.
- One is derived from mathematical observations; the other is more anecdotal in origin.

37

What is the narrator indicating when he states "I already know this would be the same as telling you nothing" (lines 48-49)?

- A) The narrator is clearly uninterested in the architectural splendor of the city.
- B) The narrator is revealing that there is much more to the city than meets the eye.
- C) The narrator feels it unnecessary to repeat what he has already shared in the earlier paragraphs' descriptions.
- D) The narrator feels confident he knows a lot about the city.

38

All of the following can be inferred from the third paragraph about the "usurper" (line 65) EXCEPT

- A) he was executed by hanging.
- B) he is the same person as the adulterer.
- C) he engaged in an attack upon the city.
- D) it was suspected that he was related to the queen.

39

All of the following provide evidence for the previous question EXCEPT

- A) Lines 51-53 ("the height ... feet")
- B) Lines 56-57 ("the leap ... dawn")
- C) Lines 64-65 ("the story ... usurper")
- D) Lines 65-66 ("who some ... son")

40

What is the relationship between the city of Isidora and the city of Zaira?

- A) They are both oases in the midst of wild regions.
- B) They both border Dorothea.
- C) The author presents both of them through the perspective of memories.
- D) The residents of both cities are driven by their dreams and desires.

The author makes an analogy between Zaira and "the lines of a hand" (line 72) in order to indicate that the city's history

- A) is unique, just as fingerprints and handprints are
- B) is central, connected to many aspects, similar to the fine and complex web of lines on a hand.
- C) has depth, like the textures and grooves in one's hand.
- D) is not clearly revealed, like the mysteries some say are hidden in the lines of a person's hand.

42

Which choice provides the best evidence for the previous question?

- A) Lines 69-70 ("A description ... past")
- B) Line 71 ("The city ... past")
- C) Lines 72-75 ("written in ... flags")
- D) Lines 75-76 ("every segment ... scrolls")

Line

(15)

(25)

history.

(5)

Questions 43-52 are based on the following passage.

This passage is adapted from Bruce Catton, "Grant and Lee: A Study in Contrasts." ©1995 by Bruce Catton.

When Ulysses S. Grant and Robert E. Lee met in the parlor of a modest house at Appomattox Court House, Virginia, on April 9, 1865, to work out the terms for the surrender of Lee's Army of Northern Virginia, a great chapter in American life came to a close, and a great new chapter began.

These men would bring the Civil War to

its virtual finish. To be sure, other armies had yet to surrender, and for a few days the fugitive Confederate government would struggle desperately and vainly, trying to find one way to go on living now that its chief support was gone. But in effect it was all over when Grant and Lee signed the papers. And the little room where they wrote out the terms was the scene of one of the most poignant, dramatic contrasts in American

They were two strong men, oddly different generals, and they represented the strengths of two (20) conflicting currents that, through them, had come into final collision.

Lee was tidewater Virginia, and in his

background were family, culture, and tradition—the age of chivalry transplanted to a New World which was making its own legends and its own myths. He embodied a way of life that had come down through the age of knighthood and the English country squire. America was a land that was beginning all over again, dedicated to nothing

- (30) much more complicated than the earnest belief that all men had equal rights and should have an equal chance in the world. In such a land Lee stood for the feeling that it was somehow of advantage to human society to have a pronounced inequality in
- (35) the social structure. There should be a leisure class, backed by ownership of land; in turn, society itself should be keyed to the land as the chief source of wealth and influence. It would bring forth (according to this ideal) a class of men with a
- (40) strong sense of obligation to the community; men who lived not to gain advantage for themselves, but to meet the solemn obligations which had been laid on them by the very fact that they were privileged. From them the country would get its
- (45) leadership; to them it could look for the higher values—of thought, of conduct, of personal deportment—to give it strength and virtue.

Lee embodied the noblest elements of this aristocratic ideal. Through him, the landed nobility

- (50) justified itself. For four years, the Southern states had fought a desperate war to uphold the ideals for which Lee stood. In the end, it almost seemed as if the Confederacy fought for Lee; as if he himself was the Confederacy: the best thing that the way
- (55) of life for which the Confederacy stood could ever have to offer. He had passed into legend before Appomattox. Thousands of tired, underfed, poorly clothed Confederate soldiers, long past the simple enthusiasm of the early days of the struggle,
- (60) somehow considered Lee the symbol of everything for which they had been willing to die. But they could not quite put this feeling into words. If the Lost Cause, sanctified by so much heroism and so many deaths, had a living justification, its
- (65) justification was General Lee.

42

The first two paragraphs (lines 1-17) serve mainly to

- A) present a historical context for the passage.
- B) explain aspects of the Civil War in detail.
- C) suggest that the events at Appomattox Court House were the most important in American history.
- D) hint at the reasons why the Confederate Army had lost the war.

44

As used in line 11, "vainly" shows that the Confederate government acted in a manner that was primarily

- A) foolish.
- B) futile.
- C) arrogant.
- D) proud.

The author uses the phrase "conflicting currents" (line 20) to refer to

- A) the turbulent coastal tidewaters of Virginia.
- B) the opposing cultures and socio-political goals of the North and South during the Civil War.
- C) the personalities of two great generals who both fought passionately for their ideals.
- D) the two armies who had fought the final battle of the Civil War near the Appomattox courthouse.

46

As used in line 37, "keyed" most nearly means

- A) enslaved.
- B) subject.
- C) called.
- D) connected.

47

From the Confederate perspective, wealthy landowners had "solemn obligations" (line 42) to

- A) dedicate their lives to serving poor members of the community.
- B) lead America with the power of their noble heritage and cultivated ideals.
- C) dominate America by means of their status and political influence.
- D) live a privileged life with no concern for their role in the newly forming country.

48

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

- A) Lines 32-35 ("Lee ... structure")
- B) Lines 39-40 ("a class ... community")
- C) Lines 43-44 ("laid ... privileged")
- D) Lines 44-46 ("From them ... values")

49

A person who subscribed to the "earnest belief" (line 30) to which America is dedicated would likely feel that the Confederate perspective is

- A) noble, but is only an ideal, a leftover from the Old World.
- B) dangerous, because it convinced a majority of the population to break away from the Union.
- C) flawed, since America is based on equality, not inequality.
- D) understandable as a way to unite the agriculturally-based states of the South.

50

According to the author, why was General Lee seen as a "living justification" (line 64) for the Confederacy's "Lost Cause"?

- A) Lee created new legends and myths that were more important than the Confederacy.
- B) Without Lee the Southern people could not have kept their ideals.
- People loved Lee so much that they were willing to die for him.
- D) Lee was a living embodiment of the values that the Southern people fought for.

51

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

- A) Lines 22-26 ("Lee was ... myths")
- B) Lines 48-50 ("Lee ... itself")
- C) Lines 52-54 ("In the end ... Confederacy")
- D) Lines 57-61 ("Thousands ... die")

52

Overall, the author's account of General Lee is

- A) blatantly sympathetic.
- B) understanding and empathetic.
- C) mocking and condescending.
- D) subtly hostile.



Writing and Language Test

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

2

35 MINUTES, 44 QUESTIONS

Directions: Each passage below is accompanied by several questions which may ask you to consider revisions to improve expression of ideas or correct grammatical errors. Some questions may ask you to make editing decisions which involve a graphic (a table or chart). For each question, choose the answer that most effectively improves the passage. Select "NO CHANGE" to leave the highlighted portion as it is.

Questions 1-11 are based on the following passage.

New evidence has put into doubt the long-standing belief that a deficiency in serotonin, a chemical messenger in the brain, plays a central role in depression. In the ACS Journal of Chemical Neuroscience, scientists have reported that mice lacking the ability to make serotonin in their brains, and thus likely to be "depressed" by common wisdom, did not show depression-like symptoms.

Donald Kuhn and colleagues at the John D.

Dingell VA Medical Center and Wayne State

University School of Medicine noted that 2 it poses a major public health problem. The World Health Organization estimates that more than 350 million people suffer from it, and it is said to be the leading cause of disability across the globe.

In the late 1980s, the now well-known antidepressant Prozac was introduced. The drug works mainly by increasing the amounts of one substance in the brain—serotonin. So scientists came to believe that boosting levels of the signaling molecule was the key to 3 solve depression. Based on this idea, many other drugs to treat the condition entered the picture. But now researchers know that 60 to 70 percent of these patients continue to feel depressed, even while taking the drugs. Kuhn's team set out to study what 4 role if any serotonin played in the condition.

1

Which choice is most consistent with the purpose and tone of the passage?

- A) NO CHANGE
- B) conventional
- C) normal
- D) typical

2

- A) NO CHANGE
- B) serotonin
- C) depression
- D) the situation

3

- A) NO CHANGE
- B) try to solve
- C) have solved
- D) solving

4

- A) NO CHANGE
- B) role, if any,
- C) role—if any—
- D) role, if any

[1] To begin the study, they developed "knockout" mice that lacked the ability to produce serotonin in their brains. [2] 5 Because of lacking serotonin, they were compulsive and extremely aggressive, but didn't show signs of depression. [3] Next, the scientists ran a 6 group of behavioral tests on both the knockout mice and a control group.[4] Another surprising finding was that when put under stress, the knock-out mice behaved in the same way most of the normal mice did. [5] 7 Likewise, a subset of the knockout mice responded therapeutically to antidepressant medications in a similar manner to the normal mice. 8

5

- A) NO CHANGE
- B) Without serotonin, the researchers observed that the knockout mice
- C) The mice, in the absence of serotonin, they
- D) Lacking serotonin, the knockout mice

6

Which choice is most consistent with the purpose and tone of the passage?

- A) NO CHANGE
- B) battery
- C) collection
- D) package

7

- A) NO CHANGE
- B) However,
- C) As a result,
- D) While

8

Which of the following would be the best arrangement for the sentences in the fourth paragraph?

- A) NO CHANGE
- B) 5, 4, 1, 2, 3
- C) 1, 3, 2, 4, 5
- D) 3, 2, 1, 4, 5

[1] The researchers stated that these findings may be evidence that serotonin is not a major player in the condition. [2] Scientists have, instead, determined that different factors must be involved. [3] Another popular anti-depressant drug on the market is

Wellbutrin, which also blocks serotonin. [4] They

2 concluded by suggesting that these results could dramatically 10 refine how the search for new antidepressants moves forward in the future.

9

- A) NO CHANGE
- B) will conclude
- C) will have concluded
- D) are concluding

10

Which choice is most consistent with the purpose and tone of the passage?

- A) NO CHANGE
- B) mutate
- C) alter
- D) redo

11

Which sentence, if removed from the last paragraph, would help to improve the paragraph's focus?

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

Questions 12-22 are based on the following passage.

It's 4 a.m.—too early for any human being to be getting out of bed. Alas, Donna is up, showered, and out the door with coffee and a Pop-Tart by 4:35. She is off to her second home.

Donna 12 Doolittle no relation to the fictional doctor is single, but her day always starts with 13 management. She was recently promoted to Primates, so now she is in charge of all the monkeys, chimps, and gorillas at Kennedy Park Zoo. Every morning she scrubs and cleans cages and habitats for her mammalian cousins. She scoops poop and looks over the facilities to make sure nothing is broken. Sometimes the chimpanzees have nightmares and break stuff. Other times the Bolivian gray Titi monkeys have family arguments that lead to ruined landscaping. Donna gets everything back in order. Then, it's time for breakfast.

[1] Donna weighs out the meals for all the primates. [2] Each one is a little picky, so she knows who won't eat mangoes and who loves cooked fish.
[3] She keeps everything in easy-to-read charts and makes sure that her animals get a nice rotation of grub, so they don't get bored. [4] Donna is tired from waking up so early, but she continues to work hard to make her primates happy. [5] Donna learned that variety is key to the primate diet when Patches the Tamarin 14 has stopped eating for a week in April.
[6] Turns out he couldn't handle cauliflower and pine nuts every day.

12

- A) NO CHANGE
- B) Doolittle, no relation to the fictional doctor,
- C) Doolittle, no relation to the fictional doctor
- D) Doolittle—no relation to the fictional doctor

13

Which choice is most consistent with the purpose and tone of the passage?

- A) NO CHANGE
- B) nurturing
- C) cultivation
- D) husbandry

14

- A) NO CHANGE
- B) will stop
- C) stopped
- D) continued to stop

15

Which sentence, if removed from the third paragraph, would help to improve the paragraph's focus?

- A) Sentence 2
- B) Sentence 3
- C) Sentence 4
- D) Sentence 6

Donna to fortifies all the meals with extra vitamins to keep everyone healthy and strong. The vet, Charlie, checks in occasionally to make sure everyone is healthy, but Donna is good at keeping their crew in tip-top shape. After the first feeding, Donna makes the rounds to get the gang up and moving.

Alternatively, she plays pattern games with Floyd the Chimp, and runs with Gauthier the Gorilla. This is Donna's favorite part of the day because she gets to literally "monkey around" and gets paid for it. Not many people have that opportunity. Her latest project is getting Floyd to learn a secret handshake, complete with a choreographed high-five sequence that would make a professional athlete jealous.

16

Which choice is most consistent with the purpose and tone of the passage?

- A) NO CHANGE
- B) strengthens
- C) prepares
- D) reinforces

17

- A) NO CHANGE
- B) her
- C) its
- D) they're

18

- A) NO CHANGE
- B) For example,
- C) Similarly,
- D) However,

In the afternoon, Donna 19 will lead a group of students through her exhibits and answers all of their questions. This is the second favorite part of her job: teaching the public about the animals. After the tour, Donna provides the second feeding, 20 practices her handshake with Floyd, and gets ready to head home. Thankfully, all her mates are healthy, so she should be able to get a full 21 nights sleep. 22

19

- A) NO CHANGE
- B) is leading
- C) will continue to lead
- D) leads

20

- A) NO CHANGE
- B) will practice
- C) is practicing
- D) has practiced

21

- A) NO CHANGE
- B) night's
- C) nights'
- D) night of

22

Which of the following sentences provides the best conclusion for the fifth paragraph?

- A) Even so, she doesn't really mind if she has to come back early the next day, for she loves her work.
- B) She is exhausted and is dreading work the next day.
- C) In fact, she was unable to leave one night last summer because one of her primates, Sebastian, was sick.
- D) Her work is demanding, and she can't wait to go home every night and sleep.

Questions 23-33 are based on the following passage.

Like most mythological heroes, 23 Achilles' lineage had a complicated family tree. His father was Peleus, the mortal king of the Myrmidons—a people who, according to legend, were extraordinarily fearless and skilled soldiers. His mother was Thetis, a Nereid.

According to myths and stories composed long after the Iliad, 24 Thetis feared that her son would suffer poor health. She did everything she could to make him 25 immortal: she burned him over a fire every night, then dressed his wounds with ambrosial ointment; and 26 he was dunked into the River Styx, whose waters were said to confer the invulnerability of the gods. However, she gripped him tightly by the foot as she dipped him into the river—so tightly that the water never touched his heel. As a result, Achilles was invulnerable everywhere but there.

When he was nine years old, a seer predicted that Achilles would die heroically in battle against the Trojans. 27 Achilles was a great hero, and he had superhuman strength and courage and was supremely handsome. When she heard about this, Thetis disguised him as a girl and sent him to live on the Aegean island of Skyros. To be a great warrior was Achilles' fate, however, and he soon left Skyros and

23

- A) NO CHANGE
- B) Achilles had a complicated family tree
- C) Achilles' family had a complicated lineage
- D) Achilles' family tree was complicated

24

Which choice results in the most effective transition to the information that follows in the paragraph?

- A) NO CHANGE
- B) Thetis hoped her son would be a great warrior
- Thetis was very concerned about the fate of her son's soul
- D) Thetis was extraordinarily concerned about her son's mortality

25

- A) NO CHANGE
- B) immortal; burning
- C) immortal, she burned
- D) immortal she burned

26

- A) NO CHANGE
- B) he was dunked by her
- C) she dunked him
- D) she was dunking him

97

The writer is considering deleting the underlined sentence. Should the sentence be kept or deleted?

- A) Kept, because it provides supporting evidence about Achilles' character.
- B) Kept, because it provides an additional example of Achilles' destiny and his mother's attempt to change that destiny.
- C) Deleted, because it blurs the paragraph's focus on Achilles' destiny and his mother's attempt to change that destiny.
- D) Deleted, because it doesn't provide specific examples of Achilles' character.

joined the Greek army. In a last-ditch effort to save her son's life, Thetis asked the divine blacksmith Hephaestus to make a sword and shield that would keep him safe. The armor 28 that was produced by Hephaestus for Achilles did not make him immortal, but it was distinctive enough to be recognized by friend and foe alike.

According to legend, the Trojan War began when the god-king Zeus decided to reduce Earth's mortal population by arranging a war between the Greeks (Homer calls them the Achaeans) and the Trojans. He did this by 29 mixing in 30 the political and emotional affairs. At Achilles' parents' wedding banquet, Zeus invited the prince of Troy, a young man named Paris, to judge a beauty contest between the goddesses Hera, Athena, and Aphrodite. Each of the goddesses 31 offer Paris a bribe in exchange for his vote. Aphrodite's was the most alluring: she promised to give the young prince the most beautiful wife in the world. Unfortunately, the wife in question—Helen, the daughter of Zeus-was already married to someone 32 else: Menelaus, the king of Sparta. At Aphrodite's urging, Paris went to Sparta, won Helen's heart and took her (along with all of Menelaus' money) back to Troy.

Menelaus vowed 33 revenge. He assembled an army of Greece's greatest warriors, including Achilles and his Myrmidons, and set off to conquer Troy and get his wife back. In Homer's telling, this war lasted for ten bloody years.

- 28
 - A) NO CHANGE
 - B) for Achilles that Hephaestus produced
 - C) that Hephaestus produced for Achilles
 - D) that was produced for Achilles by Hephaestus
- 29
 - A) NO CHANGE
 - B) meddling
 - C) involving
 - D) stirring around
- 30
 - A) NO CHANGE
 - B) their
 - C) both kingdoms'
 - D) one's
- 31
- A) NO CHANGE
- B) offers
- C) offered
- D) offering
- 32
- A) NO CHANGE
- B) else Menelaus
- C) else; Menelaus
- D) else. Menelaus
- 33
 - A) NO CHANGE
 - B) anger
 - C) payback
 - D) restitution

Questions 34-44 are based on the following passage.

Job creation is up. Unemployment is down.

Wages are stagnant. And, some economists are confused. Tighter labor markets are supposed to give workers more bargaining power. To be sure, millions of Americans who 34 will leave the workforce during the recession have yet to return, and 35 employer's knowledge of their absence is probably holding wages down. But at the rate that new jobs are now popping up, we should be seeing at least some increase in 36 their take-home pay.

And yet, we're not. Last week, the Labor Department reported that 295,000 jobs were created in February, and unemployment fell to its lowest rate since 2008. Wages, however increased by just 0.1 percent. Over the previous 12 months, they increased just two percent. Factoring in inflation, they've barely increased at all, which defies virtually every economic tenet of the 20th century.

doesn't work like its predecessor. The rise of globalization and technology has eliminated millions of middle-class jobs. For a more plausible explanation, we must follow the money. Over the past decade, more than 90 percent of Fortune 500 corporations' earnings have gone to investors. The power of shareholders to quarantine corporate revenue has grown as the power of workers to win raises has dwindled—even though the commitment of shareholders to any one corporation has diminished. The decimation of private-sector unions has eliminated the ability of workers to bargain as a body for better pay. But financiers' ability to threaten the jobs of corporate managers unless they reward shareholders has greatly increased.

34

- A) NO CHANGE
- B) left
- C) is going to leave
- D) will have left

35

- A) NO CHANGE
- B) employer
- C) employers's
- D) employers'

36

- A) NO CHANGE
- B) its
- C) Americans'
- D) the

37

- A) NO CHANGE
- B) Wages, however,
- C) Wages; however,
- D) Wages-however-

38

- A) NO CHANGE
- B) In addition,
- C) Nevertheless,
- D) By contrast,

39

Which choice is most consistent with the purpose and tone of the passage?

- A) NO CHANGE
- B) assign
- C) appropriate
- D) devote

40

Which choice is most consistent with the purpose and tone of the passage?

- A) NO CHANGE
- B) collectively
- C) jointly
- D) synchronically

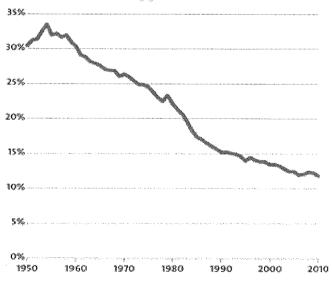
Facing one such challenge from an "activist investor" backed by four hedge funds, General Motors announced it would buy back \$5 billion of its shares, thereby raising the value of the remaining shares and

- will enrich those investors who intimidated GM's managers. As for GM's assembly-line workers, the contract is up for renegotiation. Their union hopes to eliminate the two-tier pay system, under which every worker hired since 2009 can make no more than two-thirds of what veteran workers make. But with the rate of unionization so low, GM's workers don't have the leverage that one "activist investor" has, though they make the cars while the investor makes only threats.
- [1] At the root of our great pay stagnation is the appropriation by investors of the funds that used to go to businesses' modernization, expansion, and workers.

 [2] This stagnation diminishes workers' well-being, while maintaining the wealth of investors. [3] Many economists believe that the stagnation of the middle class is merely a myth. [4] Full employment will certainly boost workers' wages, but unless the power shifts from investors to workers, the stagnant middle class will remain just that, stagnant.

 [43]

Share of wage and salary workers in unions,



41

- A) NO CHANGE
- B) has enriched
- C) enriched
- D) enriching

42

- A) NO CHANGE
- B) it
- C) their contract
- D) they're contract

43

Which sentence, if removed from the last paragraph, would help to improve the paragraph's focus?

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

44

Does the information presented in the graph adequately support the passage?

- A) No, because the chart does not indicate anything about the role that investors and shareholders play in the reduced wages for union workers.
- B) No, because the decrease in union membership is not a major factor in the author's argument.
- C) Yes, because it shows how wages have decreased steadily, which is the primary focus of the passage.
- D) Yes, because it depicts the weakening of unions, supporting a major point the author makes about the cause of stagnant wages.



Math Test



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

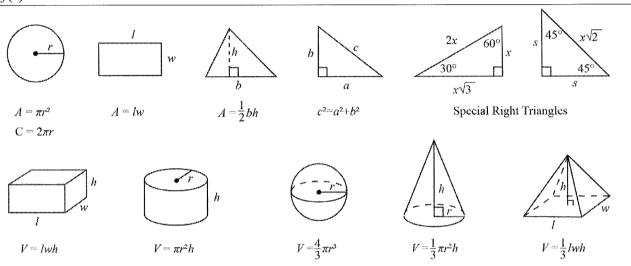
3

25 MINUTES, 20 QUESTIONS

For questions 1-20, 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:

- 1. The use of a calculator is not permitted.
- 2. All variables and expressions used represent real numbers unless otherwise indicated.
- 3. Figures provided in this test are drawn to scale unless otherwise indicated.
- 4. All figures lie in a plane unless otherwise indicated.
- 5. 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.



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.



Let g(x) = -f(x) and h(x) = f(-x). For which of the following functions is g(x) = h(x)?

- A) $f(x) = x^2$
- B) f(x) = x
- C) f(x) = |x|
- D) $f(x) = \sqrt[3]{x^4}$

2

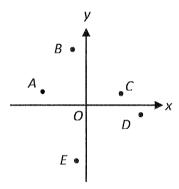
The range of the function y = 6x - 8 is all real numbers from 1 to 10. What is the domain of the function?

- A) all real numbers from 1.5 to 3.
- B) all real numbers from -2 to 52.
- C) all integers from -2 to 52.
- D) all real numbers.

If the rational expression $\frac{-3x^2}{-x+2}$ is rewritten in the equivalent form $-\frac{12}{-x+2} + A$, what must expression A be in terms of x?

- A) 3(x+2)
- B) x + 4
- C) 3x 2
- D) $\frac{3x^2}{x-2}$

4



In the figure above, if four lines are drawn by connecting the labeled points with the origin, which of the lines would have the greatest slope?

- A) AO
- \overrightarrow{B}) BO
- C) CO
- D) EO



$$\begin{aligned}
x + 4y &= 4 \\
xy + y^2 &= -20
\end{aligned}$$

In the system shown above, what is a possible value for *y* ?

- A) $\pm \frac{10}{3}$
- B) $\frac{10}{3}$
- C) $-\frac{10}{3}$
- D) $\pm \frac{3}{10}$

6

When solving the two equations below, which of the following numbers substituted for *w* results in no solution?

$$x^{2} + 2y^{2} = 10$$
$$x^{2} - 2y^{2} = w$$

- A) 6
- B) 8
- C) 10
- D) 12



Which of the following is another form of f(x) given that $f(x) = 3x^2 - 4x + 2$?

A)
$$f(x) = 3x^2 - 4x + 4 - 4 + 2x$$

B)
$$f(x) = 3(x - \frac{2}{3})^2 + \frac{2}{3}$$

C)
$$f(x) = 3(x - \frac{4}{3})^2 + \frac{2}{3}$$

D)
$$f(x) = 3(x - \frac{2}{3})^2 + 2$$

$$x^2 + y^2 = 40$$

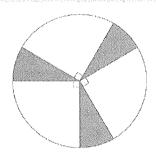
 $y + 3 = 3(x + 1)$

If the ordered pair (x, y) is a solution to the system of equations above, what is the value of $x^2 + x$?

B)
$$-2,4$$

$$(C)$$
 -2, 2

8



In the circle above, three right angles have vertices at the center of the circle. If the radius of the circle is 8, what is the combined area of the shaded regions?

- A) 8π
- B) 9π
- C) 12π
- D) 16π

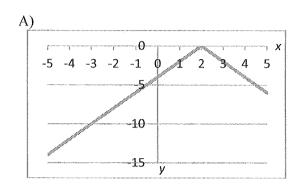
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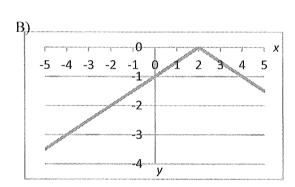
What kind of roots are in the function $f(x) = (x^2 + 2x - 8)(x^2 + 4)$?

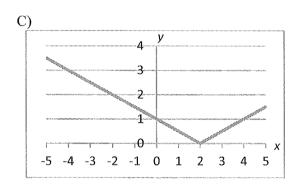
- A) 4 imaginary
- B) 4 real
- C) 2 real and 2 imaginary
- D) 3 real and 1 imaginary



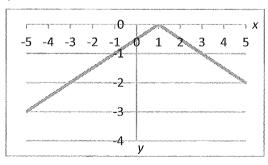
Given 0 < a < 1 < b and y = -a|x - b|, which of the following could be a graph of y?



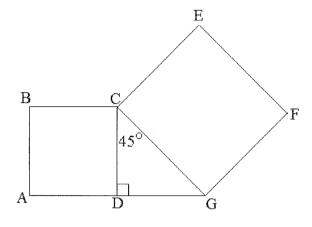




D)



1



In the figure above, *ABCD* and *CEFG* are squares. If the area of *CEFG* is 36, what is the area of *ABCD*?

- A) 6
- B) $6\sqrt{2}$
- C) 9
- D) 18

12

If a function has a domain of all real numbers and a range of $y \ge 3$, which of the following is a possible function describing y?

$$A) \quad g(x) = 7x^2 + 3$$

B)
$$g(x) = -2|x+4|+3$$

C)
$$g(x) = \frac{2}{3}|x-2|-3$$

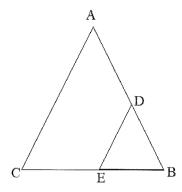
D)
$$g(x) = -5x + 3$$



If a varies directly with b and if a = 4 when b = 5, what is the value of a when b = 10? If one value increases, and the other increases linearly, then the two values have direct variation.

- A) 4
- B) 5
- C) 6
- D) 8

15



In the figure shown, $\triangle ABC$ is an equilateral triangle. Also, AC = 3 and DB = BE = 1. Find the perimeter of quadrilateral ACED.

- A) 4
- B) 5
- C) 6
- D) 8



Each of the remaining questions requires you to solve the problem and enter your answer by marking the circles in the special grid, as shown in the examples below. You may use any available space for scratch work.

Decimal

point

5 Fraction (0)line (0)(0) (2) (2) (3) (3) (3) 4 (5) (5) (5) (5) (6) (7)(7)(8) (8)

- Answer: 201
 Either position is correct

- Mark no more than one circle in any column.
- Because the answer sheet will be machine-scored, you will receive credit only if the circles are filled in correctly.
- Although not required it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately.
- Some problems may have more than one correct answer. In such cases, grid only one answer.
- No question has a negative answer.
- Mixed numbers such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2.

(If 3 1 1 / 2 is gridded, it will be

interpreted as $\frac{31}{2}$ not $3\frac{1}{2}$.)

Decimal Answers: If you obtain a decimal answer with more digits than the grid can accomodate, it may be either rounded or truncated, but it must fill the entire grid. For example, if you obtain an answer such as 0.6666... you should record your result as .666 or .667. A less accurate value such as .66 or .67 will be scored as incorrect.

Acceptable ways to grid 2/3 are:

(0)

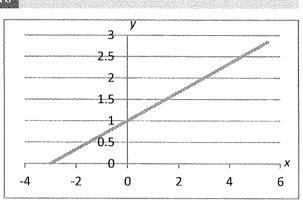
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2 2	2 2	2	2	2	2	2	2	2
3 3 3		(3)	3	(3)	(3)	(3)	(3)	(3)
	4) (4)		4	(4)	(4)	(4)	(4)	(4)
[5] [5] [5]	5 5	5	(5)	(5)	(5)	(5)	(5)	(5)
	$0 \mid 0$				(6)			6)
				(7)	(7) (A)	7	7	



What is the simplified value of $\left(-\frac{1}{8}\right)^{-\frac{2}{3}}$?

18



What is the slope of the line in the graph above?

17

What is one possible solution to the rational equation $\frac{1}{x} - \frac{2}{x-2} = 3$?



Number of Puppies					
Month	January	February	March	April	May
Number of	26	23	20	17	14
Puppies					

Questions 19 and 20 refer to the following information and the above chart.

In January, Mr. Finch opened up his mobile petting zoo with only puppies. However, Mr. Finch did not carefully consider this plan because puppies eventually become adult dogs. As a result, each month a certain number of puppies becomes too mature to be part of the petting zoo.

19

What is the magnitude of the slope of the graph modeling the number of puppies in his business?

20

Assuming Mr. Finch continues to steadily lose puppies at the rate above, which month will be his last in business? Use standard month conversion (1 = January, 2 = February, 3 = March, etc.).



Math Test



Turn to Section 4 of your answer sheet to answer the questions in this section.

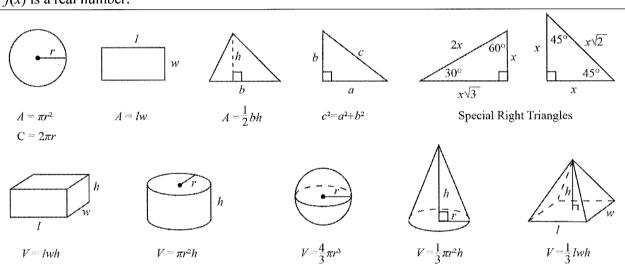
4

55 MINUTES, 38 QUESTIONS

For questions 1-30, solve each problem, choose the best answer from the choices provided, and fill in the corresponding circle on your answer sheet. **For questions 31-38,** solve the problem and enter your answer in the grid on the answer sheet. Please refer to the directions before question 31 on how to enter your answers in the grid. You may use any available space in your test booklet for scratch work.

Notes:

- 1. The use of a calculator is permitted.
- 2. All variables and expressions used represent real numbers unless otherwise indicated.
- 3. Figures provided in this test are drawn to scale unless otherwise indicated.
- 4. All figures lie in a plane unless otherwise indicated.
- 5. 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.



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.



The number of employees and the number of toys made are shown in the graph below.

	Toys
Employees	Manufactured
10	20
20	35
30	45
40	50
50	50

Which of the following pieces of information can be drawn from the graph?

- A) As the number of employees doubled, the number of toys manufactured also doubled.
- B) Each employee made 2 toys.
- C) After a certain point, an increase in employees did not result in an increase in toy production.
- D) Extra employees decreased the number of toys made.

Hydrocarbons				
	Typical number of carbon atoms	Approximate boiling		
Fraction	per molecule	range (°C)		
Natural Gas	1-4	<20		
Gasoline	5-12	40-200		
Kerosene	12-16	200-300		
Fuel Oil	15-18	250-350		
Lubricating				
Oil	16-24	300-400		

Based on the data above, a fraction containing a mixture of hydrocarbons ranging in size from 8 to 14 carbon atoms per molecule would most likely have a boiling range:

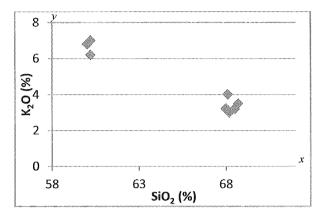
- A) below 20°C.
- B) between 20°C and 100°C.
- C) between 100°C and 250°C.
- D) above 250°C.

3

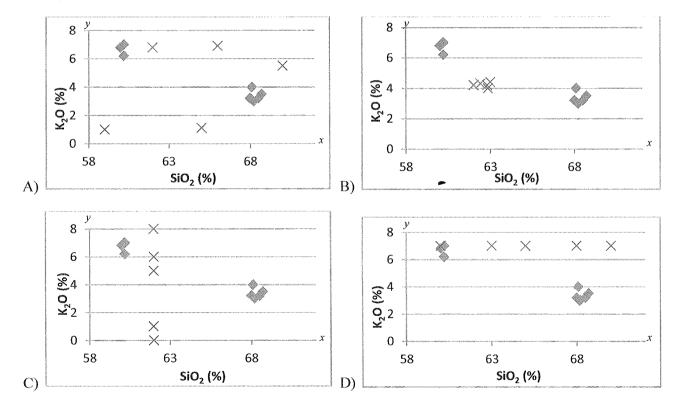
The equation 6x - 5y = 14 is written in standard form. Which point lies on the graph of this equation?

- A) (-4, -1)
- B) (-1, -4)
- C) (4, -2)
- D) (-2, 4)

To determine whether one or more lava sources feed volcanic vents in the study area, scientists plotted the SiO_2 content of ash samples from 8 of the volcanoes versus the respective K_2O content of those samples. The SiO_2 and K_2O contents of the ash derived from a given lava source will fall within a narrow range of values. The 8 ash samples are shown in the figure below.



If ash samples from volcanoes fed by a previously undiscovered magma source in the study area were analyzed, and their SiO_2 and K_2O contents were also plotted on Figure 2, which of the following figures would most likely result? The new ash sample contents are represented by the symbol: x





Questions 5 and 6 refer to the following information.

A survey asked male and female students whether they prefer Sign Language class or French class. The table shows the results of the survey.

		Class						
		Sign Language	French	Total				
<u></u>	Female	33	19	52				
Gendel	Male	21	22	43				
	Total	54	41	95				

5

What is the probability that a randomly selected student is male and prefers French class?

- A) $\frac{19}{52}$
- B) $\frac{22}{43}$
- C) $\frac{41}{95}$
- D) $\frac{22}{95}$

6

What is the probability that a randomly selected female student prefers sign language?

- A) $\frac{33}{52}$
- B) $\frac{21}{43}$
- C) $\frac{33}{95}$
- D) $\frac{54}{95}$

7

What is (-10 + 3i) - (-2 - 5i) if $i^2 = -1$?

- A) -12 2i
- B) -8 + 8i
- C) 5 + 44i
- D) 35 + 44i

8

$$L = (2,3) H = (3,0)$$

What is the slope of the linear equation connecting points L and H?

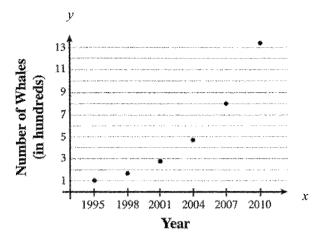
- A) -3
- B) $\frac{2}{3}$
- C) $\frac{1}{3}$
- D) $-\frac{1}{3}$

What is the *x*-intercept of the following linear equation?

$$-1(2x + 2y - 1) = -3(2x - 3y - 2) - 2$$

- A) -3/11
- B) 3/4
- C) 5/4
- D) 8/11





The hump back whale is a mellow giant found in the Pacific Ocean. A marine biologist surveyed the hump back population in Long Beach every three years between 1995 and 2010. The figure above shows his result. Which of the following equation types best describes the situation?

- A) Linear
- B) Quadratic
- C) Exponential
- D) Radical



Questions 11 and 12 refer to the following information.

A man started jogging in order to get in shape before attending a friend's wedding. Each day he would jog a certain distance, and each week that distance would increase by . 5 miles. The wedding will occur at the end of his fifth week of jogging.

11

If this man started jogging 2 miles a day in his first week, how many miles will he be jogging in a day on the week of the wedding?

- A) 3
- B) 4
- C) 5
- D) 6

12

If this man burns 100 calories every mile, how many calories will he burn in the first week of training due to jogging?

- A) 1,400
- B) 1,200
- C) 1,000
- D) 800

An accountant charges a one-time evaluation fee to estimate a potential job. If he accepts the job, he charges an hourly rate plus the cost of any additional resources to complete the task. The accountant also charges a city tax on both resources used and his hourly rate. If the total cost of completing a job that takes *h* hours is given by the function

$$C(h) = (1.0675)36h + (1.0675)155 + 200$$

then the term(1.0675)155 represents:

- A) the hourly rate with tax.
- B) the cost of hourly rate, without tax.
- C) the evaluation fee.
- D) the cost of the resources, including tax.

14

Given that the equation for a circle is $(x-a)^2 + (y-b)^2 = r^2$, which of the following points lie on the circle centered at the origin and containing the point (-2,0)?

- A) $(1,\sqrt{3})$
- B) (-1, 1)
- C) $(\sqrt{2}, 1)$
- D) (0, 0)

15

A flock of chickens is able to lay 2.25 cartons of eggs per day. At the diner that purchases the eggs, it takes 1 carton of eggs to cook 4 omelets and it also takes 2 cartons of eggs to produce 5 tins of quiche. If the diner served 56 omelets and 10 tins of quiche, how many days did it take for the flock to lay the eggs?

- A) 18
- B) 8
- C) 14
- D) 16

Which of the rational expressions *cannot* be simplified?

A)
$$\frac{2x^2+5x-3}{x^2-2x-15}$$

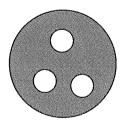
B)
$$\frac{2x^3+2x^2-24x}{x^2-36x}$$

C)
$$\frac{x^3-10x^2-24x}{x^2-3x-10}$$

D)
$$\frac{x^3-8}{x^2+2x-4}$$

17

In the figure, the radius of the large circle is R and the radius of each smaller circle is r. Which formula may be used to find the area (A) of the shaded portion?



A)
$$A = \pi R^2 - \pi r^2$$

B)
$$A = \pi R^2 - 3\pi r^2$$

C)
$$A = \pi R - \pi r$$

$$D) A = 3\pi R^2 - \pi r$$

00000

Questions 18 and 19 refer to the following information.

The function $P(k,t) = 18e^{kt}$ models the population (in millions) of a country t years after 2015. A recent change in the economy has made the k-value, or rate of change in population, 0.231.

Which of the following functions models the population of the country after this change?

A)
$$P(t) = 8e^{0.231t}$$

B)
$$P(t) = 18e^{0.231}$$

C)
$$P(t) = 18e^{-0.231t}$$

D)
$$P(t) = 18e^{0.231t}$$

19

Assuming that the population grows at the steady rate k = .231 from 2016 to 2026, estimate the population of the country in 2026. Round your answer to the nearest million.

- A) 181 million
- B) 362 million
- C) 3,653 million
- D) 396,476 million

If f(x) = 5x - 3 and f(t) = 7, then t must equal:

- A) 0
- B) 1
- C) 2
- D) 32

21

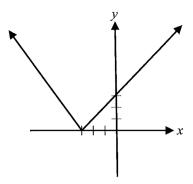
A home builder builds the exact same model of a home in two different cities in two different states. The table shows the value of each house, v_1 and v_2 , for t years after 2000.

Time					
(years), t	2	4	6	8	10
Value, V1 (thousands of dollars)	360	367	373	381	387
Value, V2 (thousands of dollars)	310	350	400	461	520

What types of functions will best model each set of data?

- A) A linear model for v_1 and an exponential model for v_2 .
- B) A linear model for v_1 and a linear model for v_2 .
- C) An exponential model for v_1 and a linear model for v_2 .
- D) An exponential model for v_1 and an exponential model for v_2 .

22



If f(x) = x + 3, then the equation of the graph in the figure above is:

- A) y = f(x)
- B) y = |f(x)|
- C) y = f(|x|)
- D) y = -|f(x)|

23

Thelma and Julio are driving away from their home town at a rate of 60 miles an hour. They drive for 5 hours until they reach the Grand Canyon and then turn around and drive home at 50 miles an hour. How much longer did they have to spend driving back than driving there?

- A) 30 minutes
- B) 1 hour
- C) 1 hour 30 minutes
- D) 1 hour 45 minutes

To make strong coffee, 3 scoops of coffee beans make 15 cups. To make weak coffee, the amount of beans used should be $\frac{5}{8}$ the amount used for strong coffee. About how many scoops should be used to make 30 cups of medium coffee?

- A) 2
- B) 3
- C) 5
- D) 6

24

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

$$y = 5x + 2$$

Which *best* describes the solutions of the system of equations above?

- A) Their graphs intersect at one point, (-2, -8). There is one solution.
- B) Their graphs intersect at two point, (-2, -8) and (5, 27). There are two solutions.
- C) Their graphs do not intersect. There is no solution.
- D) The graph of $y = x^2 + 2x 8$ has two *x*-intercepts. There are two solutions.

26

Simplify the following rational expression.

$$\frac{5}{3x} - \frac{3}{4x}$$

- A) $-\frac{2}{3}$
- B) $\frac{2}{3x}$
- C) $\frac{2}{3}$
- D) $\frac{11}{12x}$

Questions 27, 28, and 29 refer to the following

Your local sports team decides to have a dunk tank at the Fall Festival to raise money for team competitions. There is no fee for the water, but the rental fee for the dunk tank is \$105. The table shows the profits p (in dollars) when t tickets are sold for the dunk tank.

Tickets	30	70	110	150	190
Profit (\$)	-30	70	170	270	370

27

information.

In the table above what is the cost per ticket?

- A) \$1.50
- B) \$1.75
- C) \$2.50
- D) \$3.25

28

The team expects 150 tickets to be sold and finds another dunk tank that rents for only \$55. How much should the sports team charge per ticket to still make the same profit?

- A) \$2.17
- B) \$2.39
- C) \$2.53
- D) \$2.89

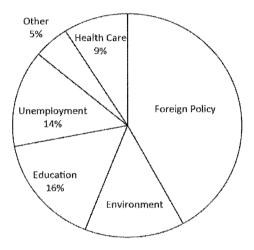
29

The sports team decides to charge \$2.50 per ticket and use a dunk tank that costs \$55. How much money will the team raise if 130 tickets are sold?

- A) \$220.00
- B) \$245.00
- C) \$255.50
- D) \$270.00

30

National Government Concerns



A senior surveyed 200 students in the humanities classes at her school to see what they thought should be the most important concern of a national government. If the ratio of students who answered "Foreign Policy" to those who answered "Environment" was 6:2, how many students answered "Environment"?

- A) 7
- B) 14
- C) 21
- D) 28



Each of the remaining questions requires you to solve the problem and enter your answer by marking the circles in the special grid, as shown in the examples below. You may use any available space for scratch work.

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Mark no more than one circle in any

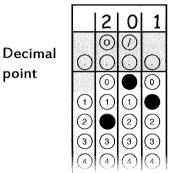
column.

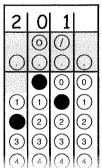
- Because the answer sheet will be machine-scored, you will receive credit only if the circles are filled in correctly.
- Although not required it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately.
- Some problems may have more than one correct answer. In such cases, grid only one answer.
- No question has a negative answer.
- Mixed numbers such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2.

(If $\frac{3|1|/2}{|3|}$ is gridded, it will be

interpreted as $\frac{31}{2}$ not $3\frac{1}{2}$.)

Answer: 201 Either position is correct



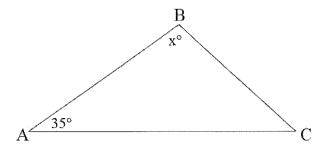


Decimal Answers: If you obtain a decimal answer with more digits than the grid can accomodate, it may be either rounded or truncated, but it must fill the entire grid. For example, if you obtain an answer such as 0.6666... you should record your result as .666 or .667. A less accurate value such as .66 or .67 will be scored as incorrect.

Acceptable ways to grid 2/3 are:

2 / 3]	6	6	6		6	6	7
0		0	0			0	(2)	
			0	0	0	0	\odot	0
		_ _	0	0		0	0	0
			1	1	1	1	1	1
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3 3 3		3)(3)	(3)	(3)	(3)	(3)	(3)	(3)
4 4 4	1 1 3	4)(4)	4	(4)	(4)	(4)	(4)	(4)
5 5 5	1 12		(5)	5	(5)	5	(5)	(5)
	1 1>				(6)			6
					(7)			





In $\triangle ABC$ above, if AB = BC, then x =

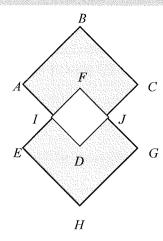
If
$$\frac{5}{b+8} = \frac{3}{b+4}$$
, then $b =$



A survey was conducted among a random group of adults in San Francisco. The following list is the ages of the adults who were surveyed:

What is the median age of the adults who were surveyed?





In the figure above, square ABCD and square EFGH overlap to form square IFJD. If AD = 4 and if EH = 4 and if I is the midpoint of AD and EF, what is the area of the shaded region?

35

What is the slope of the following linear equation?

$$2(-3y - (-2)) = -2(3x + 1)$$

36

$$6x^2 - 7x + 2 = 0$$

Find one value of x that satisfies the equation above.

Questions 37 and 38 refer to the following information.

An international cruise company offers its guests traveler credit cards when they are aboard. When a customer makes a purchase using his traveler card in a currency other than dollars, the bank converts the purchase price at the daily foreign exchange rate and then charges a 3.5% fee on the converted cost. Mr. Jabar is on a cruise off the coast of Peru. He used his traveler card for a purchase that cost 950 céntimos (Peruvian currency). The bank posted a charge of \$14.23 to his account that included the 3.5% fee.

37

What foreign exchange rate, in Peruvian céntimos per one U.S. dollar, did the bank use for Mr. Jabar charge? Round your answer to the nearest tenth of a céntimo.

A bank in Peru sells a prepaid credit card worth 1,800 céntimos. Mr. Jabar can buy the prepaid card using dollars at the daily exchange rate with no fee, but he will lose any money left unspent on the prepaid card. What is the least amount of the 1,800 céntimos on the prepaid card Mr. Jabar must spend for the prepaid card to be cheaper than charging the same purchases on the traveler card? Round your answer to the nearest whole number of céntimo.

SAT Practice Essay

Directions: The essay portion of this test allows you to demonstrate how well you can read, comprehend, and analyze a passage. In your essay, you should show that you have read the passage carefully, present a coherent analysis, and use language accurately.



Important Reminders:

- You have 50 minutes to write your essay.
- A pencil is required for the essay. An essay written in ink will receive a score of zero.
- Do not write your essay in your test book. You will receive credit only for what you write on your answer sheet

As you read the passage below, consider how The New York Times Editorial Board uses

- evidence, such as facts and 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 The New York Times Editorial Board, "One Last Election Lesson." © 2015 by The New York Times Company. Originally published January 18, 2005.

- 1 The November election may feel like ancient history, but it is still going on in North Carolina. The state has been unable to swear in an agriculture commissioner because a single malfunctioning electronic voting machine lost more ballots than the number of votes that separate the two candidates. The State Board of Elections, the candidates and the public are sharply divided on how to proceed. The mess North Carolina finds itself in is a cautionary tale about the perils of relying on electronic voting that does not produce a paper record.
- When the returns came in for the agriculture commissioner race, two things were clear: the Republican, Steve Troxler, and the Democrat, Britt Cobb, were just 2,287 votes apart, and a voting machine in Carteret County had lost 4,438 votes. The machine had mistakenly been set to keep roughly 3,000 votes in its memory, which was not enough. And in a spectacularly poor design decision, it was programmed to let people keep "voting" even when their votes were not being saved.
- There have been many suggestions for what to do next. The State Board of Elections initially wanted to have a revote limited to Carteret County, but a court struck that down. Then it scheduled a new statewide election, but that, too, was held to be improper. The elections board, which is bitterly divided along partisan lines, has been ordered by a judge to try again to find a way to resolve the election. But no one is predicting it will be easy. "There are conflicting and little-used statutes and constitutional provisions that may not be consistent with each other," says Don Wright, the general counsel of the elections board.
- In the meantime, both sides are promoting methods that appear designed to ensure that their candidate wins. Republicans want to count 1,352 affidavits recently collected by Mr. Troxler from Carteret County voters saying that they voted for him on the faulty machine. They say that if the affidavits were counted, it would be mathematically impossible for Mr. Cobb to win. Democrats say this would violate the principle of a secret ballot and open up the possibility of voter coercion. Some of Mr. Cobb's backers argue that the State Constitution requires that the race be decided by the state legislature, which just happens to be in Democratic hands.

- North Carolina agriculture commissioner may not be the loftiest of offices. But if the same glitch had occurred in Washington, where Christine Gregoire was just elected governor by 129 votes, it would have destabilized the entire state government. If it had occurred in Florida in 2000, where President Bush's margin was just 537 votes, it would have undermined an entire presidential election.
- 6 North Carolina's plight underscores a basic point about elections: because there are often problems, there must be a mechanism for a recount. If the Carteret County voting machine had produced a voter-verified paper record each time a vote was cast, these paper records could have been counted and the matter would be resolved. But electronic voting machines that do not produce paper records make recounts impossible.
- 7 The one positive thing to come out of the agriculture commissioner race fiasco is that it has prompted North Carolina to reconsider its use of paperless electronic voting. As the state ponders the issue, it should look to Ohio. Kenneth Blackwell, the Ohio secretary of state who did so many things wrong as elections supervisor last year, recently did one very important thing right. He directed all of the state's

counties to adopt paper-based optical-scan voting systems. If Carteret County had voted on machines that produced a paper record, North Carolina would not have the constitutional crisis it has now—it would have an agriculture commissioner.

Write an essay in which you explain how The New York Times Editorial Board builds an argument to persuade its audience that electronic voting machines should produce a paper record. In your essay, analyze how the Editorial Board uses one or more of the features listed in the box above (or features of your own choice) to strengthen the logic and persuasiveness of its 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 Editorial Board's claims, but rather explain how The Editorial Board builds an argument to persuade its audience.