Jody Ian Goeler, Superintendent of Schools
Christopher Melillo, Assistant Superintendent of Schools

Hamden Public Schools
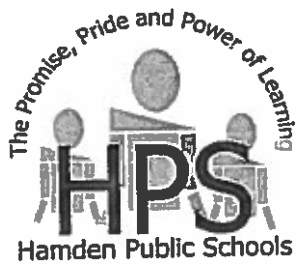
March 17, 2020

Dear Hamden Public Schools Families,

Hamden Public Schools will be closed for an extended period of time due to COVID-19 (Coronavirus). The district has worked proactively to create a plan for keeping students academically engaged during this time.

Included in this envelope are activities your child should complete for reading/writing, math, science, social studies, health, physical education, and art/music. Each activity will include directions. Technology is not required, though there may be extension activities students can do online. All work should be kept in the envelope and returned to your students' teachers on the day school reopens.

I want to personally thank you for your patience and understanding during this difficult time. Our focus is always on doing what is best for all of our students. We hope these activities will keep them thinking about math, science, social studies, reading, writing, health, music, art, and physical education to ensure a smooth transition back into school when schools are able to re-open.

Sincerely,

Jody Goeler
Superintendent
Hamden Public Schools

The Promise, Pride and Power of Learning

HPS

Hamden Public Schools

el 17 de marzo, 2020

Estimadas familias de las Escuelas Públicas de Hamden:

Las Escuelas Públicas de Hamden cerrarán durante un período de tiempo debido a COVID-19 (Coronavirus). El distrito ha trabajado con antelación para crear un plan para mantener a los estudiantes académicamente involucrados durante esta temporada.

En este sobre se incluyen actividades que su hijo debe completar para lectura / escritura, matemáticas, ciencias, ciencias sociales, salud, educación física y arte / música. Cada actividad incluirá instrucciones. No se requiere tecnología, aunque puede haber actividades de extensión que los estudiantes pueden hacer en la red durante este tiempo. El propósito de estas actividades no es evaluar a nuestros estudiantes, sino mantenerles académicamente involucrados durante este tiempo.

Todo el trabajo debe guardarse en el sobre y devolverse a los maestros de sus alumnos el día que se reabre la escuela.

Quiero agradecerles personalmente y darles las gracias por su paciencia y comprensión durante este tiempo difícil. Nuestro enfoque siempre está en hacer lo mejor para todos nuestros estudiantes. Esperamos que estas actividades los mantengan pensando en matemáticas, ciencias, ciencias sociales, lectura, escritura, salud, música, arte y educación física para garantizar una transición sin problemas a la escuela cuando las escuelas puedan volver a abrir.

Atentamente,

Jody Goeler
Superintendente
Escuelas Públicas de Hamden

Grade 11 ELA Distance Learning Assignments

Please complete the work described below during your time at home.

Reading	Formal Writing	SAT Practice
Daily reading: • Please read at least half an hour a day, books you've checked out or books you have at home. **Journaling about reading:** • As you read, track your thinking on looseleaf paper or in a journal. • Examples: What are your thoughts about characters? About the plot? About the setting or structure? If it's non-fiction, what's most interesting? • At the end of each week, write long -- meaning about a page -- about your reflections. How would you pull together your thinking?	<u>What was your favorite book you read, and why was it your favorite?</u> Please choose three quotes from the book, preferably throughout, that help develop why this book was your favorite. Explain your thinking about each.	SAT packets (2)

Tips and bonus activities:
- Write poetry or journal entries about your unique experiences during this time.
- Write poetry or journal entries about something else -- Spring, time with your siblings, video games: your choice.
- Get some Khan Academy practice!

ELA Electives Distance Learning Assignments

Please complete the work described below during your time at home.

Reading	Formal Writing
Daily reading: • Please read at least half an hour a day the books you checked out of the library and any books you have at home. **Journaling about reading:** • As you read, track your thinking on looseleaf paper or in a journal. • Examples: What are your thoughts about characters? About the plot? About the setting or structure? If it's non-fiction, what's most interesting? • At the end of each week, write long -- meaning about a page -- about your reflections. How would you pull together your thinking?	<u>How does the theme develop across your novel?</u> Find three passages -- one from the beginning, one from the middle, and one from the end of the novel -- and write or type them out. Then explain how each develops the theme in different ways.

Tips and bonus activities:

• Write poetry or journal entries about your unique experiences during this time.
• Write poetry or journal entries about something else -- Spring, time with your siblings, video games: your choice.

Chapter 1

Linear Equations in One Variable

HEART OF ALGEBRA MAKES UP 35% OF THE SAT MATH TEST

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11	Unit 2		E	B
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14	Unit 2		M	C

NOTES

1. Use of a calculator **is permitted** on all problems **except** those indicated by a ⌨ symbol above the question number.
2. Unless otherwise indicated, all variables and expressions used represent real numbers.
3. Unless otherwise indicated, figures provided in this test are drawn to scale.
4. Unless otherwise indicated, all figures lie in a plane.
5. The domain of a given function f is the set of all real numbers x for which $f(x)$ is a real number, unless otherwise indicated.

Solve a Linear Equation in One Variable

1

If $3x - 4$ is equal to 16, what is the value of $6x$?

A) $\frac{20}{3}$

B) 20

C) 24

D) 40

2

If $\frac{4}{5}t = \frac{3}{2}$, what is the value of t?

A) $\frac{8}{15}$

B) $\frac{5}{6}$

C) $\frac{6}{5}$

D) $\frac{15}{8}$

3

If $3(4x - 5) + 7(2x - 4) = 9$, what is the value of x?

A) $\frac{1}{8}$

B) $\frac{1}{2}$

C) 2

D) 8

4

$$14 = 3.5(4z - 8)$$

According to the equation above, what is the value of z?

5

If $\frac{2}{15}x + \frac{1}{5}x = \frac{3}{2} - \frac{1}{3}$, what is the value of x?

A) $\frac{2}{7}$

B) $\frac{7}{10}$

C) $\frac{10}{7}$

D) $\frac{7}{2}$

6

If $\frac{1}{2}x + \frac{2}{3}x + \frac{3}{4}x = 46$, what is the value of x?

7

If $\frac{4}{7} = \frac{p}{9}$ and $\frac{5}{3} = \frac{k}{8}$, what is the value of $7p - 3k$?

A) -8

B) -4

C) 4

D) 8

8

For what value of n is $-3 = \frac{4}{n} - 9$?

Create (Possibly Solve) a Linear Equation in One Variable

9.

If five times a certain number minus two is equal to three times that number plus eight, what is the value of twice that number?

A) 5

B) 6

C) 10

D) 12

10.

Donna is shipping training manuals to remote employees. She has two identical boxes filled with packing material that each weigh 10.2 ounces before packing them with manuals. She packed each box with the same number of manuals that each weigh 7.4 ounces. The total weight for the two boxes packed with manuals was 168.4 ounces. What is the total number of manuals that Donna packed in the two boxes?

11.

If $\frac{3}{5}$ of $10x$ is 15 more than x, what is the value of x?

A) 2

B) 3

C) 5

D) 6

12.

Sheila drove at an average speed of 75 miles per hour for 4 hours. If her car consumed gasoline at a rate of 23 miles per gallon, approximately how many gallons of fuel did her car use for the entire 4-hour trip?

A) 3

B) 4

C) 13

D) 14

13

Amy invested a total of $8,000 in two different mutual funds and earned interest on both funds. She earned 2.5% interest on Mutual Fund A and 6% interest on Mutual Fund B. She earned 4% interest on the total amount invested. Which equation can be used to determine the amount of money, x, that she invested in Mutual Fund A?

A) $1.025x = 8,320$

B) $\left(\dfrac{0.025 + 0.06}{2}\right)x = 320$

C) $0.025x + 0.06(8,000 - x) = 320$

D) $1.06 + 1.025x(8,000 - x) = 8,320$

14

Oliver needs to hire a car rental service to travel from Arlington to Betelwood. Car Rental Service A charges a $24 daily fee plus $0.40 per mile traveled. Car Rental Service B charges a $44 daily fee and has no charge per mile driven. Oliver will rent the car for three days and drive a total of x miles. Which of the following values of x will make the total charge of renting from Service B equal to the total charge of renting from Service A?

A) 50

B) 123

C) 150

D) 420

Chapter 2

Linear Equations in One Variable

HEART OF ALGEBRA MAKES UP 35% OF THE SAT MATH TEST

NOTES

1. Use of a calculator **is permitted** on all problems **except** those indicated by a 🖩 symbol above the question number.

2. Unless otherwise indicated, all variables and expressions used represent real numbers.

3. Unless otherwise indicated, figures provided in this test are drawn to scale.

4. Unless otherwise indicated, all figures lie in a plane.

5. The domain of a given function f is the set of all real numbers x for which $f(x)$ is a real number, unless otherwise indicated.

Create a Linear Function

15

A girls youth lacrosse coach earns $9.25 an hour for coaching a team of 12 girls and an additional bonus of $20 if the team wins the regional championship. If the team wins the regional championship, what expression could be used to determine the coach's total earnings?

A) $9.25x + 20$, where x is the number of hours

B) $20x + 9.25$, where x is the number of hours

C) $x(9.25 + 12) + 20$, where x is the number of girls

D) $20x + (9.25 + 12)$, where x is the number of girls

17

Abbey is staying at a hotel that charges $79 per night plus tax for a room. A tax of 13.5% is applied to the price of the room. Abbey will also leave a gratuity of $5 per night for the hotel staff while she remains at the hotel. Which of the following expressions represents Abbey's total cost of staying x nights at the hotel?

A) $1.135(79x + 5x)$

B) $1.135(79x) + 5x$

C) $13.5(79x + 5x)$

D) $13.5(79x) + 5x$

16

Carrie works 15 hours per week for Company A and 13 hours per week for Company B. She makes p dollars per hour working for Company A. She makes 3 dollars more per hour working for Company B than she does working for Company A. Which of the following expressions represents Carrie's total weekly salary?

A) $15p$

B) $15p + 39$

C) $28p + 39$

D) $28p + 84$

18

Tara is writing a paper for her AP US History class. During her first hour of writing, she writes 330 words. During each subsequent hour, she writes 180 words. Which of the following functions correctly states the relationship between w, the number of words she has written and h, the number of hours she has been writing? (Note: assume Tara has been writing for at least one hour.)

A) $w(h) = 180h + 150$

B) $w(h) = 180h + 330$

C) $w(h) = 330h - 180$

D) $w(h) = 330h + 180$

Hamden Math Department

19

A cyclist turns onto a stretch of highway that descends 8 meters in elevation for every 100 meters traveled along the length of the highway. The stretch the cyclist turns onto begins at an elevation of 2743 meters, and the cyclist travels at a rate of 17 meters per second. What is the elevation of the highway, in meters, at the point where the cyclist passes s seconds after turning onto this stretch of highway?

A) $2743 - 0.08s$

B) $2743 - 1.36s$

C) $2743 - 8s$

D) $2743 - 17s$

20

> ## ENROLLMENT IS OPEN AT OUR DAYCARE!
>
> <u>Daily Cost of Care:</u>
> $45 per child per day
>
> <u>Discounts:</u>
> - First day is free for all new children
> - Family discount: 10% of daily cost if you enroll more than one child
>
> <u>Registration Fee:</u> $50 per child

The figure above shows an advertisement for a daycare. The daycare allows the two discounts to be used together. A family enrolls two children in the daycare program, each for the first time. If each child is signed up for x days of daycare, excluding the first free day, which of the following represents the family's total cost $c(x)$, in dollars?

A) $c(x) = 81x + 100$

B) $c(x) = 81x + 19$

C) $c(x) = 40.5x + 50$

D) $c(x) = 40.5x + 9.5$

Interpret Input/Output Pair, Constant, Variable, or Term

21

The number of tickets available for a performance of *Guys and Dolls* can be modeled by $a = 1300 - 26d$, where a represents the number of tickets still available d days after the tickets go on sale. What is the meaning of 26 in this equation?

A) The number of tickets that are made available for sale each day

B) The number of tickets that are sold each day

C) The number of days required to sell all of the tickets

D) The number of tickets sold after 26 days

22

The number of Super Bowl viewers in millions, S, can be modeled by $S = 92.1 + 0.73t$, where t is the number of years after 2000. What is the meaning of 92.1 in this equation?

A) Approximately 92.1 million viewers watched the Super Bowl in 2000.

B) Approximately 92.1 million viewers watched the Super Bowl in 2001.

C) Approximately 92.1 million viewers watch the Super Bowl for the first time each year.

D) Approximately 92.1% of Americans watched the Super Bowl in 2000.

23

$$g = 20 - \frac{m}{28}$$

If Martha begins with a full tank of gas, the number of gallons, g, left in the tank after she drives m miles is given by the equation above. When full, how many gallons of gas does Martha's tank hold?

A) 8

B) 20

C) 28

D) 560

24

The average SAT math score of students at Ramsey Sr. High School from 2005 to 2015 can be modeled by the equation $y = 1.36x + 491.7$, where x is the number of years since 2005 and y represents the average SAT score per student. Which of the following best describes the meaning of the number 491.7 in this equation?

A) The average SAT math score of students at the school in 2005.

B) The average SAT math score of students at the school in 2015.

C) The estimated total increase in average score between 2005 and 2015.

D) The estimated yearly increase in average score between 2005 and 2015.

25

The equation $P = 110 + 90h$ gives the amount P, in dollars, a plumber charges a customer for h hours of work on a job. In the equation, what does the number 90 represent?

A) The number of hours of work spent on a job.

B) The flat fee, in dollars, that the plumber charges for starting a job.

C) The dollar amount that the plumber charges for each hour of work spent on a job.

D) The total amount, in dollars, that the plumber charges for h hours of work spent on a job.

26

$$A = 224 - 2.75t$$

Eric planted string beans in his garden. The model above relates the approximate area A, in square feet, of the unpicked string bean plants to t, the number of minutes that Eric has picked string beans for. In the equation, what does the number 2.75 represent?

A) The rate, in square feet per minute, at which Eric picked string beans

B) The rate, in minutes per square foot, at which Eric picked string beans

C) The area, in square yards, of Eric's garden

D) The average number of string bean plants that Eric planted, per minute, in his garden

27

The volume of water in a swimming pool, in liters, while it is in the process of draining is modeled by the equation $v(t) = 375,000 - 130t$, where t is the time, in minutes, since the plug was pulled. What is the meaning of 375,000 in the equation?

A) The time it takes for the swimming pool to be drained completely.

B) The rate at which water drained out of the swimming pool

C) The volume of water that would fit in the swimming pool if it were completely full.

D) The volume of water in the swimming pool when the plug was pulled.

28.

Relationship between Degrees Delisle and Degrees Fahrenheit
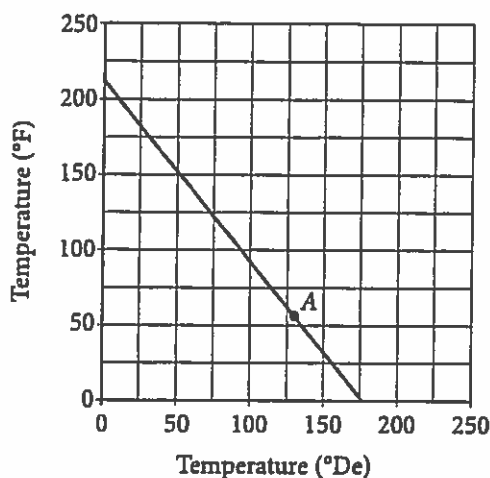
The graph above shows the function $f(d)$ that relates the temperature, f, measured in degrees Fahrenheit, and the temperature d, measured in degrees Fahrenheit. If $A(130,56)$ is a point on the graph of f, which of the following must be true?

A) A temperature of 130 degrees Delisle corresponds to a temperature of 56 degrees Fahrenheit.

B) A temperature of 56 degrees Delisle corresponds to a temperature of 130 degrees Fahrenheit.

C) For every increase of 56 degrees Fahrenheit, there is an increase of 130 degrees Delisle.

D) For every increase of 56 degrees Delisle, there is an increase of 130 degrees Fahrenheit.

29.

$$A = 224 - 2.75t$$

Eric planted string beans in his garden. The model above relates the approximate area A, in square feet, of the unpicked string bean plants to t, the number of minutes that Eric has picked string beans for. Eric's friend Kat began picking her 279 square feet of string beans at the same time as Eric, but Kat worked at twice Eric's pace. If the area of unpicked string bean plants was the same m minutes after both Eric and Kat began picking, which of the following is closest to m ?

A) 20

B) 25

C) 30

D) 40

30.

One of the requirements for becoming a court reporter is the ability to type 225 words per minute. Donald has been training to become a court reporter. The number of words per minute that Donald could type after training for x weeks, W, can be modeled by the equation $W = \dfrac{(5x + 350)}{2}$. According to the model, for every additional 1 week of training, by how many words per minute will Donald's typing speed increase?

A) 2.5

B) 3.5

C) 4.0

D) 5.0

31.

$$n = 4t - 160$$

The equation above models the relationship between the number of times a field cricket chirps per minute, n, and the temperature in degrees Fahrenheit, t. The model is valid for $0 \le n \le 200$. Which of the following is a true statement about the relationship between field cricket chirps and temperature?

A) A one degree increase in temperature corresponds with an increase of four chirps per minute.

B) A four degree increase in temperature corresponds with an increase of one chirp per minute.

C) A one degree increase in temperature corresponds with a decrease of four chirps per minute.

D) A four degree increase in temperature corresponds with a decrease of one chirp per minute.

33.

The function d, defined by $d(t) = at + b$, where a and b are constants, models the distance, in meters, of a marathon runner after t minutes of running during a time period in which her pace is approximately constant. What does a represent?

A) The predicted number of meters the runner travels during each minute during the period.

B) The predicted distance run, in meters, between the start and the end of the period.

C) The predicted total distance that she has run, in meters, at the end of the period.

D) The number of minutes that the runner's pace is approximately constant.

32.

$$0.9x + y = 8.1$$

The city of Boston was recently hit with a major snowstorm. The equation above can be used to model the depth of the snow, y, in inches, that still covers the ground x days after the storm began. What does it mean that $(9,0)$ is a solution to this equation?

A) During the days immediately following the snowfall, 9 inches of snow melt each day.

B) It takes 9 days for 8.1 inches of snow to fall.

C) When snow began to melt, 9 inches of snow covered the ground.

D) It will take 9 days for the ground to be completely clear of snow.

Given an Input or Output Value, Find the Other

34

If $p(x) = 3x + 5$, what is the value of $p(2)$?

A)   7
B)   9
C) 11
D) 16

35

An exhibitor is selling decorative wreaths at an arts and crafts show. The net profit P, in dollars, from the sales of the wreaths is given by $P(n) = 0.75n - 50$ where n is the number of wreaths sold. How many wreaths must the exhibitor sell in order to earn a profit of $100?

A)   75
B) 150
C) 175
D) 200

36

$$s = 247.3 + 8.5y$$

The amount of sales that a salesman at Silverfax Corporation completes can be modeled based on the amount of experience that the salesman has. The formula above shows the predicted relationship between s, the amount of sales in thousands of dollars, and y, the number of years of experience that the salesman has. Approximately how many years of experience would this model predict for a salesman whose sales totaled $400,000 for the year?

A) 18
B) 19
C) 20
D) 21

37

$$A = 224 - 2.75t$$

Eric planted string beans in his garden. The model above relates the approximate area A, in square feet, of the unpicked string bean plants to t, the number of minutes that Eric has picked string beans for. According to the model, how many minutes after Eric began picking string beans were there 59 square feet of unharvested string bean plants?

A) 30
B) 40
C) 50
D) 60

38

Vendor J: $y = 0.55x + 1,000$

Vendor K: $y = 0.80x + 440$

A company wants to decide between one of two credit card vendors. The cost to process credit card transactions consists of an initial setup fee plus a fee for each transaction the company processes using a credit card. The equations above show the cost, y, in dollars, to process x transactions. The company has a total budget of $3,000 allotted to credit card costs. What is the maximum number of transactions that the company can process with Vendor K without going over budget?

A) 2,048

B) 3,200

C) 3,750

D) 4,300

39

In 2005, the price of a metric ton of cocoa beans was $1,448. In 2015, the price of a metric ton of cocoa beans was $3,318. If the price of a metric ton of cocoa beans increased linearly over this 10-year period, what was the price of a metric ton of cocoa beans in 2013?

Given Change in the Input/Output Value, Determine Change in the Other

40

$$s = 58,250 - 158p$$

The number of Amazon Prime subscribers depends on the price Amazon sets for Amazon Prime membership. The number of thousands of subscribers, s, is modeled by the relationship above, where p is the price of membership, in dollars. According to this model, what is the meaning of the 158 in the equation?

A) For every $1 increase in price, 158 fewer people will subscribe to Amazon Prime.

B) For every $1 increase in price, 158,000 fewer people will subscribe to Amazon Prime.

C) For every $1 increase in price, 158 more people will subscribe to Amazon Prime.

D) For every $1 increase in price, 158,000 more people will subscribe to Amazon Prime.

41

$$t = 37 + \frac{2}{5}P$$

Quinn sells t-shirts at lacrosse tournaments. She uses the function above to model the relationship between the number of t-shirts, t, sold per tournament and the number of parents, P, in attendance. According to the model, what is the meaning of the $\frac{2}{5}$ in the function?

A) For every increase of 2 parents in attendance, five more t-shirts are sold.

B) For every decrease of 2 parents in attendance, five more t-shirts are sold.

C) For every increase of 5 parents in attendance, two more t-shirts are sold.

D) For every decrease of 5 parents in attendance, two more t-shirts are sold.

42

$$b = 0.035(r - s)$$

Lorenzo's employment contract states that he receives an end-of-year bonus, b, as determined by the equation above, where r is the total revenue of the company he works for, s is a constant, and $r \geq s$. In 2014, Lorenzo's bonus was \$2,100. If the total revenue of the company he works for is \$22,000 higher in 2015 than in 2014, what will Lorenzo's end-of-year bonus be in 2015?

43

If f is a linear function and $f(5) - f(4) = 3$, what is the value of $f(10) - f(5)$?

A) 5

B) 10

C) 12

D) 15

Make Connections Between Various Representations

44

t	0	1	2	3
$f(t)$	1	4	7	10

The table above gives values of the function f for several values of t. If the graph of f is linear, which of the following defines $f(t)$?

A) $f(t) = t + 1$

B) $f(t) = t + 4$

C) $f(t) = 3t + 1$

D) $f(t) = 3t + 4$

45
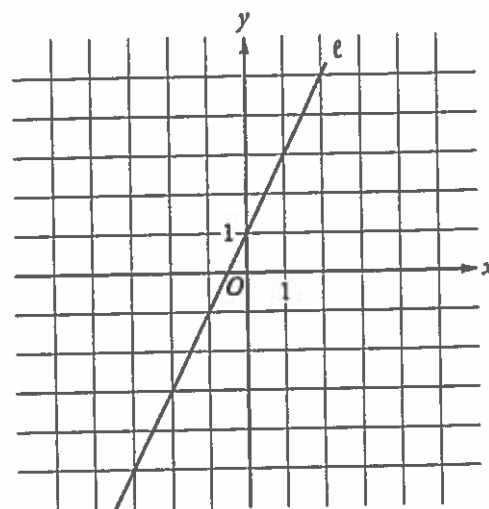
Which of the following is an equation of line ℓ in the xy-plane above?

A) $y = 1$

B) $x = 2y$

C) $y = 2x$

D) $y = 2x + 1$

46

x	1	2	3	4	5
$f(x)$	3	9	15	21	27

Which of the following functions expresses a linear relationship that is satisfied by all pairs of $(x, f(x))$?

A) $f(x) = 3x$

B) $f(x) = 6x$

C) $f(x) = 6x - 3$

D) $f(x) = 6x + 3$

47

A line is shown in the xy-plane above. Which of the following is an equation of the line?
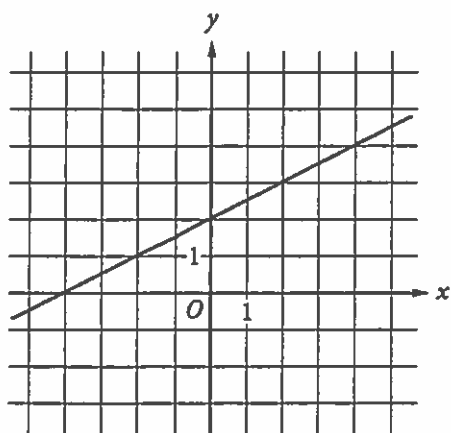
A) $y = -2x + 2$

B) $y = x + 2$

C) $y = 2x + 1$

D) $y = \frac{1}{2}x + 2$

48
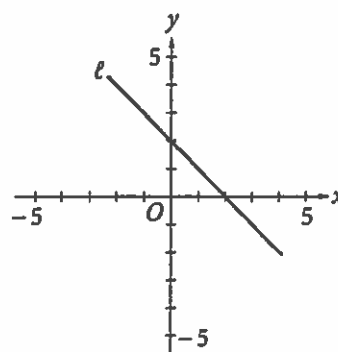
Line ℓ is shown in the xy-plane above. If line ℓ has equation $cx + dy = 8$, where c and d are constants, which of the following is true about c and d?

A) $c < 0$ and $d < 0$

B) $c < 0$ and $d > 0$

C) $c > 0$ and $d < 0$

D) $c > 0$ and $d > 0$

49

In the xy-plane, which of the following does NOT contain any points that are part of the solution set to $2x + 3y < 0$?

A) The region where x and y are both greater than 0.

B) The region where x and y are both less than 0.

C) The region where either x or y are greater than zero, and the other is less than 0.

D) The x-axis and y-axis.

50

Vendor J: $y = 0.55x + 1,000$

Vendor K: $y = 0.80x + 440$

A company wants to decide between one of two credit card vendors. The cost to process credit card transactions consists of an initial setup fee plus a fee for each transaction the company processes using a credit card. The equations above show the cost, y, in dollars, to process x transactions. The company is also considering placing an advertisement with Vendor L. Vendor L charges no setup fee but charges the same amount as Vendor J every time a transaction is processed. Which of the following graphs represents the cost y, in dollars, of processing x transactions?

A)

B)

C)

D)
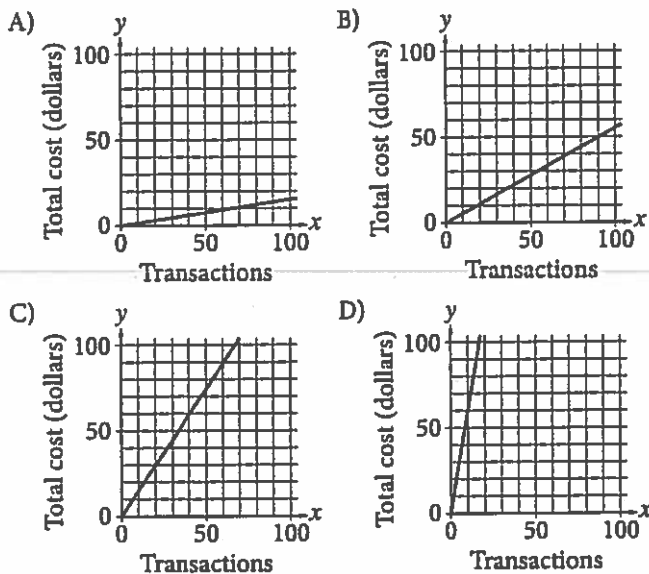
Write a Linear Function

51

Nina mows lawns for a summer job. For each lawn she mows, she charges an initial fee plus $11 per hour. If Carolina's total charge for a 3-hour job is $39, which of the following functins models the total charge C, in dollars, for a job that takes h hours to complete?

A) $C(h) = 11h + 6$

B) $C(h) = 11h + 39$

C) $C(h) = 13h - 2$

D) $C(h) = 13h$

52

Line ℓ has slope 3 and y-intercept -5 in the xy-plane. Which of the following is an equation of line ℓ?

A) $y = 3x + 5$

B) $y = 3x - 5$

C) $y = -3x + 5$

D) $y = -3x - 5$

53

A quadcopter drone descends from an altitude of 1,000 feet at a constant rate of 100 feet every 4 seconds. Which of the following models the quadcopter's altitude, in feet, as a function of the time s, in seconds, since the beginning of its descent?

A) $h(s) = 1,000 - 25s$

B) $h(s) = 1,000 - 400s$

C) $h(s) = 1,000 - \dfrac{400}{s}$

D) $h(s) = 1000 - \dfrac{25}{s}$

54

The function $f(x)$ is a linear function such that $f(3) = 10$ and $f(7) = 2$. Which of the following functions determines f?

A) $f(x) = -2x + 10$

B) $f(x) = -2x + 16$

C) $f(x) = -\frac{1}{2}x + 7$

D) $f(x) = -\frac{1}{2}x + 13$

Calculate Slope

55

In the xy-plane, the line determined by $(0, -18)$ and $(5, k)$ has a slope of 4. Which of the following is the value of k?

A) -38

B)   2

C)   12

D)   26

56

In the standard xy-coordinate plane, the slope of a line that passes through $(2, 4)$ and $(5, 2n + 6)$ is 4. What is the value of n?

57

What is the slope of the line in the xy-plane that passes through the points $\left(-\frac{9}{2}, 7\right)$ and $\left(-\frac{1}{2}, 2\right)$?

A) $-\frac{5}{4}$

B) -1

C) 1

D) $\frac{4}{5}$

58

The slope of the line that passes through both $(5, k)$ and $(-k, -11)$ is 4. What is the value of k ?

A) -3
B) -1
C) 3
D) No such value of k exists

Calculate Slope of Parallel/Perpendicular Line

59

Line l passes through the point $(3, 11)$ and is perpendicular to line k. Line k has the equation $y = \frac{1}{4}x + 2$. What is the y-intercept of line l ?

A) -1

B) 1

C) $\frac{41}{4}$

D) 23

60.

Which statement is true about the lines $y - 2x = 3$ and $-5y + 10x = -15$?

A) They are two parallel lines.

B) They are two perpendicular lines.

C) They are the same line.

D) They are two intersecting lines, but not perpendicular.

61.
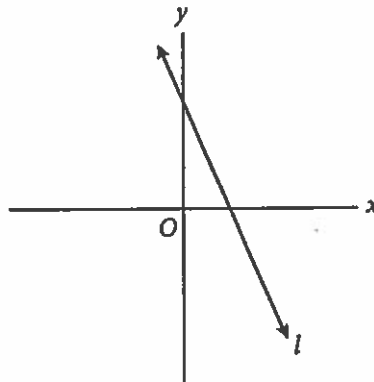
The equation of line l, graphed above, is $y = ax + b$. Line k, which is perpendicular to line l, has the equation $y = cx + d$. Which of the following statements MUST be true?

  I. $a < c$

  II. $b = d$

  III. $ac = -1$

A) I only

B) III only

C) I and III

D) I, II, and III

Social Studies Assignment

Current Events

A major part of being a Social Studies student is paying attention to current events. Your task over the school shut down is to watch at least 10 minutes of the news each day. You may choose to watch a morning, afternoon, evening, or night time television broadcast, or an online airing of a news program. You may watch the local news (ex-NBC 30 news), national news (ex-Good Morning America, CBS Evening News) or a program from a news station (ex-Fox News, CNN, or CNN10). Please respond to the prompts in complete sentences on a separate paper. **You answer all 5 questions *each day!***

1. State the name of the program as well as the channel or website, and date and time it aired.

2. List and give a one sentence description of each of the stories that aired during the time you viewed.

3. Choose one story you watched that day,

> Explain why this was a newsworthy story----or if you think it wasn't, why you think it aired.

> Did anything in it seem unconvincing, inaccurate or biased?

> Did any information shared in the story surprise you, help you understand something, or cause you to think in a new way? Explain.

Example-

1. March 10, 2020 morning news on NBC Connecticut (viewed online)
2. Second person in CT tested positive and many changes are happening (colleges are shutting, nursing homes are limiting visitors); a body was found in Wallingford; a bill could erase criminal records
3. Coronavirus story- People are very concerned about the Coronavirus- they need to know if events aren't happening and what to do. I'm not convinced that closing the Capitol to clean it will really make a difference if someone sick comes in when it reopens. This story made me think that this is more serious than I thought!
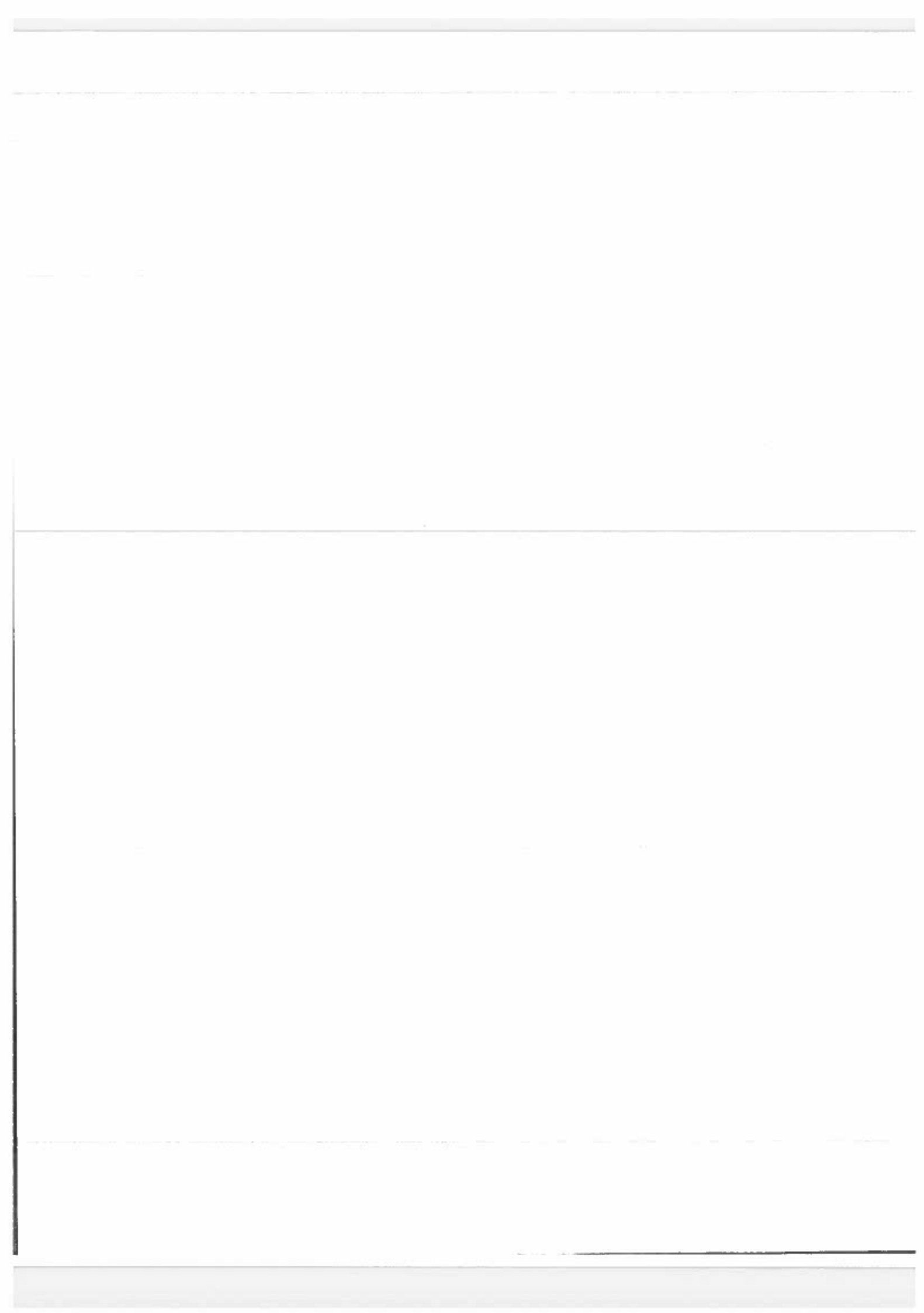
The SAT

Practice Test #5

Make time to take the practice test. It's one of the best ways to get ready for the SAT.

After you've taken the practice test, score it right away at **sat.org/scoring**.

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K-5MSA04

Reading Test

65 MINUTES, 52 QUESTIONS

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

Each passage or pair of passages below is followed by a number of questions. After reading each passage or pair, 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 William Maxwell, *The Folded Leaf*. ©1959 by William Maxwell. Originally published in 1945.

The Alcazar Restaurant was on Sheridan Road near Devon Avenue. It was long and narrow, with tables for two along the walls and tables for four
Line down the middle. The decoration was *art moderne*,
5 except for the series of murals depicting the four seasons, and the sick ferns in the front window. Lymie sat down at the second table from the cash register, and ordered his dinner. The history book, which he propped against the catsup and the glass
10 sugar bowl, had been used by others before him. Blank pages front and back were filled in with maps, drawings, dates, comic cartoons, and organs of the body; also with names and messages no longer clear and never absolutely legible. On nearly every other
15 page there was some marginal notation, either in ink or in very hard pencil. And unless someone had upset a glass of water, the marks on page 177 were from tears.
        While Lymie read about the Peace of Paris, signed
20 on the thirtieth of May, 1814, between France and the Allied powers, his right hand managed again and again to bring food up to his mouth. Sometimes he chewed, sometimes he swallowed whole the food that he had no idea he was eating. The Congress of
25 Vienna met, with some allowance for delays, early in November of the same year, and all the powers engaged in the war on either side sent

plenipotentiaries. It was by far the most splendid and important assembly ever convoked to discuss and
30 determine the affairs of Europe. The Emperor of Russia, the King of Prussia, the Kings of Bavaria, Denmark, and Wurttemberg, all were present in person at the court of the Emperor Francis I in the Austrian capital. When Lymie put down his fork and
35 began to count them off, one by one, on the fingers of his left hand, the waitress, whose name was Irma, thought he was through eating and tried to take his plate away. He stopped her. Prince Metternich (his right thumb) presided over the Congress, and
40 Prince Talleyrand (the index finger) represented France.
        A party of four, two men and two women, came into the restaurant, all talking at once, and took possession of the center table nearest Lymie.
45 The women had shingled hair and short tight skirts which exposed the underside of their knees when they sat down. One of the women had the face of a young boy but disguised by one trick or another (rouge, lipstick, powder, wet bangs plastered against
50 the high forehead, and a pair of long pendent earrings) to look like a woman of thirty-five, which as a matter of fact she was. The men were older. They laughed more than there seemed any occasion for, while they were deciding between soup and shrimp
55 cocktail, and their laughter was too loud. But it was the women's voices, the terrible not quite sober pitch of the women's voices which caused Lymie to skim over two whole pages without knowing what was on them. Fortunately he realized this and went back.
60 Otherwise he might never have known about the

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2

CONTINUE ▶

secret treaty concluded between England, France, and Austria, when the pretensions of Prussia and Russia, acting in concert, seemed to threaten a renewal of the attack. The results of the Congress
65 were stated clearly at the bottom of page 67 and at the top of page 68, but before Lymie got halfway through them, a coat that he recognized as his father's was hung on the hook next to his chair. Lymie closed the book and said, "I didn't think you
70 were coming."

    Time is probably no more unkind to sporting characters than it is to other people, but physical decay unsustained by respectability is somehow more noticeable. Mr. Peters' hair was turning gray and his
75 scalp showed through on top. He had lost weight also; he no longer filled out his clothes the way he used to. His color was poor, and the flower had disappeared from his buttonhole. In its place was an American Legion button.
80   Apparently he himself was not aware that there had been any change. He straightened his tie self-consciously and when Irma handed him a menu, he gestured with it so that the two women at the next table would notice the diamond ring on the fourth
85 finger of his right hand. Both of these things, and also the fact that his hands showed signs of the manicurist, one can blame on the young man who had his picture taken with a derby hat on the back of his head, and also sitting with a girl in the curve of
90 the moon. The young man had never for one second deserted Mr. Peters. He was always there, tugging at Mr. Peters' elbow, making him do things that were not becoming in a man of forty-five.

1

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

A) Lymie's inner thoughts to observations made by the other characters.

B) an exchange between strangers to a satisfying personal relationship.

C) the physical setting of the scene to the different characters' personality traits.

D) Lymie's experience reading a book to descriptions of people in the restaurant.

2

The main purpose of the first paragraph is to

A) introduce the passage's main character by showing his nightly habits.

B) indicate the date the passage takes place by presenting period details.

C) convey the passage's setting by describing a place and an object.

D) foreshadow an event that is described in detail later in the passage.

3

It can reasonably be inferred that Irma, the waitress, thinks Lymie is "through eating" (line 37) because

A) he has begun reading his book.

B) his plate is empty.

C) he is no longer holding his fork.

D) he has asked her to clear the table.

4

Lymie's primary impression of the "party of four" (line 42) is that they

A) are noisy and distracting.

B) are a refreshing change from the other customers.

C) resemble characters from his history book.

D) represent glamour and youth.

5

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

A) Lines 45-47 ("The women . . . down")

B) Lines 47-52 ("One . . . was")

C) Lines 55-59 ("But . . . them")

D) Line 69 ("Lymie . . . book")

6

The narrator indicates that Lymie finally closes the history book because

A) his father has joined him at the table.

B) the people at the other table are too disruptive.

C) he has finished the chapter about the Congress.

D) he is preparing to leave the restaurant.

7

The primary impression created by the narrator's description of Mr. Peters in lines 74-79 is that he is

A) healthy and fit.

B) angry and menacing.

C) nervous and hesitant.

D) aging and shriveled.

8

The main idea of the last paragraph is that Mr. Peters

A) neglects to spend any time with his family members.

B) behaves as if he is a younger version of himself.

C) is very conscious of symbols of wealth and power.

D) is preoccupied with the knowledge that he is growing old.

9

Which choice best supports the conclusion that Mr. Peters wants to attract attention?

A) Lines 80-81 ("Apparently . . . change")

B) Lines 81-85 ("He straightened . . . hand")

C) Lines 90-91 ("The young . . . Mr. Peters")

D) Lines 91-93 ("He was . . . forty-five")

10

As used in line 93, "becoming" most nearly means

A) emerging.

B) fitting.

C) developing.

D) happening.

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5

Questions 11-21 are based on the following passages.

Passage 1 is adapted from Catharine Beecher, *Essay on Slavery and Abolitionism*. Originally published in 1837. Passage 2 is adapted from Angelina E. Grimké, *Letters to Catharine Beecher*. Originally published in 1838. Grimké encouraged Southern women to oppose slavery publicly. Passage 1 is Beecher's response to Grimké's views. Passage 2 is Grimké's response to Beecher.

Passage 1

Heaven has appointed to one sex the superior, and to the other the subordinate station, and this without any reference to the character or conduct of
Line either. It is therefore as much for the dignity as it is
5 for the interest of females, in all respects to conform to the duties of this relation. . . . But while woman holds a subordinate relation in society to the other sex, it is not because it was designed that her duties or her influence should be any the less important, or
10 all-pervading. But it was designed that the mode of gaining influence and of exercising power should be altogether different and peculiar. . . .

A man may act on society by the collision of intellect, in public debate; he may urge his measures
15 by a sense of shame, by fear and by personal interest; he may coerce by the combination of public sentiment; he may drive by physical force, and he does not outstep the boundaries of his sphere. But all the power, and all the conquests that are lawful to
20 woman, are those only which appeal to the kindly, generous, peaceful and benevolent principles.

Woman is to win every thing by peace and love; by making herself so much respected, esteemed and loved, that to yield to her opinions and to gratify her
25 wishes, will be the free-will offering of the heart. But this is to be all accomplished in the domestic and social circle. There let every woman become so cultivated and refined in intellect, that her taste and judgment will be respected; so benevolent in feeling
30 and action; that her motives will be reverenced;—so unassuming and unambitious, that collision and competition will be banished;—so "gentle and easy to be entreated," as that every heart will repose in her presence; then, the fathers, the husbands, and the
35 sons, will find an influence thrown around them, to which they will yield not only willingly but proudly. . . .

A woman may seek the aid of co-operation and combination among her own sex, to assist her in her
40 appropriate offices of piety, charity, maternal and

domestic duty; but whatever, in any measure, throws a woman into the attitude of a combatant, either for herself or others—whatever binds her in a party conflict—whatever obliges her in any way to exert
45 coercive influences, throws her out of her appropriate sphere. If these general principles are correct, they are entirely opposed to the plan of arraying females in any Abolition movement.

Passage 2

The investigation of the rights of the slave has led
50 me to a better understanding of my own. I have found the Anti-Slavery cause to be the high school of morals in our land—the school in which *human rights* are more fully investigated, and better understood and taught, than in any other. Here a
55 great fundamental principle is uplifted and illuminated, and from this central light, rays innumerable stream all around.

Human beings have *rights*, because they are *moral* beings: the rights of *all* men grow out of their moral
60 nature; and as all men have the same moral nature, they have essentially the same rights. These rights may be wrested from the slave, but they cannot be alienated: his title to himself is as perfect now, as is that of Lyman Beecher:[1] it is stamped on his moral
65 being, and is, like it, imperishable. Now if rights are founded in the nature of our moral being, then the *mere circumstance of sex* does not give to man higher rights and responsibilities, than to woman. To suppose that it does, would be to deny the
70 self-evident truth, that the "physical constitution is the mere instrument of the moral nature." To suppose that it does, would be to break up utterly the relations, of the two natures, and to reverse their functions, exalting the animal nature into a monarch,
75 and humbling the moral into a slave; making the former a proprietor, and the latter its property.

When human beings are regarded as *moral* beings, *sex*, instead of being enthroned upon the summit, administering upon rights and
80 responsibilities, sinks into insignificance and nothingness. My doctrine then is, that whatever it is morally right for man to do, it is morally right for woman to do. Our duties originate, not from difference of sex, but from the diversity of our
85 relations in life, the various gifts and talents committed to our care, and the different eras in which we live.

[1] Lyman Beecher was a famous minister and the father of Catharine Beecher.

CONTINUE

11

In Passage 1, Beecher makes which point about the status of women relative to that of men?

A) Women depend on men for their safety and security, but men are largely independent of women.

B) Women are inferior to men, but women play a role as significant as that played by men.

C) Women have fewer rights than men do, but women also have fewer responsibilities.

D) Women are superior to men, but tradition requires women to obey men.

12

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

A) Lines 6-10 ("But . . . all-pervading")

B) Lines 13-14 ("A man . . . debate")

C) Lines 16-18 ("he may coerce . . . sphere")

D) Lines 41-46 ("but whatever . . . sphere")

13

In Passage 1, Beecher implies that women's effect on public life is largely

A) overlooked, because few men are interested in women's thoughts about politics.

B) indirect, because women exert their influence within the home and family life.

C) unnecessary, because men are able to govern society themselves.

D) symbolic, because women tend to be more idealistic about politics than men are.

14

As used in line 2, "station" most nearly means

A) region.

B) studio.

C) district.

D) rank.

15

As used in line 12, "peculiar" most nearly means

A) eccentric.

B) surprising.

C) distinctive.

D) infrequent.

16

What is Grimké's central claim in Passage 2?

A) The rights of individuals are not determined by race or gender.

B) Men and women must learn to work together to improve society.

C) Moral rights are the most important distinction between human beings and animals.

D) Men and women should have equal opportunities to flourish.

17

In Passage 2, Grimké makes which point about human rights?

A) They are viewed differently in various cultures around the world.

B) They retain their moral authority regardless of whether they are recognized by law.

C) They are sometimes at odds with moral responsibilities.

D) They have become more advanced and refined throughout history.

18

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

A) Lines 58-61 ("Human . . . same rights")

B) Lines 61-65 ("These . . . imperishable")

C) Lines 71-76 ("To suppose . . . property")

D) Lines 77-81 ("When . . . nothingness")

19

Which choice best states the relationship between the two passages?

A) Passage 2 illustrates the practical difficulties of a proposal made in Passage 1.

B) Passage 2 takes issue with the primary argument of Passage 1.

C) Passage 2 provides a historical context for the perspective offered in Passage 1.

D) Passage 2 elaborates upon several ideas implied in Passage 1.

20

Based on the passages, both authors would agree with which of the following claims?

A) Women have moral duties and responsibilities.

B) Men often work selflessly for political change.

C) The ethical obligations of women are often undervalued.

D) Political activism is as important for women as it is for men.

21

Beecher would most likely have reacted to lines 65-68 ("Now . . . woman") of Passage 2 with

A) sympathy, because she feels that human beings owe each other a debt to work together in the world.

B) agreement, because she feels that human responsibilities are a natural product of human rights.

C) dismay, because she feels that women actually have a more difficult role to play in society than men do.

D) disagreement, because she feels that the natures of men and women are fundamentally different.

When it comes to energy, everyone loves efficiency. Cutting energy waste is one of those goals that both sides of the political divide can agree on,
Line even if they sometimes diverge on how best to get
5 there. Energy efficiency allows us to get more out of our given resources, which is good for the economy and (mostly) good for the environment as well. In an increasingly hot and crowded world, the only sustainable way to live is to get more out of less.
10 Every environmentalist would agree.

But change the conversation to food, and suddenly efficiency doesn't look so good. Conventional industrial agriculture has become incredibly efficient on a simple land to food basis.
15 Thanks to fertilizers, mechanization and irrigation, each American farmer feeds over 155 people worldwide. Conventional farming gets more and more crop per square foot of cultivated land— over 170 bushels of corn per acre in Iowa, for
20 example—which can mean less territory needs to be converted from wilderness to farmland. And since a third of the planet is already used for agriculture—destroying forests and other wild habitats along the way—anything that could help us
25 produce more food on less land would seem to be good for the environment.

Of course, that's not how most environmentalists regard their arugula [a leafy green]. They have embraced organic food as better for the planet—and
30 healthier and tastier, too—than the stuff produced by agricultural corporations. Environmentalists disdain the enormous amounts of energy needed and waste created by conventional farming, while organic practices—forgoing artificial fertilizers and chemical
35 pesticides—are considered far more sustainable. Sales of organic food rose 7.7% in 2010, up to $26.7 billion—and people are making those purchases for their consciences as much as their taste buds.

Yet a new meta-analysis in *Nature* does the math
40 and comes to a hard conclusion: organic farming yields 25% fewer crops on average than conventional agriculture. More land is therefore needed to produce fewer crops—and that means organic farming may not be as good for the planet as
45 we think.

In the *Nature* analysis, scientists from McGill University in Montreal and the University of Minnesota performed an analysis of 66 studies comparing conventional and organic methods across
50 34 different crop species, from fruits to grains to legumes. They found that organic farming delivered a lower yield for every crop type, though the disparity varied widely. For rain-watered legume crops like beans or perennial crops like fruit trees, organic
55 trailed conventional agriculture by just 5%. Yet for major cereal crops like corn or wheat, as well as most vegetables—all of which provide the bulk of the world's calories—conventional agriculture outperformed organics by more than 25%.
60 The main difference is nitrogen, the chemical key to plant growth. Conventional agriculture makes use of 171 million metric tons of synthetic fertilizer each year, and all that nitrogen enables much faster plant growth than the slower release of nitrogen from the
65 compost or cover crops used in organic farming. When we talk about a Green Revolution, we really mean a nitrogen revolution—along with a lot of water.
But not all the nitrogen used in conventional
70 fertilizer ends up in crops—much of it ends up running off the soil and into the oceans, creating vast polluted dead zones. We're already putting more nitrogen into the soil than the planet can stand over the long term. And conventional agriculture also
75 depends heavily on chemical pesticides, which can have unintended side effects.

What that means is that while conventional agriculture is more efficient—sometimes much more efficient—than organic farming, there are trade-offs
80 with each. So an ideal global agriculture system, in the views of the study's authors, may borrow the best from both systems, as Jonathan Foley of the University of Minnesota explained:

The bottom line? Today's organic farming
85 practices are probably best deployed in fruit and vegetable farms, where growing nutrition (not just bulk calories) is the primary goal. But for delivering sheer calories, especially in our staple crops of wheat, rice, maize, soybeans and so on,
90 conventional farms have the advantage right now.

Looking forward, I think we will need to deploy different kinds of practices (especially new, mixed approaches that take the best of organic
95 and conventional farming systems) where they are best suited—geographically, economically, socially, etc.

Figure 1

Organic Yield as a Percentage of
Conventional Yield, by Crop Type
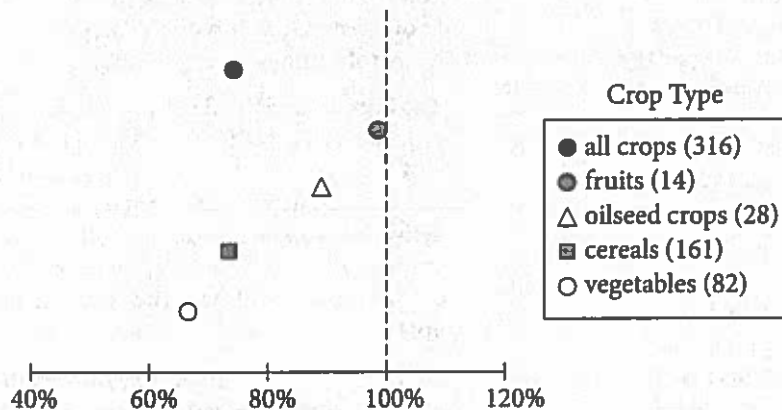
Crop Type

- all crops (316)
- fruits (14)
- △ oilseed crops (28)
- ▣ cereals (161)
- ○ vegetables (82)

At 100%, the organic yield is the same as
the conventional yield. The number of
observations for each crop type is shown
in parentheses.

Figure 2

Organic Yield as a Percentage of
Conventional Yield, by Species
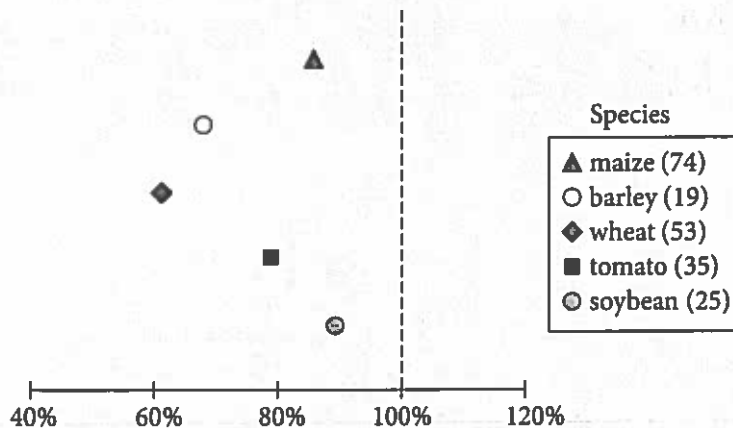
Species

- ▲ maize (74)
- ○ barley (19)
- ◆ wheat (53)
- ■ tomato (35)
- ◎ soybean (25)

At 100%, the organic yield is the same as
the conventional yield. The number of
observations for each species is shown in
parentheses.

CONTINUE

22

As used in line 14, "simple" most nearly means

A) straightforward.

B) modest.

C) unadorned.

D) easy.

23

According to the passage, a significant attribute of conventional agriculture is its ability to

A) produce a wide variety of fruits and vegetables.

B) maximize the output of cultivated land.

C) satisfy the dietary needs of the world's population.

D) lessen the necessity of nitrogen in plant growth.

24

Which choice best reflects the perspective of the "environmentalists" (line 27) on conventional agriculture?

A) It produces inferior fruits and vegetables and is detrimental to the environment.

B) It is energy efficient and reduces the need to convert wilderness to farmland.

C) It is good for the environment only in the short run.

D) It depletes critical resources but protects wildlife habitats.

25

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

A) Lines 27-28 ("Of course . . . green")

B) Lines 28-31 ("They . . . corporations")

C) Lines 31-35 ("Environmentalists . . . sustainable")

D) Lines 42-45 ("More . . . think")

26

Which statement best expresses a relationship between organic farming and conventional farming that is presented in the passage?

A) Both are equally sustainable, but they differ dramatically in the amount of land they require to produce equivalent yields.

B) Both rely on artificial chemicals for pest control, but organic farmers use the chemicals sparingly in conjunction with natural remedies.

C) Both use nitrogen to encourage plant growth, but the nitrogen used in conventional farming comes from synthetic sources.

D) Both create a substantial amount of nitrogen runoff, but only the type of nitrogen found in fertilizers used in conventional farming can be dangerous.

27

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

A) Lines 13-14 ("Conventional . . . basis")

B) Lines 22-26 ("And since . . . environment")

C) Lines 51-53 ("They . . . widely")

D) Lines 61-65 ("Conventional . . . farming")

28

According to Foley, an "ideal global agriculture system" (line 80)

A) focuses primarily on yield percentages and global markets.

B) considers multiple factors in the selection of farming techniques.

C) weighs the economic interests of farmers against the needs of consumers.

D) puts the nutritional value of produce first and foremost.

29

In line 88, "sheer" most nearly means

A) transparent.

B) abrupt.

C) steep.

D) pure.

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12

30

Which statement is best supported by the information provided in figure 1?

A) The organic yield as a percentage of conventional yield is greater for vegetables than for fruits.

B) The organic yield as a percentage of conventional yield is similar for cereals and all crops.

C) The reported number of observations for each crop type exceeds 82.

D) The organic yield as a percentage of conventional yield is greater for vegetable crops than it is for oilseed crops.

31

Which of the following claims is supported by figure 2?

A) Of the organically grown species represented, soybeans have the lowest yield.

B) The organically grown maize and barley represented are comparable in their yields to conventionally grown maize and barley.

C) Of the organically grown species represented, tomatoes have the highest yield.

D) The organically grown species represented have lower yields than their conventionally grown counterparts do.

Questions 32-41 are based on the following passage and supplementary material.

This passage is adapted from John Bohannon, "Why You Shouldn't Trust Internet Comments." ©2013 by American Association for the Advancement of Science.

The "wisdom of crowds" has become a mantra of the Internet age. Need to choose a new vacuum cleaner? Check out the reviews on online merchant
Line Amazon. But a new study suggests that such online
5   scores don't always reveal the best choice. A massive controlled experiment of Web users finds that such ratings are highly susceptible to irrational "herd behavior"—and that the herd can be manipulated.

Sometimes the crowd really is wiser than you. The
10   classic examples are guessing the weight of a bull or the number of gumballs in a jar. Your guess is probably going to be far from the mark, whereas the average of many people's choices is remarkably close to the true number.

15   But what happens when the goal is to judge something less tangible, such as the quality or worth of a product? According to one theory, the wisdom of the crowd still holds—measuring the aggregate of people's opinions produces a stable, reliable
20   value. Skeptics, however, argue that people's opinions are easily swayed by those of others. So nudging a crowd early on by presenting contrary opinions—for example, exposing them to some very good or very bad attitudes—will steer the crowd in a
25   different direction. To test which hypothesis is true, you would need to manipulate huge numbers of people, exposing them to false information and determining how it affects their opinions.

A team led by Sinan Aral, a network scientist at
30   the Massachusetts Institute of Technology in Cambridge, did exactly that. Aral has been secretly working with a popular website that aggregates news stories. The website allows users to make comments about news stories and vote each other's comments
35   up or down. The vote tallies are visible as a number next to each comment, and the position of the comments is chronological. (Stories on the site get an average of about ten comments and about three votes per comment.) It's a follow-up to his experiment
40   using people's ratings of movies to measure how much individual people influence each other online (answer: a lot). This time, he wanted to know how much the crowd influences the individual, and whether it can be controlled from outside.

45   For five months, every comment submitted by a user randomly received an "up" vote (positive); a "down" vote (negative); or as a control, no vote at all. The team then observed how users rated those comments. The users generated more than
50   100,000 comments that were viewed more than 10 million times and rated more than 300,000 times by other users.

At least when it comes to comments on news sites, the crowd is more herdlike than wise.
55   Comments that received fake positive votes from the researchers were 32% more likely to receive more positive votes compared with a control, the team reports. And those comments were no more likely than the control to be down-voted by the next viewer
60   to see them. By the end of the study, positively manipulated comments got an overall boost of about 25%. However, the same did not hold true for negative manipulation. The ratings of comments that got a fake down vote were usually negated by an up
65   vote by the next user to see them.

"Our experiment does not reveal the psychology behind people's decisions," Aral says, "but an intuitive explanation is that people are more skeptical of negative social influence. They're more
70   willing to go along with positive opinions from other people."

Duncan Watts, a network scientist at Microsoft Research in New York City, agrees with that conclusion. "[But] one question is whether the
75   positive [herding] bias is specific to this site" or true in general, Watts says. He points out that the category of the news items in the experiment had a strong effect on how much people could be manipulated. "I would have thought that 'business' is
80   pretty similar to 'economics,' yet they find a much stronger effect (almost 50% stronger) for the former than the latter. What explains this difference? If we're going to apply these findings in the real world, we'll need to know the answers."

85   Will companies be able to boost their products by manipulating online ratings on a massive scale? "That is easier said than done," Watts says. If people detect—or learn—that comments on a website are being manipulated, the herd may spook and leave
90   entirely.

Artificially Up-Voted Comments versus Control Comments
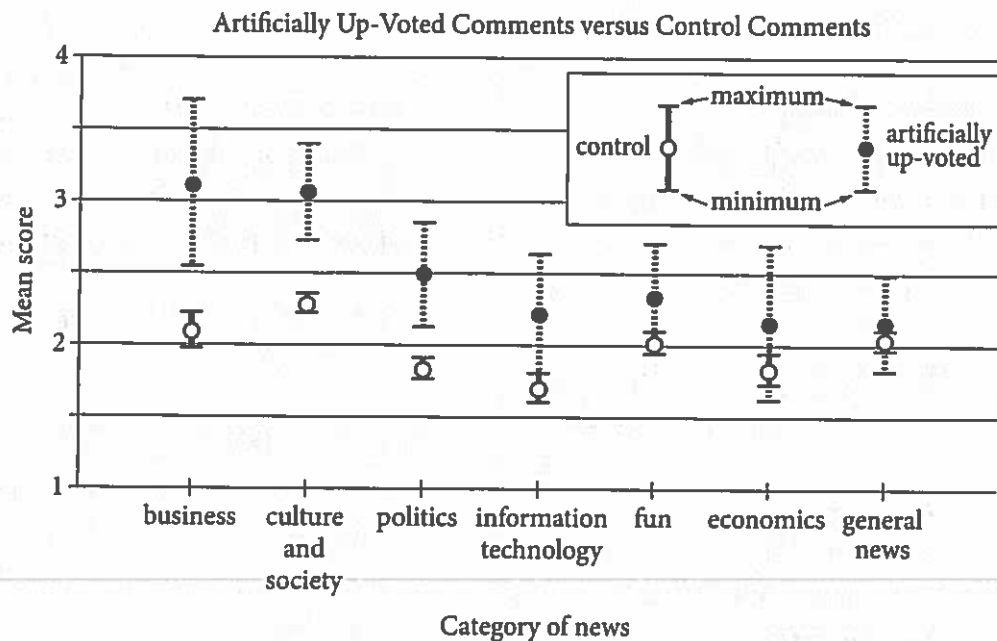
Mean score: mean of scores for the comments in each category, with the score for each comment being determined by the number of positive votes from website users minus the number of negative votes

Adapted from Lev Muchnik, Sinan Aral, and Sean J. Taylor, "Social Influence Bias: A Randomized Experiment." ©2013 by American Association for the Advancement of Science.

32

Over the course of the passage, the main focus shifts from a discussion of an experiment and its results to

A) an explanation of the practical applications of the results.

B) a consideration of the questions prompted by the results.

C) an analysis of the defects undermining the results.

D) a conversation with a scientist who disputes the results.

33

The author of the passage suggests that crowds may be more effective at

A) creating controversy than examining an issue in depth.

B) reinforcing members' ideas than challenging those ideas.

C) arriving at accurate quantitative answers than producing valid qualitative judgments.

D) ranking others' opinions than developing genuinely original positions.

34

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

A) Line 9 ("Sometimes . . . you")

B) Lines 11-14 ("Your . . . number")

C) Lines 17-20 ("According . . . value")

D) Lines 25-28 ("To test . . . opinions")

35

Which choice best supports the view of the "skeptics" (line 20)?

A) Lines 55-58 ("Comments . . . reports")

B) Lines 58-60 ("And . . . them")

C) Lines 63-65 ("The ratings . . . them")

D) Lines 76-79 ("He . . . manipulated")

36

Which action would best address a question Watts raises about the study?

A) Providing fewer fake positive comments

B) Using multiple websites to collect ratings

C) Requiring users to register on the website before voting

D) Informing users that voting data are being analyzed

37

As used in line 85, "boost" most nearly means

A) increase.

B) accelerate.

C) promote.

D) protect.

38

As used in line 86, "scale" most nearly means

A) level.

B) wage.

C) interval.

D) scheme.

39

In the figure, which category of news has an artificially up-voted mean score of 2.5?

A) Business

B) Politics

C) Fun

D) General news

40

According to the figure, which category of news showed the smallest difference in mean score between artificially up-voted comments and control comments?

A) Culture and society

B) Information technology

C) Fun

D) General news

41

Data presented in the figure most directly support which idea from the passage?

A) The mean score of artificially down-voted comments is similar to that of the control.

B) The patterns observed in the experiment suggest that people are suspicious of negative social influence.

C) The positive bias observed in users of the news site may not apply to human behavior in other contexts.

D) The type of story being commented on has an impact on the degree to which people can be influenced.

Questions 42-52 are based on the following passage.

This passage is adapted from Joshua Foer, *Moonwalking with Einstein: The Art and Science of Remembering Everything.* ©2011 by Joshua Foer.

In 2000, a neuroscientist at University College London named Eleanor Maguire wanted to find out what effect, if any, all that driving around the
Line labyrinthine streets of London might have on
5 cabbies' brains. When she brought sixteen taxi drivers into her lab and examined their brains in an MRI scanner, she found one surprising and important difference. The right posterior hippocampus, a part of the brain known to be
10 involved in spatial navigation, was 7 percent larger than normal in the cabbies—a small but very significant difference. Maguire concluded that all of that way-finding around London had physically altered the gross structure of their brains. The more
15 years a cabbie had been on the road, the more pronounced the effect.
        The brain is a mutable organ, capable—within limits—of reorganizing itself and readapting to new kinds of sensory input, a phenomenon known as
20 neuroplasticity. It had long been thought that the adult brain was incapable of spawning new neurons—that while learning caused synapses to rearrange themselves and new links between brain cells to form, the brain's basic anatomical structure
25 was more or less static. Maguire's study suggested the old inherited wisdom was simply not true.
        After her groundbreaking study of London cabbies, Maguire decided to turn her attention to mental athletes. She teamed up with Elizabeth
30 Valentine and John Wilding, authors of the academic monograph *Superior Memory*, to study ten individuals who had finished near the top of the World Memory Championship. They wanted to find out if the memorizers' brains were—like the London
35 cabbies'—structurally different from the rest of ours, or if they were somehow just making better use of memory abilities that we all possess.
        The researchers put both the mental athletes and a group of matched control subjects into MRI scanners
40 and asked them to memorize three-digit numbers, black-and-white photographs of people's faces, and magnified images of snowflakes, while their brains were being scanned. Maguire and her team thought it was possible that they might discover anatomical
45 differences in the brains of the memory champs,

evidence that their brains had somehow reorganized themselves in the process of doing all that intensive remembering. But when the researchers reviewed the imaging data, not a single significant structural
50 difference turned up. The brains of the mental athletes appeared to be indistinguishable from those of the control subjects. What's more, on every single test of general cognitive ability, the mental athletes' scores came back well within the normal range. The
55 memory champs weren't smarter, and they didn't have special brains.
        But there was one telling difference between the brains of the mental athletes and the control subjects: When the researchers looked at which parts of the
60 brain were lighting up when the mental athletes were memorizing, they found that they were activating entirely different circuitry. According to the functional MRIs [fMRIs], regions of the brain that were less active in the control subjects seemed to be
65 working in overdrive for the mental athletes.
        Surprisingly, when the mental athletes were learning new information, they were engaging several regions of the brain known to be involved in two specific tasks: visual memory and spatial
70 navigation, including the same right posterior hippocampal region that the London cabbies had enlarged with all their daily way-finding. At first glance, this wouldn't seem to make any sense. Why would mental athletes be conjuring images in
75 their mind's eye when they were trying to learn three-digit numbers? Why should they be navigating like London cabbies when they're supposed to be remembering the shapes of snowflakes?
        Maguire and her team asked the mental athletes
80 to describe exactly what was going through their minds as they memorized. The mental athletes said they were consciously converting the information they were being asked to memorize into images, and distributing those images along familiar spatial
85 journeys. They weren't doing this automatically, or because it was an inborn talent they'd nurtured since childhood. Rather, the unexpected patterns of neural activity that Maguire's fMRIs turned up were the result of training and practice.

42

According to the passage, Maguire's findings regarding taxi drivers are significant because they

A) demonstrate the validity of a new method.

B) provide evidence for a popular viewpoint.

C) call into question an earlier consensus.

D) challenge the authenticity of previous data.

43

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

A) Lines 8-12 ("The right . . . difference")

B) Lines 12-16 ("Maguire . . . effect")

C) Lines 17-20 ("The brain . . . neuroplasticity")

D) Lines 20-26 ("It had . . . true")

44

As used in line 24, "basic" most nearly means

A) initial.

B) simple.

C) necessary.

D) fundamental.

45

Which question was Maguire's study of mental athletes primarily intended to answer?

A) Does the act of memorization make use of different brain structures than does the act of navigation?

B) Do mental athletes inherit their unusual brain structures, or do the structures develop as a result of specific activities?

C) Does heightened memorization ability reflect abnormal brain structure or an unusual use of normal brain structure?

D) What is the relationship between general cognitive ability and the unusual brain structures of mental athletes?

46

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

A) Lines 27-29 ("After . . . athletes")

B) Lines 33-37 ("They . . . possess")

C) Lines 38-43 ("The researchers . . . scanned")

D) Lines 52-54 ("What's . . . range")

19

47

As used in line 39, "matched" most nearly means

A) comparable.

B) identical.

C) distinguishable.

D) competing.

48

The main purpose of the fifth paragraph
(lines 57-65) is to

A) relate Maguire's study of mental athletes to her
study of taxi drivers.

B) speculate on the reason for Maguire's
unexpected results.

C) identify an important finding of Maguire's study
of mental athletes.

D) transition from a summary of Maguire's findings
to a description of her methods.

49

According to the passage, when compared to mental
athletes, the individuals in the control group in
Maguire's second study

A) showed less brain activity overall.

B) demonstrated a wider range of cognitive ability.

C) exhibited different patterns of brain activity.

D) displayed noticeably smaller hippocampal
regions.

50

The passage most strongly suggests that mental
athletes are successful at memorization because they

A) exploit parts of the brain not normally used in
routine memorization.

B) convert information they are trying to memorize
into abstract symbols.

C) organize information into numerical lists prior
to memorization.

D) exercise their brains regularly through puzzles
and other mental challenges.

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20

CONTINUE

51

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

A) Lines 66-72 ("Surprisingly . . . way-finding")

B) Lines 72-73 ("At first . . . sense")

C) Lines 79-81 ("Maguire . . . memorized")

D) Lines 85-87 ("They . . . childhood")

52

The questions in lines 74-78 primarily serve to

A) raise doubts about the reliability of the conclusions reached by Maguire.

B) emphasize and elaborate on an initially puzzling result of Maguire's study of mental athletes.

C) imply that Maguire's findings undermine earlier studies of the same phenomenon.

D) introduce and explain a connection between Maguire's two studies and her earlier work.

STOP

**If you finish before time is called, you may check your work on this section only.
Do not turn to any other section.**

Writing and Language Test

35 MINUTES, 44 QUESTIONS

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

DIRECTIONS

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

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

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

Questions 1-11 are based on the following passage.

Prehistoric Printing

Paleontologists are using modern technology to gain a greater understanding of the distant past. With the aid of computed tomography (CT) scanning and 3-D printing, researchers are able to create accurate models of prehistoric fossils. **1** These models have expanded

1

At this point, the writer is considering adding the following sentence.

Fossils provide paleontologists with a convenient way of estimating the age of the rock in which the fossils are found.

Should the writer make this addition here?

A) Yes, because it supports the paragraph's argument with an important detail.

B) Yes, because it provides a logical transition from the preceding sentence.

C) No, because it is not directly related to the main point of the paragraph.

D) No, because it undermines the main claim of the paragraph.

CONTINUE

researchers' knowledge of ancient species and [2] swear to advance the field of paleontology in the years to come.

CT scanners use X-rays to map the surface of a fossil in minute detail, recording as many as one million data points to create a digital blueprint. A 3-D printer then builds a polymer model based on this blueprint, much as a regular computer printer reproduces digital documents on paper. [3] Whereas the head of an ordinary computer printer moves back and forth while printing ink onto paper, the corresponding part of a 3-D printer moves in multiple dimensions while squirting out thin layers of melted polymer plastic. The plastic hardens quickly, [4] it allows the printer to build the layers of the final model. Compared with older ways of modeling fossils, scanning and printing in this way is extremely versatile.

[2]

A) NO CHANGE
B) subscribe
C) vow
D) promise

[3]

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

A) Kept, because it helps explain why X-rays are used in CT scanners.
B) Kept, because it provides details to illustrate how a 3-D printer works.
C) Deleted, because it contradicts the passage's information about digital blueprints.
D) Deleted, because it creates confusion about how researchers gather data.

[4]

A) NO CHANGE
B) this
C) which
D) that

[1] One significant benefit of 3-D printing technology is its ability to create scale reproductions of fossils. [2] But now 3-D scale models can be rearranged with ease, which is a huge boon to scientists. [3] A team led by Drexel University professor Kenneth Lacovara is making models of dinosaur bones one-tenth the bones' original sizes **5** in order to learn how they fit together when the animals were alive. [4] In the past, such research was limited by the weight and bulk of the fossils as well as **6** its preciousness and fragility. [5] In many cases, scientists had to rearrange bones virtually, using artists' renderings. **7**

Because CT scanners can map objects that are impossible to excavate, CT scanning and 3-D printing can also be used to reproduce fossils that scientists cannot observe firsthand. **8** By contrast, researchers

5

A) NO CHANGE
B) in order for learning
C) so that one is learning
D) so to learn

6

A) NO CHANGE
B) it's
C) their
D) there

7

To make this paragraph most logical, sentence 2 should be placed

A) where it is now.
B) before sentence 1.
C) after sentence 4.
D) after sentence 5.

8

A) NO CHANGE
B) Nonetheless,
C) Besides,
D) For example,

from the National Museum of Brazil [9] has relied on this technique to study a fossilized skeleton that was discovered protruding from a rock at an old São Paulo railroad site. [10] The fossil was too delicate to be removed from the rock. Because of the fossil's delicate nature, the team dug up a block of stone around the fossil and brought it to their lab. With the aid of a CT scanner and a 3-D printer, they were able to produce a resin model of the fossil. Examining the model, the researchers determined that [11] one had found a new species, a 75-million-year-old crocodile. While not every discovery will be as dramatic as this one, paleontologists anticipate further expanding their knowledge of ancient life-forms as CT scanning and 3-D printing continue to make fossils more accessible.

[9]

A) NO CHANGE
B) relied
C) will rely
D) is relying

[10]

Which choice most effectively combines the underlined sentences?

A) The fossil could not be removed from the rock on account of it being too delicate; moreover, the team dug up a block of stone around it and brought it to their lab.
B) The team thought the fossil was too delicate to remove from the rock, and their next decision was to dig up a block of stone around the fossil and bring it to their lab.
C) The fossil was too delicate to be removed from the rock, so the team dug up a block of stone around the fossil and brought it to their lab.
D) In removing the fossil from the rock, the team found it was too delicate; then they dug up a block of stone around the fossil and brought it to their lab.

[11]

A) NO CHANGE
B) he or she
C) they
D) it

CONTINUE

Questions 12-22 are based on the following passage.

Thomas Nast, the Crusading Cartoonist

"Stop them pictures!" Legend has it that the corrupt politician William "Boss" Tweed once used those words when ordering someone to offer a bribe to Thomas Nast, an artist who had become famous for cartoons that called for reforms to end corruption. **12** As a result, Tweed's attempt to silence the artist failed, and Nast's cartoons, published in magazines like *Harper's Weekly*, actually played a key role in bringing Boss Tweed and his cronies to justice.

13 There were powerful political organizations in the 1860s and the 1870s. The organizations were known as "political machines" and started taking control of city governments. These political machines were able to pack legislatures and courts with hand-picked supporters by purchasing **14** votes, a form of election fraud involving the exchange of money or favors for votes. Once a political machine had control of enough important positions, its members were able to use public funds to enrich themselves and their friends. Boss Tweed's Tammany Hall group, which controlled New York **15** City in the 1860s—stole more than $30 million,

A) NO CHANGE
B) Therefore,
C) Furthermore,
D) DELETE the underlined portion.

13

Which choice most effectively combines the underlined sentences?

A) Powerful political organizations in the 1860s and the 1870s started taking control of city governments, and they were known as "political machines."
B) Known as "political machines," in the 1860s and the 1870s, political organizations that were powerful started taking control of city governments.
C) City governments were taken control of in the 1860s and the 1870s, and powerful political organizations known as "political machines" did so.
D) In the 1860s and the 1870s, powerful political organizations known as "political machines" started taking control of city governments.

14

A) NO CHANGE
B) votes, being
C) votes, that is
D) votes, which it is

15

A) NO CHANGE
B) City in the 1860s,
C) City, in the 1860s,
D) City in the 1860s

the equivalent of more than $365 million today.

[16] Tweed had been elected to a single two-year term in Congress in 1852. Tammany Hall was so powerful and [17] corrupt that, the *New York Times*, commented "There is absolutely nothing . . . in the city which is beyond the reach of the insatiable gang."

Given the extent of Tweed's power, it is remarkable that a single cartoonist could have played such a significant role in bringing about his downfall. Nast's cartoons depicted Tweed as a great big bloated thief. One of the artist's most [18] famous images showed Tweed with a bag of money in place of his [19] head. Another featured Tweed leaning against a ballot box with the caption "As long as I count the votes, what are you going to do about it?" These cartoons were so effective in part because many of the citizens who supported Tweed were illiterate and thus could not read the newspaper accounts of his criminal activities. Nast's cartoons, though, widely exposed the public to the injustice of Tweed's political machine.

---

[16]

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

A) Kept, because it introduces the quote from the *New York Times* in the next sentence.

B) Kept, because it adds a vital detail about Tweed that is necessary to understand his power.

C) Deleted, because it blurs the focus of the paragraph by introducing loosely related information.

D) Deleted, because it contains information that undermines the main claim of the passage.

[17]

A) NO CHANGE

B) corrupt, that the *New York Times* commented,

C) corrupt that the *New York Times* commented,

D) corrupt that the *New York Times*, commented

[18]

A) NO CHANGE

B) famous and well-known

C) famous and commonly known

D) famous, commonly known

[19]

Which choice adds the most relevant supporting information to the paragraph?

A) head; like many other Nast cartoons, that one was published in *Harper's Weekly*.

B) head; Nast would later illustrate Tweed's escape from prison.

C) head, one depiction that omits Tweed's signature hat.

D) head, an image that perfectly captured Tweed's greedy nature.

Nast's campaign to bring down Tweed and the Tammany Hall gang was ultimately successful. In the elections of 1871, the public voted against most of the Tammany Hall candidates, greatly weakening Tweed's power. Eventually, Tweed and his gang were **20** persecuted for a number of charges, including fraud and larceny, and many of them were sent to jail. In 1875 Tweed escaped from jail and fled to Spain and unwittingly **21** brought about one final **22** pinnacle for the power of political cartoons: A Spanish police officer recognized Tweed from one of Nast's cartoons. Consequently, Tweed was sent back to jail, and Nast was hailed as the man who toppled the great Tammany Hall machine.

20
A) NO CHANGE
B) persecuted on
C) persecuted with
D) prosecuted on

21
A) NO CHANGE
B) bringing
C) brings
D) has brought

22
A) NO CHANGE
B) triumph
C) culmination
D) apex

Questions 23-33 are based on the following passage and supplementary material.

Rethinking Crowdfunding in the Arts

Crowdfunding is a popular way to raise money using the Internet. The process sounds simple: an artist, entrepreneur, or other innovator takes his or her ideas straight to the public via a crowdfunding website. The innovator creates a video about the project and offers, in exchange for donations, a series of "perks," from acknowledgment on a social media site to a small piece of art. Many crowdfunding programs are all-or-nothing; in other words, the innovator must garner 100 percent funding for the project or the money is refunded to the donors. At **23** it's best, the system can give creators direct access to millions of potential backers.

The home page of one leading crowdfunding site features a project to manufacture pinhole cameras on a 3-D printer. **24** The idea is obviously very attractive. An obscure method of photography may be made available to many with little expense. Within weeks, the project was 621 percent funded. In contrast, on the same page, a small Brooklyn performance venue is attempting to raise money for its current season. The venue features works of performance art showcased in a storefront window. Those who have seen the space consider it vital. **25** However, that group may not be large enough; with just fourteen days to go in the fund-raising period, the campaign is only 46 percent funded.

23

A) NO CHANGE
B) its
C) its'
D) their

24

Which choice most effectively combines the underlined sentences?

A) With the idea being obviously very attractive, an obscure method of photography may be made available to many at little expense.
B) The idea is obviously very attractive: an obscure method of photography may be made available to many at little expense.
C) An obscure method of photography may be made available to many at little expense, and the idea is obviously very attractive.
D) An obscure method of photography, an idea that is obviously very attractive, may be made available to many at little expense.

25

A) NO CHANGE
B) Therefore,
C) In effect,
D) As a rule,

Artists such as these Brooklyn performers find that crowdfunding exacerbates problems that already exist. **26** Work, that is easily understood and appreciated, is supported, while more complex work goes unnoticed. **27** Time that could be used creating art is spent devising clever perks to draw the attention of potential contributors. **28** In addition, audiences may contain many "free **29** riders," they did not make contributions.

26

A) NO CHANGE
B) Work that is easily understood and appreciated is supported,
C) Work that is easily understood, and appreciated is supported
D) Work—that is easily understood and appreciated—is supported,

27

At this point, the writer is considering adding the following sentence.

> Crowdfunding tends to attract contributors from a wide variety of professional fields.

Should the writer make this addition here?

A) Yes, because it gives more information about the people who donate to crowdfunding campaigns.
B) Yes, because it reinforces the writer's point about the funding of artistic projects.
C) No, because it fails to take into account project funding received from public institutions.
D) No, because it blurs the focus of the paragraph by introducing a poorly integrated piece of information.

28

A) NO CHANGE
B) Conversely,
C) However,
D) Thus,

29

A) NO CHANGE
B) riders," not making
C) riders," who did not make
D) riders" to not make

Ironically, the success of crowdfunding may weaken overall funding for the arts if people begin to feel that paying for the art **30** <u>loved by them</u> is someone else's responsibility.

[1] One innovative playwright has woven the deficiencies of the system into her crowdfunding model. [2] Though the price for her tickets was higher than that of tickets for comparable shows, it was still affordable to most theatergoers—and reflected the real cost of the performance. [3] She presented the total cost for producing her play on a crowdfunding site. [4] Then she divided the total cost by the number of people she expected to attend the performance. [5] The result of the calculation was the minimum donor price, and only donors who paid at least the minimum ticket price were allowed to attend the performance. [6] By subverting the presumption that money used for her project is an altruistic donation, the playwright showed that **31** <u>our</u> work has monetary value to those who enjoy it. **32**

30
A) NO CHANGE
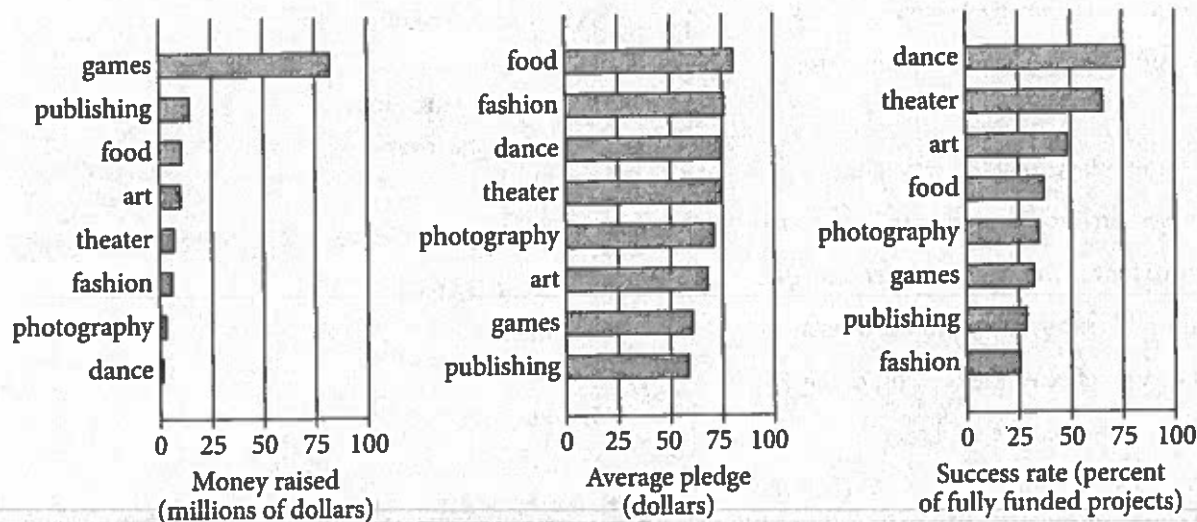B) they love
C) loved by him or her
D) he or she loves

31
A) NO CHANGE
B) their
C) her
D) its

32

To make this paragraph most logical, sentence 2 should be placed

A) where it is now.
B) after sentence 3.
C) after sentence 4.
D) after sentence 5.

Crowdfunded Projects on Kickstarter in 2012

Money raised
(millions of dollars)

Average pledge
(dollars)

Success rate (percent
of fully funded projects)

Adapted from "These Were the Most Successful Projects on Kickstarter Last Year." ©2013 by The Economist Newspaper Limited.

Question 33 asks about the graphic.

33

Which choice offers an accurate interpretation of the data in the graphs?

A) The project category with the lowest amount of money raised was also the most successfully funded project category.

B) The project category with the highest average pledge amount was also the most successfully funded project category.

C) The project category with the lowest average pledge amount was also the project category that raised the most money.

D) The project category with the highest average pledge amount was also the project category with the most money raised.

Questions 34-44 are based on the following passage.

Investigative Journalism: An Evolving American Tradition

[1] The recent precipitous decline of print journalism as a viable profession has exacerbated long-held concerns about the state of investigative reporting in the United States. [2] Facing lower print circulation and diminished advertising revenue, many major newspapers have reduced or eliminated investigative resources. [3] Newspapers, the traditional nurturing ground for investigative journalism, have been hit especially hard by the widespread availability of free news online. [4] To survive, investigative journalism must continue to adapt to the digital age. **34**

    It is not difficult to understand why a cash-strapped, understaffed publication might feel pressure to cut teams of investigative **35** reporter's—their work is expensive and time-consuming. **36** Taking on the public interest, investigative journalism involves original, often long-form reporting on such topics as **37** illegal activities, street crime, corporate wrongdoing, and political corruption. An investigative story involves one or more experienced journalists dedicating their full energy and the resources of the publisher to a piece for a prolonged period of time. Expensive legal battles may ensue. The results of this work, though costly, have

34

For the sake of the logic and cohesion of the paragraph, sentence 3 should be

A) placed where it is now.
B) placed before sentence 1.
C) placed after sentence 1.
D) DELETED from the paragraph.

35

A) NO CHANGE
B) reporters:
C) reporters,
D) reporter's;

36

A) NO CHANGE
B) Undertaken in
C) Overtaking
D) Taking off from

37

A) NO CHANGE
B) business scandals,
C) abuse of government power,
D) DELETE the underlined portion.

helped keep those in power accountable. The exposure by *Washington Post* reporters Bob Woodward and Carl Bernstein of government misconduct in the Watergate scandal resulted in the resignation of President Richard Nixon in 1974. More recently, Seymour Hersh, reporting for the *New Yorker* in 2004, helped publicize the mistreatment of Iraqi prisoners by US personnel at Abu Ghraib during the Iraq War. **38** In these and other cases, exposure from reporters has served as an important **39** blockade to or scolding of malfeasance.

38

At this point, the writer is considering adding the following sentence.

> In 1954, Edward R. Murrow and Fred Friendly produced episodes of the CBS television show *See It Now* that contributed to the end of US senator Joseph McCarthy's anticommunist "witch hunts."

Should the writer make this addition here?

A) Yes, because it helps clarify that the passage's main focus is on investigations of political corruption.

B) Yes, because it offers an important counterpoint to the other cases previously described in the paragraph.

C) No, because it gives an example that is both chronologically and substantively out of place in the paragraph.

D) No, because it provides an example that is inconsistent with the passage's definition of investigative journalism.

39

A) NO CHANGE

B) interference to or condemnation of

C) drag on or reproof of

D) deterrent or rebuke to

While worrisome, the decline of traditional print media **40** could not entail the end of investigative journalism. **41** Although many newsrooms have reduced their staff, some still employ investigative reporters. Nonprofit **42** enterprises such as the Organized Crime and Corruption Reporting Project have begun to fill the void created by staff losses at newspapers and magazines. Enterprising freelance reporters, newly funded by nonprofits, make extensive use of social media,

40

Which choice most effectively suggests that the "end of investigative journalism" is a real possibility but one that can be prevented?

A) NO CHANGE
B) need
C) will
D) must

41

Which choice most effectively sets up the examples in the following sentences?

A) NO CHANGE
B) Investigative journalism also declined between the 1930s and 1950s, only to be revived in the 1960s.
C) According to the Pew Research Center, more people get their national and international news from the Internet than from newspapers.
D) Indeed, recent years have witnessed innovative adjustments to changing times.

42

A) NO CHANGE
B) enterprises: such as
C) enterprises such as:
D) enterprises, such as

including blogs and Twitter, to foster a public conversation about key issues. The Help Me Investigate project, [43] for example, solicited readers to submit tips and information related to ongoing stories to its website. Far from marking the end of investigative journalism, [44] cooperation among journalists and ordinary citizens has been facilitated by the advent of the digital age through an increase in the number of potential investigators.

A) NO CHANGE
B) therefore,
C) however,
D) in any case,

A) NO CHANGE
B) the number of potential investigators has increased since the advent of the digital age owing to the facilitation of cooperation among journalists and ordinary citizens.
C) the advent of the digital age has increased the number of potential investigators by facilitating cooperation among journalists and ordinary citizens.
D) by facilitating cooperation among journalists and ordinary citizens the advent of the digital age has increased the number of potential investigators.

STOP

**If you finish before time is called, you may check your work on this section only.
Do not turn to any other section.**

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5MSA05

Reading Test

65 MINUTES, 52 QUESTIONS

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

DIRECTIONS

Each passage or pair of passages below is followed by a number of questions. After reading each passage or pair, 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 Daniyal Mueenuddin, "Nawabdin Electrician." ©2009 by Daniyal Mueenuddin.

Another man might have thrown up his
hands—but not Nawabdin. His twelve daughters
acted as a spur to his genius, and he looked with
Line satisfaction in the mirror each morning at the face of
5 a warrior going out to do battle. Nawab of course
knew that he must proliferate his sources of
revenue—the salary he received from K. K. Harouni
for tending the tube wells would not even begin to
suffice. He set up a little one-room flour mill, run off
10 a condemned electric motor—condemned by him.
He tried his hand at fish-farming in a little pond at
the edge of his master's fields. He bought broken
radios, fixed them, and resold them. He did not
demur even when asked to fix watches, though that
15 enterprise did spectacularly badly, and in fact earned
him more kicks than kudos, for no watch he took
apart ever kept time again.
K. K. Harouni rarely went to his farms, but lived
mostly in Lahore. Whenever the old man visited,
20 Nawab would place himself night and day at the door
leading from the servants' sitting area into the walled
grove of ancient banyan trees where the old
farmhouse stood. Grizzled, his peculiar aviator

glasses bent and smudged, Nawab tended the
25 household machinery, the air conditioners, water
heaters, refrigerators, and water pumps, like an
engineer tending the boilers on a foundering steamer
in an Atlantic gale. By his superhuman efforts he
almost managed to maintain K. K. Harouni in the
30 same mechanical cocoon, cooled and bathed and
lighted and fed, that the landowner enjoyed in
Lahore.
Harouni of course became familiar with this
ubiquitous man, who not only accompanied him on
35 his tours of inspection, but morning and night could
be found standing on the master bed rewiring the
light fixture or in the bathroom poking at the water
heater. Finally, one evening at teatime, gauging the
psychological moment, Nawab asked if he might say
40 a word. The landowner, who was cheerfully filing his
nails in front of a crackling rosewood fire, told him
to go ahead.
"Sir, as you know, your lands stretch from here to
the Indus, and on these lands are fully seventeen tube
45 wells, and to tend these seventeen tube wells there is
but one man, me, your servant. In your service I have
earned these gray hairs"—here he bowed his head to
show the gray—"and now I cannot fulfill my duties
as I should. Enough, sir, enough. I beg you, forgive
50 me my weakness. Better a darkened house and proud
hunger within than disgrace in the light of day.
Release me, I ask you, I beg you."
The old man, well accustomed to these sorts of
speeches, though not usually this florid, filed away at
55 his nails and waited for the breeze to stop.
"What's the matter, Nawabdin?"

"Matter, sir? O what could be the matter in your service. I've eaten your salt for all my years. But sir, on the bicycle now, with my old legs, and with the
60 many injuries I've received when heavy machinery fell on me—I cannot any longer bicycle about like a bridegroom from farm to farm, as I could when I first had the good fortune to enter your employment. I beg you, sir, let me go."
65 "And what's the solution?" asked Harouni, seeing that they had come to the crux. He didn't particularly care one way or the other, except that it touched on his comfort—a matter of great interest to him. "Well, sir, if I had a motorcycle, then I could
70 somehow limp along, at least until I train up some younger man."
The crops that year had been good, Harouni felt expansive in front of the fire, and so, much to the disgust of the farm managers, Nawab received a
75 brand-new motorcycle, a Honda 70. He even managed to extract an allowance for gasoline.
The motorcycle increased his status, gave him weight, so that people began calling him "Uncle," and asking his opinion on world affairs, about which he
80 knew absolutely nothing. He could now range further, doing a much wider business. Best of all, now he could spend every night with his wife, who had begged to live not on the farm but near her family in Firoza, where also they could educate at
85 least the two eldest daughters. A long straight road ran from the canal headworks near Firoza all the way to the Indus, through the heart of the K. K. Harouni lands. Nawab would fly down this road on his new machine, with bags and cloths hanging from every
90 knob and brace, so that the bike, when he hit a bump, seemed to be flapping numerous small vestigial wings; and with his grinning face, as he rolled up to whichever tube well needed servicing, with his ears almost blown off, he shone with the speed of his
95 arrival.

1

The main purpose of the first paragraph is to

A) characterize Nawab as a loving father.

B) outline the schedule of a typical day in Nawab's life.

C) describe Nawab's various moneymaking ventures.

D) contrast Nawab's and Harouni's lifestyles.

2

As used in line 16, "kicks" most nearly means

A) thrills.

B) complaints.

C) jolts.

D) interests.

3

The author uses the image of an engineer at sea (lines 23-28) most likely to

A) suggest that Nawab often dreams of having a more exciting profession.

B) highlight the fact that Nawab's primary job is to tend to Harouni's tube wells.

C) reinforce the idea that Nawab has had many different occupations in his life.

D) emphasize how demanding Nawab's work for Harouni is.

4

Which choice best supports the claim that Nawab performs his duties for Harouni well?

A) Lines 28-32 ("By his . . . Lahore")

B) Lines 40-42 ("The landowner . . . ahead")

C) Lines 46-49 ("In your . . . should")

D) Line 58 ("I've . . . years")

6

Nawab uses the word "bridegroom" (line 62) mainly to emphasize that he's no longer

A) in love.

B) naive.

C) busy.

D) young.

5

In the context of the conversation between Nawab and Harouni, Nawab's comments in lines 43-52 ("Sir . . . beg you") mainly serve to

A) flatter Harouni by mentioning how vast his lands are.

B) boast to Harouni about how competent and reliable Nawab is.

C) emphasize Nawab's diligence and loyalty to Harouni.

D) notify Harouni that Nawab intends to quit his job tending the tube wells.

7

It can reasonably be inferred from the passage that Harouni provides Nawab with a motorcycle mainly because

A) Harouni appreciates that Nawab has to work hard to support his family.

B) Harouni sees benefit to himself from giving Nawab a motorcycle.

C) Nawab's speech is the most eloquent that Harouni has ever heard.

D) Nawab threatens to quit if Harouni doesn't agree to give him a motorcycle.

8

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

A) Lines 65-66 ("And . . . crux")

B) Lines 66-68 ("He didn't . . . him")

C) Lines 75-76 ("He even . . . gasoline")

D) Lines 80-81 ("He could . . . business")

9

The passage states that the farm managers react to Nawab receiving a motorcycle with

A) disgust.

B) happiness.

C) envy.

D) indifference.

10

According to the passage, what does Nawab consider to be the best result of getting the motorcycle?

A) People start calling him "Uncle."

B) He's able to expand his business.

C) He's able to educate his daughters.

D) He can spend more time with his wife.

Questions 11-21 are based on the following passage and supplementary material.

This passage is adapted from Stephen Coleman, Scott Anthony, and David E. Morrison, "Public Trust in the News." ©2009 by Stephen Coleman.

The news is a form of public knowledge. Unlike personal or private knowledge (such as the health of one's friends and family; the conduct of a
Line private hobby; a secret liaison), public knowledge
5 increases in value as it is shared by more people. The date of an election and the claims of rival candidates; the causes and consequences of an environmental disaster; a debate about how to frame a particular law; the latest reports from a war zone—these are all
10 examples of public knowledge that people are generally expected to know in order to be considered informed citizens. Thus, in contrast to personal or private knowledge, which is generally left to individuals to pursue or ignore, public knowledge is
15 promoted even to those who might not think it matters to them. In short, the circulation of public knowledge, including the news, is generally regarded as a public good which cannot be solely demand-driven.
20 The production, circulation, and reception of public knowledge is a complex process. It is generally accepted that public knowledge should be authoritative, but there is not always common agreement about what the public needs to
25 know, who is best placed to relate and explain it, and how authoritative reputations should be determined and evaluated. Historically, newspapers such as *The Times* and broadcasters such as the BBC were widely regarded as the trusted shapers of authoritative
30 agendas and conventional wisdom. They embodied the *Oxford English Dictionary*'s definition of authority as the "power over, or title to influence, the opinions of others." As part of the general process of the transformation of authority whereby there has
35 been a reluctance to uncritically accept traditional sources of public knowledge, the demand has been for all authority to make explicit the frames of value which determine their decisions. Centres of news production, as our focus groups show, have not been
40 exempt from this process. Not surprisingly perhaps some news journalists feel uneasy about this renegotiation of their authority:

Editors are increasingly casting a glance at the "most read" lists on their own and other websites
45 to work out which stories matter to readers and viewers. And now the audience—which used to know its place—is being asked to act as a kind of journalistic ombudsman, ruling on our credibility (broadcast journalist, 2008).

50 The result of democratising access to TV news could be political disengagement by the majority and a dumbing down through a popularity contest of stories (online news editor, 2007).

Despite the rhetorical bluster of these statements,
55 they amount to more than straightforward professional defensiveness. In their reference to an audience "which used to know its place" and conflation between democratisation and "dumbing down," they are seeking to argue for a particular
60 mode of public knowledge: one which is shaped by experts, immune from populist pressures; and disseminated to attentive, but mainly passive recipients. It is a view of citizenship that closes down opportunities for popular involvement in the making
65 of public knowledge by reinforcing the professional claims of experts. The journalists quoted above are right to feel uneasy, for there is, at almost every institutional level in contemporary society, scepticism towards the epistemological authority of
70 expert elites. There is a growing feeling, as expressed by several of our focus group participants, that the news media should be "informative rather than authoritative"; the job of journalists should be to "give the news as raw as it is, without putting their
75 slant on it"; and people should be given "sufficient information" from which "we would be able to form opinions of our own."

At stake here are two distinct conceptions of authority. The journalists we have quoted are
80 resistant to the democratisation of news: the supremacy of the clickstream (according to which editors raise or lower the profile of stories according to the number of readers clicking on them online); the parity of popular culture with "serious"
85 news; the demands of some audience members for raw news rather than constructed narratives.

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6

CONTINUE ➡

Percentage of Respondents Seeing News Stories
as Inaccurate or Favoring One Side

	1985	1992	2003	2007	2011
News organizations...					
• Get the facts straight	55	49	36	39	25
• Often have inaccurate stories	34	44	56	53	66
• Don't know	11	7	8	8	9
• Are pretty independent	37	35	23	23	15
• Are often influenced by powerful people and organizations	53	58	70	69	80
• Don't know	10	7	7	8	5
On political and social issues, news organizations...					
• Deal fairly with all sides	34	31	26	26	16
• Tend to favor one side	53	63	66	66	77
• Don't know	13	6	8	8	7

Adapted from "Pew Research Center for the People & the Press Report on
Views of the News Media, 1985–2011." ©2011 by Pew Research Center.

11

The main purpose of the passage is to

A) analyze the technological developments that have affected the production, circulation, and reception of news stories.

B) discuss changes in the perception of the news media as a source of public knowledge.

C) show how journalists' frames of value influence the production of news stories.

D) challenge the conventional view that news is a form of public knowledge.

12

According to the passage, which expectation do traditional authorities now face?

A) They should be uninfluenced by commercial considerations.

B) They should be committed to bringing about positive social change.

C) They should be respectful of the difference between public and private knowledge.

D) They should be transparent about their beliefs and assumptions.

13

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

A) Lines 2-5 ("Unlike . . . people")

B) Lines 20-21 ("The production . . . process")

C) Lines 33-38 ("As part . . . decisions")

D) Lines 43-46 ("Editors . . . viewers")

14

As used in line 24, "common" most nearly means

A) numerous.

B) familiar.

C) widespread.

D) ordinary.

15

The authors most likely include the extended quotations in lines 43-53 to

A) present contradictory examples.

B) cite representative opinions.

C) criticize typical viewpoints.

D) suggest viable alternatives.

16

The authors indicate that the public is coming to believe that journalists' reports should avoid

A) personal judgments about the events reported.

B) more information than is absolutely necessary.

C) quotations from authorities on the subject matter.

D) details that the subjects of news reports wish to keep private.

17

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

A) Lines 12-16 ("Thus . . . them")

B) Lines 30-33 ("They . . . others")

C) Lines 40-42 ("Not surprisingly . . . authority")

D) Lines 70-77 ("There . . . own")

18

As used in line 74, "raw" most nearly means

A) unfiltered.

B) exposed.

C) harsh.

D) inexperienced.

19

Based on the table, in which year were people the most trusting of the news media?

A) 1985

B) 1992

C) 2003

D) 2011

20

Which statement is best supported by information presented in the table?

A) Between 1985 and 2011, the proportion of inaccurate news stories rose dramatically.

B) Between 1992 and 2003, the proportion of people who believed that news organizations were biased almost doubled.

C) Between 2003 and 2007, people's views of the accuracy, independence, and fairness of news organizations changed very little.

D) Between 2007 and 2011, people's perception that news organizations are accurate increased, but people's perception that news organizations are fair diminished.

21

The 2011 data in the table best serve as evidence of

A) "political disengagement by the majority" (line 51).

B) "the professional claims of experts" (lines 65-66).

C) "scepticism towards the epistemological authority of expert elites" (lines 69-70).

D) "the supremacy of the clickstream" (line 81).

Questions 22-32 are based on the following passage.

This passage is adapted from Elsa Youngsteadt, "Decoding a Flower's Message." ©2012 by Sigma Xi, The Scientific Research Society.

Texas gourd vines unfurl their large, flared blossoms in the dim hours before sunrise. Until they close at noon, their yellow petals and mild, squashy
Line aroma attract bees that gather nectar and shuttle
5 pollen from flower to flower. But "when you advertise [to pollinators], you advertise in an open communication network," says chemical ecologist Ian Baldwin of the Max Planck Institute for Chemical Ecology in Germany. "You attract not just
10 the good guys, but you also attract the bad guys." For a Texas gourd plant, striped cucumber beetles are among the very bad guys. They chew up pollen and petals, defecate in the flowers and transmit the dreaded bacterial wilt disease, an infection that can
15 reduce an entire plant to a heap of collapsed tissue in mere days.

In one recent study, Nina Theis and Lynn Adler took on the specific problem of the Texas gourd—how to attract enough pollinators but not
20 too many beetles. The Texas gourd vine's main pollinators are honey bees and specialized squash bees, which respond to its floral scent. The aroma includes 10 compounds, but the most abundant—and the only one that lures squash bees
25 into traps—is 1,4-dimethoxybenzene.

Intuition suggests that more of that aroma should be even more appealing to bees. "We have this assumption that a really fragrant flower is going to attract a lot of pollinators," says Theis, a chemical
30 ecologist at Elms College in Chicopee, Massachusetts. But, she adds, that idea hasn't really been tested—and extra scent could well call in more beetles, too. To find out, she and Adler planted 168 Texas gourd vines in an Iowa field and,
35 throughout the August flowering season, made half the plants more fragrant by tucking dimethoxybenzene-treated swabs deep inside their flowers. Each treated flower emitted about 45 times more fragrance than a normal one; the other half of
40 the plants got swabs without fragrance.

The researchers also wanted to know whether extra beetles would impose a double cost by both damaging flowers and deterring bees, which might not bother to visit (and pollinate) a flower laden with
45 other insects and their feces. So every half hour throughout the experiments, the team plucked all the beetles off of half the fragrance-enhanced flowers and half the control flowers, allowing bees to respond to the blossoms with and without interference by
50 beetles.

Finally, they pollinated by hand half of the female flowers in each of the four combinations of fragrance and beetles. Hand-pollinated flowers should develop into fruits with the maximum number of seeds,
55 providing a benchmark to see whether the fragrance-related activities of bees and beetles resulted in reduced pollination.

"It was very labor intensive," says Theis. "We would be out there at four in the morning, three
60 in the morning, to try and set up before these flowers open." As soon as they did, the team spent the next several hours walking from flower to flower, observing each for two-minute intervals "and writing down everything we saw."

65 What they saw was double the normal number of beetles on fragrance-enhanced blossoms. Pollinators, to their surprise, did not prefer the highly scented flowers. Squash bees were indifferent, and honey bees visited enhanced flowers less often
70 than normal ones. Theis thinks the bees were repelled not by the fragrance itself, but by the abundance of beetles: The data showed that the more beetles on a flower, the less likely a honey bee was to visit it.

75 That added up to less reproduction for fragrance-enhanced flowers. Gourds that developed from those blossoms weighed 9 percent less and had, on average, 20 fewer seeds than those from normal flowers. Hand pollination didn't rescue the seed set,
80 indicating that beetles damaged flowers directly —regardless of whether they also repelled pollinators. (Hand pollination did rescue fruit weight, a hard-to-interpret result that suggests that lost bee visits did somehow harm fruit development.)

85 The new results provide a reason that Texas gourd plants never evolved to produce a stronger scent: "If you really ramp up the odor, you don't get more pollinators, but you can really get ripped apart by your enemies," says Rob Raguso, a chemical ecologist
90 at Cornell University who was not involved in the Texas gourd study.

22

The primary purpose of the passage is to

A) discuss the assumptions and reasoning behind a theory.

B) describe the aim, method, and results of an experiment.

C) present and analyze conflicting data about a phenomenon.

D) show the innovative nature of a procedure used in a study.

23

As presented in the passage, Theis and Adler's research primarily relied on which type of evidence?

A) Direct observation

B) Historical data

C) Expert testimony

D) Random sampling

24

Which statement about striped cucumber beetles can most reasonably be inferred from the passage?

A) They feed primarily on Texas gourd plants.

B) They are less attracted to dimethoxybenzene than honey bees are.

C) They experience only minor negative effects as a result of carrying bacterial wilt disease.

D) They are attracted to the same compound in Texas gourd scent that squash bees are.

25

The author indicates that it seems initially plausible that Texas gourd plants could attract more pollinators if they

A) did not have aromatic flowers.

B) targeted insects other than bees.

C) increased their floral scent.

D) emitted more varied fragrant compounds.

26

As used in line 38, "treated" most nearly means

A) altered.
B) restored.
C) provided.
D) preserved.

27

What did Theis and Adler do as part of their study that most directly allowed Theis to reason that "bees were repelled not by the fragrance itself" (lines 70-71)?

A) They observed the behavior of bees and beetles both before and after the flowers opened in the morning.
B) They increased the presence of 1,4-dimethoxybenzene only during the August flowering season.
C) They compared the gourds that developed from naturally pollinated flowers to the gourds that developed from hand-pollinated flowers.
D) They gave bees a chance to choose between beetle-free enhanced flowers and beetle-free normal flowers.

28

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

A) Lines 45-50 ("So every . . . beetles")
B) Lines 51-53 ("Finally . . . beetles")
C) Lines 59-61 ("We would . . . open")
D) Lines 76-79 ("Gourds . . . flowers")

29

The primary function of the seventh and eighth paragraphs (lines 65-84) is to

A) summarize Theis and Adler's findings.
B) describe Theis and Adler's hypotheses.
C) illustrate Theis and Adler's methods.
D) explain Theis and Adler's reasoning.

30

In describing squash bees as "indifferent" (line 68), the author most likely means that they

A) could not distinguish enhanced flowers from normal flowers.

B) visited enhanced flowers and normal flowers at an equal rate.

C) largely preferred normal flowers to enhanced flowers.

D) were as likely to visit beetle-infested enhanced flowers as to visit beetle-free enhanced flowers.

31

According to the passage, Theis and Adler's research offers an answer to which of the following questions?

A) How can Texas gourd plants increase the number of visits they receive from pollinators?

B) Why is there an upper limit on the intensity of the aroma emitted by Texas gourd plants?

C) Why does hand pollination rescue the fruit weight of beetle-infested Texas gourd plants?

D) Why do Texas gourd plants stop producing fragrance attractive to pollinators when beetles are present?

32

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

A) Lines 17-20 ("In one . . . beetles")

B) Lines 22-25 ("The aroma . . . 1,4-dimethoxybenzene")

C) Lines 79-84 ("Hand . . . development")

D) Lines 85-86 ("The new . . . scent")

Questions 33-42 are based on the following passages.

Passage 1 is adapted from Abraham Lincoln, "Address to the Young Men's Lyceum of Springfield, Illinois." Originally delivered in 1838. Passage 2 is from Henry David Thoreau, "Resistance to Civil Government." Originally published in 1849.

Passage 1

Let every American, every lover of liberty, every well wisher to his posterity, swear by the blood of the Revolution, never to violate in the least particular,
Line the laws of the country; and never to tolerate their
5 violation by others. As the patriots of seventy-six did to the support of the Declaration of Independence, so to the support of the Constitution and Laws, let every American pledge his life, his property, and his sacred honor;—let every man remember that to violate the
10 law, is to trample on the blood of his father, and to tear the character of his own, and his children's liberty. Let reverence for the laws, be breathed by every American mother, to the lisping babe, that prattles on her lap—let it be taught in schools, in
15 seminaries, and in colleges;—let it be written in Primers, spelling books, and in Almanacs;—let it be preached from the pulpit, proclaimed in legislative halls, and enforced in courts of justice. And, in short, let it become the *political religion* of the nation;
20 and let the old and the young, the rich and the poor, the grave and the gay, of all sexes and tongues, and colors and conditions, sacrifice unceasingly upon its altars. . . .

When I so pressingly urge a strict observance of
25 all the laws, let me not be understood as saying there are no bad laws, nor that grievances may not arise, for the redress of which, no legal provisions have been made. I mean to say no such thing. But I do mean to say, that, although bad laws, if they exist,
30 should be repealed as soon as possible, still while they continue in force, for the sake of example, they should be religiously observed. So also in unprovided cases. If such arise, let proper legal provisions be made for them with the least possible delay; but, till
35 then, let them if not too intolerable, be borne with.

There is no grievance that is a fit object of redress by mob law. In any case that arises, as for instance, the promulgation of abolitionism, one of two positions is necessarily true; that is, the thing is right
40 within itself, and therefore deserves the protection of all law and all good citizens; or, it is wrong, and therefore proper to be prohibited by legal enactments; and in neither case, is the interposition of mob law, either necessary, justifiable, or excusable.

Passage 2

45 Unjust laws exist; shall we be content to obey them, or shall we endeavor to amend them, and obey them until we have succeeded, or shall we transgress them at once? Men generally, under such a government as this, think that they ought to wait
50 until they have persuaded the majority to alter them. They think that, if they should resist, the remedy would be worse than the evil. But it is the fault of the government itself that the remedy is worse than the evil. It makes it worse. Why is it not more apt to
55 anticipate and provide for reform? Why does it not cherish its wise minority? Why does it cry and resist before it is hurt? . . .

If the injustice is part of the necessary friction of the machine of government, let it go, let it go;
60 perchance it will wear smooth—certainly the machine will wear out. If the injustice has a spring, or a pulley, or a rope, or a crank, exclusively for itself, then perhaps you may consider whether the remedy will not be worse than the evil; but if it is of such a
65 nature that it requires you to be the agent of injustice to another, then, I say, break the law. Let your life be a counter friction to stop the machine. What I have to do is to see, at any rate, that I do not lend myself to the wrong which I condemn.
70 As for adopting the ways which the State has provided for remedying the evil, I know not of such ways. They take too much time, and a man's life will be gone. I have other affairs to attend to. I came into this world, not chiefly to make this a good place to
75 live in, but to live in it, be it good or bad. A man has not everything to do, but something; and because he cannot do everything, it is not necessary that he should do something wrong. . . .

I do not hesitate to say, that those who call
80 themselves Abolitionists should at once effectually
withdraw their support, both in person and property,
from the government . . . and not wait till they
constitute a majority of one, before they suffer the
right to prevail through them. I think that it is
85 enough if they have God on their side, without
waiting for that other one. Moreover, any man more
right than his neighbors constitutes a majority of one
already.

33

In Passage 1, Lincoln contends that breaking the law
has which consequence?

A) It slows the repeal of bad laws.

B) It undermines and repudiates the nation's values.

C) It leads slowly but inexorably to rule by the mob.

D) It creates divisions between social groups.

34

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

A) Lines 9-12 ("let every man . . . liberty")

B) Lines 20-23 ("and let . . . altars")

C) Lines 33-35 ("If such . . . borne with")

D) Lines 36-37 ("There . . . law")

35

As used in line 24, "urge" most nearly means

A) hasten.

B) stimulate.

C) require.

D) advocate.

36

The sentence in lines 24-28 ("When . . . made")
primarily serves which function in Passage 1?

A) It raises and refutes a potential counterargument
to Lincoln's argument.

B) It identifies and concedes a crucial shortcoming
of Lincoln's argument.

C) It acknowledges and substantiates a central
assumption of Lincoln's argument.

D) It anticipates and corrects a possible
misinterpretation of Lincoln's argument.

37

As used in line 32, "observed" most nearly means

A) followed.

B) scrutinized.

C) contemplated.

D) noticed.

38

In Passage 2, Thoreau indicates that some unjust aspects of government are

A) superficial and can be fixed easily.

B) subtle and must be studied carefully.

C) self-correcting and may be beneficial.

D) inevitable and should be endured.

39

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

A) Lines 45-48 ("Unjust . . . once")

B) Lines 51-52 ("They . . . evil")

C) Lines 58-59 ("If the injustice . . . go")

D) Lines 75-78 ("A man . . . wrong")

40

The primary purpose of each passage is to

A) make an argument about the difference between legal duties and moral imperatives.

B) discuss how laws ought to be enacted and changed in a democracy.

C) advance a view regarding whether individuals should follow all of the country's laws.

D) articulate standards by which laws can be evaluated as just or unjust.

41

Based on the passages, Lincoln would most likely describe the behavior that Thoreau recommends in lines 64-66 ("if it ... law") as

A) an excusable reaction to an intolerable situation.

B) a rejection of the country's proper forms of remedy.

C) an honorable response to an unjust law.

D) a misapplication of a core principle of the Constitution.

42

Based on the passages, one commonality in the stances Lincoln and Thoreau take toward abolitionism is that

A) both authors see the cause as warranting drastic action.

B) both authors view the cause as central to their argument.

C) neither author expects the cause to win widespread acceptance.

D) neither author embraces the cause as his own.

Questions 43-52 are based on the following passage and supplementary material.

This passage is adapted from Kevin Bullis, "What Tech Is Next for the Solar Industry?" ©2013 by MIT Technology Review.

Solar panel installations continue to grow quickly, but the solar panel manufacturing industry is in the doldrums because supply far exceeds demand. The
Line poor market may be slowing innovation, but
5 advances continue; judging by the mood this week at the IEEE Photovoltaics Specialists Conference in Tampa, Florida, people in the industry remain optimistic about its long-term prospects.

The technology that's surprised almost everyone
10 is conventional crystalline silicon. A few years ago, silicon solar panels cost $4 per watt, and Martin Green, professor at the University of New South Wales and one of the leading silicon solar panel researchers, declared that they'd never go
15 below $1 a watt. "Now it's down to something like 50 cents a watt, and there's talk of hitting 36 cents per watt," he says.

The U.S. Department of Energy has set a goal of reaching less than $1 a watt—not just for the solar
20 panels, but for complete, installed systems—by 2020. Green thinks the solar industry will hit that target even sooner than that. If so, that would bring the direct cost of solar power to six cents per kilowatt-hour, which is cheaper than the average cost
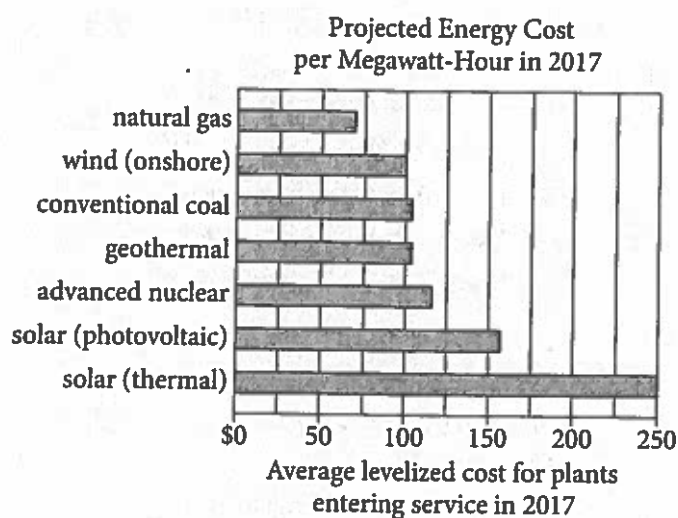25 expected for power from new natural gas power plants.

All parts of the silicon solar panel industry have been looking for ways to cut costs and improve the power output of solar panels, and that's led to steady
30 cost reductions. Green points to something as mundane as the pastes used to screen-print some of the features on solar panels. Green's lab built a solar cell in the 1990s that set a record efficiency for silicon solar cells—a record that stands to this day. To
35 achieve that record, he had to use expensive lithography techniques to make fine wires for collecting current from the solar cell. But gradual improvements have made it possible to use screen printing to produce ever-finer lines. Recent research
40 suggests that screen-printing techniques can produce lines as thin as 30 micrometers—about the width of the lines Green used for his record solar cells, but at costs far lower than his lithography techniques.

Meanwhile, researchers at the National Renewable
45 Energy Laboratory have made flexible solar cells on a new type of glass from Corning called Willow Glass, which is thin and can be rolled up. The type of solar cell they made is the only current challenger to silicon in terms of large-scale production—thin-film
50 cadmium telluride. Flexible solar cells could lower the cost of installing solar cells, making solar power cheaper.

One of Green's former students and colleagues, Jianhua Zhao, cofounder of solar panel manufacturer
55 China Sunergy, announced this week that he is building a pilot manufacturing line for a two-sided solar cell that can absorb light from both the front and back. The basic idea, which isn't new, is that during some parts of the day, sunlight falls on the
60 land between rows of solar panels in a solar power plant. That light reflects onto the back of the panels and could be harvested to increase the power output. This works particularly well when the solar panels are built on sand, which is highly reflective. Where a
65 one-sided solar panel might generate 340 watts, a two-sided one might generate up to 400 watts. He expects the panels to generate 10 to 20 percent more electricity over the course of a year.

Even longer-term, Green is betting on silicon,
70 aiming to take advantage of the huge reductions in cost already seen with the technology. He hopes to greatly increase the efficiency of silicon solar panels by combining silicon with one or two other semiconductors, each selected to efficiently convert a
75 part of the solar spectrum that silicon doesn't convert efficiently. Adding one semiconductor could boost efficiencies from the 20 to 25 percent range to around 40 percent. Adding another could make efficiencies as high as 50 percent feasible, which
80 would cut in half the number of solar panels needed for a given installation. The challenge is to produce good connections between these semiconductors, something made challenging by the arrangement of silicon atoms in crystalline silicon.
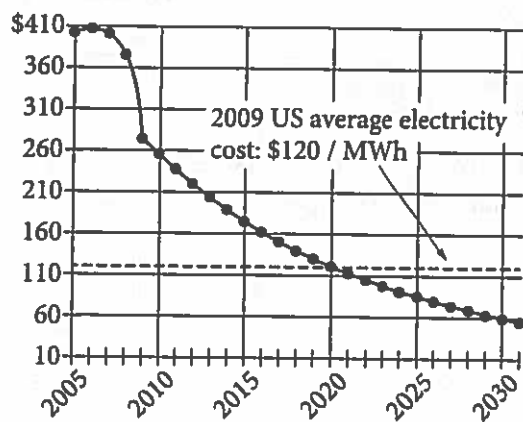
Figure 1

Projected Energy Cost
per Megawatt-Hour in 2017

Average levelized cost for plants
entering service in 2017

Adapted from Peter Schwartz, "Abundant Natural Gas and Oil Are
Putting the Kibosh on Clean Energy." ©2012 by Condé Nast.

Figure 2

Solar Photovoltaic Cost per Megawatt-Hour (MWh)
(Projected beyond 2009. All data in 2009 dollars.)

Adapted from Ramez Naam, "Smaller, Cheaper, Faster: Does
Moore's Law Apply to Solar Cells?" ©2011 by Scientific American.

43

The passage is written from the point of view of a

A) consumer evaluating a variety of options.
B) scientist comparing competing research methods.
C) journalist enumerating changes in a field.
D) hobbyist explaining the capabilities of new technology.

44

As used in line 4, "poor" most nearly means

A) weak.
B) humble.
C) pitiable.
D) obsolete.

45

It can most reasonably be inferred from the passage that many people in the solar panel industry believe that

A) consumers don't understand how solar panels work.
B) two-sided cells have weaknesses that have not yet been discovered.
C) the cost of solar panels is too high and their power output too low.
D) Willow Glass is too inefficient to be marketable.

46

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

A) Lines 1-3 ("Solar . . . demand")
B) Lines 10-15 ("A few . . . a watt")
C) Lines 22-26 ("If so . . . plants")
D) Lines 27-30 ("All . . . reductions")

47

According to the passage, two-sided solar panels will likely raise efficiency by

A) requiring little energy to operate.
B) absorbing reflected light.
C) being reasonably inexpensive to manufacture.
D) preventing light from reaching the ground.

48

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

A) Lines 58-61 ("The basic . . . plant")
B) Lines 61-62 ("That . . . output")
C) Lines 63-64 ("This . . . reflective")
D) Lines 64-66 ("Where . . . 400 watts")

49

As used in line 69, "betting on" most nearly means

A) dabbling in.

B) gambling with.

C) switching from.

D) optimistic about.

50

The last sentence of the passage mainly serves to

A) express concern about the limitations of a material.

B) identify a hurdle that must be overcome.

C) make a prediction about the effective use of certain devices.

D) introduce a potential new area of study.

51

According to figure 1, in 2017, the cost of which of the following fuels is projected to be closest to the 2009 US average electricity cost shown in figure 2?

A) Natural gas

B) Wind (onshore)

C) Conventional coal

D) Advanced nuclear

52

According to figure 2, in what year is the average cost of solar photovoltaic power projected to be equal to the 2009 US average electricity cost?

A) 2018

B) 2020

C) 2025

D) 2027

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section.

Writing and Language Test
35 MINUTES, 44 QUESTIONS

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

Questions 1-11 are based on the following passage.

A Necessary Resource for Science

In the winter of 1968, scientists David Schindler and Gregg Brunskill poured nitrates and phosphates into Lake **[1]** 227, this is one of the 58 freshwater bodies that compose Canada's remotely located Experimental Lakes Area. Schindler and Brunskill were contaminating the water not out of malice but in the name of research. While deliberately adding chemical compounds to a lake may seem **[2]** destructive and irresponsible, this method of experimenting is sometimes the most effective way to influence policy and save the environment from even more damaging pollution.

[1]
A) NO CHANGE
B) 227. Which is one
C) 227. One
D) 227, one

[2]
A) NO CHANGE
B) destructive, and irresponsible this method
C) destructive and, irresponsible, this method
D) destructive and irresponsible this method,

CONTINUE

Schindler and Brunskill were investigating possible causes for the large blooms of blue-green algae, or cyanobacteria, that had been affecting bodies of water such as Lake Erie. **3** In addition to being unsightly and odorous, these algal blooms cause oxygen depletion. Oxygen depletion kills fish and other wildlife in the lakes. Just weeks after the scientists added the nitrates and phosphates, the water in Lake 227 turned bright **4** green. It was thick with: the same type of algal blooms that had plagued Lake Erie.

3

Which choice most effectively combines the underlined sentences?

A) In addition to being unsightly and odorous, these algal blooms cause oxygen depletion: the result being that it kills fish and other wildlife in the lakes.

B) In addition to being unsightly and odorous, these algal blooms cause oxygen depletion; the algal blooms cause oxygen depletion that kills fish and other wildlife in the lakes.

C) In addition to being unsightly and odorous, these algal blooms cause oxygen depletion, and oxygen depletion caused by the algal blooms kills fish and other wildlife in the lakes.

D) In addition to being unsightly and odorous, these algal blooms cause oxygen depletion, which kills fish and other wildlife in the lakes.

4

A) NO CHANGE

B) green: it was thick with

C) green. It was thick with—

D) green, it was thick with

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23

CONTINUE

[5] One mission of the Experimental Lakes Area is to conduct research that helps people better understand threats to the environment. The scientists divided the lake in half by placing a nylon barrier through the narrowest part of its figure-eight shape. In one half of Lake 226, they added phosphates, nitrates, and a source of carbon; in the other, they added just nitrates [6] and a source of carbon was added. Schindler and Brunskill hypothesized that phosphates were responsible for the growth of cyanobacteria. The experiment confirmed their suspicions when the half of the lake containing the phosphates [7] was teeming with blue-green algae.

[5]

Which choice provides the best transition from the previous paragraph to this one?

A) NO CHANGE

B) The Experimental Lakes Area is located in a sparsely inhabited region that experiences few effects of human and industrial activity.

C) To isolate the cause of the algae, Schindler and Brunskill performed another experiment, this time using Lake 226.

D) The process by which water becomes enriched by dissolved nutrients, such as phosphates, is called eutrophication.

[6]

A) NO CHANGE

B) and a source of carbon.

C) plus also a source of carbon.

D) but also adding a source of carbon.

[7]

A) NO CHANGE

B) were teeming

C) are teeming

D) teems

Schindler and Brunskill's findings were [8] shown off by the journal *Science*. The research demonstrated a clear correlation between introducing phosphates and the growth of blue-green algae. [9] For example, legislators in Canada passed laws banning phosphates in laundry detergents, which had been entering the water supply. [10]

[8]

A) NO CHANGE
B) put in the spotlight of
C) published in
D) put into

[9]

A) NO CHANGE
B) Similarly,
C) However,
D) Subsequently,

[10]

At this point, the writer wants to add a second policy outcome of the research described. Which choice best accomplishes this goal?

A) Lake 226 continued to develop blooms of blue-green algae for eight consecutive years after the experiment took place.
B) In the United States, many individual states have also adopted legislation to eliminate, or at least reduce, phosphorous content in laundry detergents.
C) In 1974, Schindler initiated a study of the effects of acid rain, using Lake 223 to examine how sulfuric acid altered aquatic ecosystems.
D) Aerial photos of the lakes taken before and during algal blooms helped convey the effects of phosphates in water to the public.

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25

CONTINUE

Experiments like these can help people understand the unintended consequences of using certain household products. **11** Of course, regulating the use of certain chemical compounds can be a controversial issue. Selectively establishing remote study locations, such as the Experimental Lakes Area, can provide scientists with opportunities to safely conduct controlled research. This research can generate evidence solid enough to persuade policy makers to take action in favor of protecting the larger environment.

11

Which choice most effectively anticipates and addresses a relevant counterargument to the argument in favor of the types of experiments described in the passage?

A) NO CHANGE

B) Many companies now offer phosphate-free alternatives for household cleaning products.

C) Obviously, scientists should not be allowed to randomly perform experiments on just any body of water.

D) Phosphates are sometimes used in agricultural fertilizers, in addition to being used in cleaning products.

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26

CONTINUE

Questions 12-22 are based on the following passage.

A Little to the Left, but Not Too Much!

Italy's Tower of Pisa has been leaning southward since the initial [12] stages of it's construction over 800 years ago. [13] Indeed, if the tower's construction had not taken two centuries and involved significant breaks due to war and civil unrest, which allowed the ground beneath the tower to settle, the tower would likely have collapsed before it was completed.

[12]

A) NO CHANGE
B) stage's of its'
C) stage's of it's
D) stages of its

[13]

A) NO CHANGE
B) Therefore,
C) Nevertheless,
D) However,

Luckily, the tower survived, and its tilt has made it an Italian **14** icon, it attracts visitors from all over who flock to Pisa to see one of the greatest architectural **15** weirdnesses in the world. **16** By the late twentieth century, the angle of the tower's tilt had reached an astonishing 5.5 degrees; in **17** 1990, Italy's government closed the tower to visitors and appointed a committee to find a way to save it.

14

A) NO CHANGE
B) icon, attracting
C) icon, its attracting
D) icon; attracting

15

A) NO CHANGE
B) deviations
C) oddities
D) abnormalities

16

At this point, the writer is considering adding the following sentence.

> Unfortunately, the tower's tilt has steadily increased over the centuries, placing the structure in danger of collapse.

Should the writer make this addition here?

A) Yes, because it provides an important restatement of the main claim in the previous sentence.
B) Yes, because it establishes an important shift in emphasis in the paragraph's discussion about the tower's tilt.
C) No, because it interrupts the paragraph's discussion with irrelevant information.
D) No, because it repeats information that is already presented in the first paragraph.

17

A) NO CHANGE
B) 1990, Italy's government, closed
C) 1990 Italy's government, closed,
D) 1990: Italy's government closed

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28

The committee was charged with saving the tower without ruining its aesthetic, **18** which no one had yet managed to achieve. The committee's first attempt to reduce the angle of the tower's tilt—placing 600 tons of iron ingots (molded pieces of metal) on the tower's north side to create a counterweight—was derided because the bulky weights ruined the tower's appearance. The attempt at a less visible solution—sinking anchors into the ground below the tower—almost caused the tower to fall.

18

Which choice best supports the main point of the paragraph?

A) NO CHANGE

B) although not everyone on the committee agreed completely about what that aesthetic was.

C) which meant somehow preserving the tower's tilt while preventing that tilt from increasing and toppling the tower.

D) which included the pristine white marble finish that has come to be widely associated with the tower's beauty.

CONTINUE

[1] Enter committee member John Burland, [19] he is a geotechnical engineer from England who saved London's clock tower Big Ben from collapse. [2] Burland began a years-long process of drilling out small amounts of soil from under the tower [20] that took several years to complete and then monitoring the tower's resulting movement. [3] Twice daily, Burland evaluated these movements and made recommendations as to how much soil should be removed in the next drilling. [4] By 2001, almost 77 tons of soil had been removed, and the tower's tilt had decreased by over 1.5 degrees; the ugly iron weights were removed, and the tower was reopened to visitors. [5] Burland [21] advocated using soil extraction: removing small amounts of soil from under the tower's north side, opposite its tilt, to enable gravity to straighten the tower. [22]

The tower's tilt has not increased since, and the committee is confident that the tower will be safe for another 200 years. Burland is now working on a more permanent solution for keeping the tower upright, but he is adamant that the tower never be completely straightened. In an interview with PBS's *Nova*, Burland explained that it is very important "that we don't really change the character of the monument. That would be quite wrong and quite inappropriate."

[19]
A) NO CHANGE
B) Burland is
C) his being
D) DELETE the underlined portion.

[20]
A) NO CHANGE
B) —taking several years to complete—
C) that took him several years to complete
D) DELETE the underlined portion.

[21]
A) NO CHANGE
B) advocated to use
C) advocated the using of
D) advocating to use

[22]
To make this paragraph most logical, sentence 5 should be

A) placed after sentence 1.
B) placed after sentence 2.
C) placed after sentence 3.
D) DELETED from the paragraph.

Questions 23-33 are based on the following passage and supplementary material.

The Physician Assistant Will See You Now

    [23] The term "paramedics" refers to health care workers who provide routine and clinical services. While the pressures of an aging population, insurance reforms, and health epidemics have increased demand for care, the supply of physicians is not expected to [24] keep pace. The Association of American Medical Colleges predicts a shortage of over 90,000 physicians by 2020; by 2025, that number could climb to more than 130,000. In some parts of the country, shortages are already a sad fact of life. A 2009 report by the Bureau of Health Professions notes that although a fifth of the US population lives in rural areas, less than a tenth of US physicians serves that population. Because a traditionalist response to the crisis—[25] amping up medical-college enrollments and expanding physician training programs—is too slow and costly to address the near-term problem, alternatives are being explored. One promising avenue has been greater reliance on physician assistants (PAs).

[23]

Which choice is the best introduction to the paragraph?

A) NO CHANGE
B) For many Americans, finding a physician is likely to become a growing challenge.
C) Getting treatment for an illness usually requires seeing either a general practitioner or a specialist.
D) Worldwide the costs of health care are increasing at an alarming rate.

[24]

A) NO CHANGE
B) maintain the tempo.
C) get in line.
D) move along.

[25]

A) NO CHANGE
B) bolstering
C) arousing
D) revving up

CONTINUE

[26] By virtue of [27] there medical training, PAs can perform many of the jobs traditionally done by doctors, including treating chronic and acute conditions, performing minor [28] surgeries: and prescribing some medications. However, although well [29] compensated earning in 2012 a median annual salary of $90,930, PAs cost health care providers less than do the physicians who

At this point, the writer is considering adding the following sentence.

> Several factors argue in favor of such an expanded role.

Should the writer make this addition here?

A) Yes, because it introduces a counterargument for balance.

B) Yes, because it frames the points that the paragraph will examine.

C) No, because it does not specify the education required to be a PA.

D) No, because it presents information that is only tangential to the main argument.

A) NO CHANGE
B) they're
C) their
D) his or her

A) NO CHANGE
B) surgeries; and
C) surgeries, and,
D) surgeries, and

A) NO CHANGE

B) compensated (earning in 2012 a median annual salary of $90,930),

C) compensated, earning in 2012 a median annual salary of $90,930

D) compensated: earning in 2012 a median annual salary of $90,930,

might otherwise undertake these tasks. Moreover, the training period for PAs is markedly shorter than [30] those for physicians—two to three years versus the seven to eleven required for physicians.

Physician assistants already offer vital primary care in many locations. Some 90,000 PAs were employed nationwide in 2012. Over and above their value in partially compensating for the general physician shortage has been their extraordinary contribution to rural health care. A recent review of the scholarly literature by Texas researchers found that PAs lend cost-efficient, widely appreciated services in underserved areas. [31] In addition, rural-based PAs often provide a broader spectrum of such services than do their urban and suburban counterparts, possibly as a consequence of the limited pool of rural-based physicians.

[30]
A) NO CHANGE
B) that compared with
C) that for
D) DELETE the underlined portion.

[31]
A) NO CHANGE
B) Thus,
C) Despite this,
D) On the other hand,

Increasingly, PAs and other such medical practitioners have become a critical complement to physicians. A 2013 RAND Corporation report estimates that while the number of primary care physicians will increase slowly from 2010 to 2025, the number of physician assistants and nurse-practitioners in primary care will grow at much faster rates. [32] Both by merit and from necessity, PAs are likely to greet more [33] patience than ever before.

Supply of Physicians, Physician Assistants,
and Nurse-Practitioners in Primary Care
Clinical Practice in 2010 and 2025

Provider type	2010		2025 (predicted)	
	Number	Percent of total	Number	Percent of total
Physicians	210,000	71	216,000	60
Physician assistants	30,000	10	42,000	12
Nurse-practitioners	56,000	19	103,000	28
Total	296,000	100	361,000	100

Adapted from David I. Auerbach et al., "Nurse-Managed Health Centers and Patient-Centered Medical Homes Could Mitigate Expected Primary Care Physician Shortage." ©2013 by Project HOPE: The People-to-People Health Foundation, Inc.

[32]

At this point, the writer is considering adding the following sentence.

> In fact, according to the data presented in the table, physician assistants will likely outnumber physicians by 2025.

Should the writer make this addition here?

A) Yes, because it provides additional support for the main point of the paragraph.

B) Yes, because it addresses a possible counterargument to the writer's main claim.

C) No, because it is not an accurate interpretation of the data.

D) No, because it introduces irrelevant information that interrupts the flow of the passage.

[33]

A) NO CHANGE

B) patience, than

C) patients then

D) patients than

Questions 34-44 are based on the following passage.

Gold into Silver: The "Reverse Alchemy" of Superhero Comics History

34 Popular film franchises are often "rebooted" in an effort to make their characters and stories fresh and relevant for new audiences. Superhero comic books are periodically reworked to try to increase their appeal to contemporary readers. This practice is almost as 35 elderly as the medium itself and has in large part established the "ages" that compose comic book history. The shift from the Golden to the Silver Age is probably the most successful 36 example: of publishers responding to changing times and tastes.

Which choice most effectively combines the underlined sentences?

A) In an effort to make their characters and stories fresh and relevant for new audiences, popular film franchises, which are often "rebooted," are similar to superhero comic books, which are periodically reworked to try to increase their appeal to contemporary readers.

B) Just as popular film franchises are often "rebooted" in an effort to make their characters and stories fresh and relevant for new audiences, superhero comic books are periodically reworked to try to increase their appeal to contemporary readers.

C) Superhero comic books are periodically reworked to try to increase their appeal to contemporary readers, while popular film franchises are often "rebooted" in an effort to make their characters and stories fresh and relevant for new audiences.

D) Superhero comic books are much like popular film franchises in being often "rebooted" in an effort to make their characters and stories fresh and relevant for new audiences and periodically reworked to try to increase their appeal to contemporary readers.

A) NO CHANGE
B) old
C) mature
D) geriatric

A) NO CHANGE
B) example, of publishers
C) example of publishers,
D) example of publishers

The start of the first ("Golden") age of comic books is often dated to 1938 with the debut of Superman in *Action Comics* #1. Besides beginning the age, Superman in many respects defined it, becoming the model on which many later superheroes were based. His characterization, as established in *Superman* #1 (1939), was relatively simple. He could "hurdle skyscrapers" and "leap an eighth of a mile"; "run faster than a streamline train"; withstand anything less than a "bursting shell"; and **37** lift a car over his head. Sent to Earth from the "doomed planet" Krypton, he was raised by human foster parents, whose love helped infuse him with an unapologetic desire to "benefit mankind." Admirable but aloof, the Golden Age Superman was arguably more paragon than character, a problem only partially solved by giving him a human alter ego. Other Golden Age superheroes were similarly archetypal: Batman was a crime-fighting millionaire, Wonder Woman a warrior princess from a mythical island.

37

Which choice is most consistent with the previous examples in the sentence?

A) NO CHANGE

B) hold down a regular job as a newspaper reporter.

C) wear a bright blue costume with a flowing red cape.

D) live in the big city of Metropolis instead of the small town where he grew up.

By contrast, the second ("Silver") age of comics was marked by characters that, though somewhat simplistic by today's standards, **38** were provided with origin stories often involving scientific experiments gone wrong. In addition to super villains, the new, soon-to-be-iconic characters of the **39** age: Spider-Man, the Fantastic Four, and the Hulk among them—had to cope with mundane, real-life problems, including paying the rent, dealing with family squabbles, and facing anger, loneliness, and ostracism. Their interior lives were richer and their motivations more complex. Although sales remained strong for Golden Age stalwarts Superman and, to a lesser extent, Batman, **40** subsequent decades would show the enduring appeal of these characters.

38

Which choice most effectively sets up the main idea of the following two sentences?

A) NO CHANGE

B) reflected the increasing conservatism of the United States in the 1950s.

C) engaged in bizarre adventures frequently inspired by science fiction.

D) were more "realistic" than their Golden Age counterparts.

39

A) NO CHANGE

B) age;

C) age,

D) age—

40

The writer wants a conclusion to the sentence and paragraph that logically completes the discussion of the Silver Age and provides an effective transition into the next paragraph. Which choice best accomplishes these goals?

A) NO CHANGE

B) the distinctions between later stages of comic book history are less well defined than the one between the Golden and Silver Ages.

C) readers increasingly gravitated to the upstarts as the 1960s and the Silver Age drew to a close.

D) these characters themselves underwent significant changes over the course of the Silver Age.

More transformations would take place in the medium as the Silver Age gave way to the Bronze and Modern (and possibly Postmodern) Ages. Such efforts **41** have yielded diminishing returns, as even the complete relaunch of DC **42** Comics' superhero's, line in 2011 has failed to arrest the steep two-decade decline of comic book sales. For both commercial and, arguably, creative reasons, **43** then, no transition was more successful than **44** those from the Golden to Silver Age.

41

A) NO CHANGE
B) would have yielded
C) were yielding
D) will yield

42

A) NO CHANGE
B) Comic's superhero's
C) Comics superhero's
D) Comics' superhero

43

A) NO CHANGE
B) however,
C) nevertheless,
D) yet,

44

A) NO CHANGE
B) these
C) that
D) DELETE the underlined portion.

STOP

**If you finish before time is called, you may check your work on this section only.
Do not turn to any other section.**