SAT First

Test blanc SAT n°2
sujet et corrigé

Un SAT blanc complet au format du SAT numérique, à imprimer. Questions originales écrites par SAT First, corrigé détaillé en français.

FORMAT
98 questions en 4 modules

DURÉE
2 h 14, plus une pause de 10 minutes

READING AND WRITING
54 questions, 64 minutes

MATH
44 questions, 70 minutes

Version en ligne avec chronomètre et score estimé : preparation-sat.fr/test-blanc-sat-2/
Une question sur votre préparation ? 09 78 45 00 08

Avant de commencer

Conditions du jour du test

Le vrai SAT se passe sur ordinateur, dans l'application Bluebook du College Board. Ce sujet en reprend la structure : deux modules de Reading and Writing, une pause de 10 minutes, puis deux modules de Math. Respectez le temps de chaque module et notez vos réponses sur la grille en fin de sujet.

> Au vrai SAT, le second module de chaque section s'adapte à vos résultats au premier. Ce n'est pas le cas ici. Le score que vous obtiendrez est donc une estimation.

Questions à réponse libre (Math)

Certaines questions de Math n'ont pas de choix proposés : écrivez votre réponse. Une fraction ou un nombre décimal sont acceptés, sans unité.

Formules (rappelées dans Bluebook le jour du test)

- Cercle : $A = \pi r^2$, $C = 2\pi r$
- Rectangle : $A = \ell w$; triangle : $A = (1/2)bh$
- Pythagore : $c^2 = a^2 + b^2$
- Triangles 30°, 60°, 90° : x, $x\sqrt{3}$, $2x$; 45°, 45°, 90° : s, s, $s\sqrt{2}$
- Pavé : $V = \ell wh$; cylindre : $V = \pi r^2 h$; sphère : $V = (4/3)\pi r^3$
- Cône : $V = (1/3)\pi r^2 h$; pyramide : $V = (1/3)\ell wh$
- Un cercle mesure 360°, soit 2π radians ; la somme des angles d'un triangle vaut 180°.

Reading and Writing, module 1

27 questions, 32 minutes

Question 1

The engineer's first prototype of the water filter was _____ : it removed most bacteria from river water, but it clogged after only two days of use, so she spent the following year redesigning it.

Which choice completes the text with the most logical and precise word or phrase?

A promising but flawed
B entirely useless
C perfectly finished
D widely copied

Question 2

Because the archive's letters were written in a faded, cramped hand, the historian had to _____ each page slowly, sometimes using a magnifying glass to identify a single word.

Which choice completes the text with the most logical and precise word or phrase?

A publish
B decipher
C summarize
D discard

Question 3

Critics had expected the choreographer's new piece to be as _____ as her earlier work, which featured dozens of dancers and elaborate sets. Instead, it features a single dancer on a bare stage.

Which choice completes the text with the most logical and precise word or phrase?

A quiet
B lavish
C traditional
D brief

Question 4

For decades, mapmakers placed a small island called Sandy Island in the Coral Sea, between Australia and New Caledonia. In 2012, a research ship sailed to the island's charted location and found only open ocean more than 1,000 meters deep. The island, it turned out, had never existed.

Which choice best describes the overall structure of the text?

A It explains how an island formed and then how it disappeared.
B It compares two methods of making maps and then recommends one.
C It describes a long-accepted belief and then reports a finding that disproved it.
D It presents a scientific theory and then lists questions it raises.

Question 5

Most of the tea sold in the world comes from a single plant species, *Camellia sinensis*. Green, black and oolong teas differ not because they come from different plants but because their leaves are processed differently after harvest. Black tea leaves, for example, are left to oxidize fully before they are dried.

Which choice best states the function of the third sentence in the overall structure of the text?

A It describes the history of tea drinking.
B It introduces a counterargument to the main claim of the text.
C It gives an example that illustrates the claim made in the previous sentence.
D It explains why *Camellia sinensis* is grown in many countries.

Question 6

Text 1
Researchers studying urban foxes have argued that the animals thrive in cities mainly because people leave out food, intentionally or not.

Text 2
In a two-year study of foxes in the fictional city of Larbourg, ecologist Inès Barre found that fox numbers stayed stable even after the city introduced sealed garbage bins. Barre noted that the foxes' diet shifted toward rodents and insects found in parks and railway embankments.

Based on the texts, how would Barre most likely respond to the argument in Text 1?

A By claiming that sealed garbage bins increased the number of foxes
B By suggesting that urban foxes can rely on natural food sources when human food becomes scarce
C By agreeing that foxes cannot survive in cities without food left by people
D By arguing that foxes avoid parks and railway embankments

Question 7

Text 1
Some music teachers believe that students should master reading sheet music before they try to improvise, since improvisation requires a solid knowledge of scales and harmony.

Text 2
Jazz educator Tomás Elcano starts beginners on improvisation in their very first lesson, using only three notes. He argues that improvising early builds confidence and trains the ear, and that reading skills can be added once students enjoy playing.

Based on the texts, how would Elcano most likely respond to the teachers in Text 1?

A He would claim that reading sheet music damages a musician's ear.
B He would agree that beginners should not improvise.
C He would disagree that improvisation must wait until students can read music well.
D He would argue that scales and harmony are not useful to musicians.

Question 8

When a forest burns, some tree species depend on the fire. The cones of the jack pine, for instance, are sealed with a resin that melts only at high temperatures. Once a fire passes, the cones open and release seeds onto ground that has been cleared of competing plants and enriched by ash.

Which choice best states the main idea of the text?

A Ash makes soil less fertile for young trees.
B Forest fires destroy all the seeds of the jack pine.
C Resin protects jack pine cones from insects.
D Some trees, such as the jack pine, are adapted to reproduce after forest fires.

Question 9

The novelist Ama Owusu wrote her first three books in English, the language of her schooling. Her fourth novel, however, is written in Twi, the language her grandmother spoke at home. In interviews, Owusu has said that some memories of her childhood simply could not be told in English without losing their rhythm and humor.

Which choice best states the main idea of the text?

A Owusu chose to write a novel in Twi because she felt it suited memories that English could not fully express.
B Owusu's grandmother translated her first three novels into Twi.
C Owusu stopped writing in English because her earlier books were unsuccessful.
D Owusu believes that novels should always be written in the author's first language.

Question 10

A biologist hypothesizes that honeybees use the position of the sun, and not landmarks, to find their way back to the hive.

Which finding, if true, would most directly support the biologist's hypothesis?

A Bees released on a sunny day returned to the hive even after familiar landmarks around it had been covered.
B Bees returned to the hive more slowly when it rained.
C Bees visited more flowers in the morning than in the afternoon.
D Bees from different hives were able to recognize one another.

Question 11

In the poem "The Lighthouse Keeper" by Elin Varga, the speaker describes her solitary work with a mixture of pride and loneliness.

Which quotation from the poem most effectively illustrates this claim?

A "The waves were gray, the rocks were black, / the gulls flew east and then came back."
B "My father kept this tower once; / his coat still hangs beside the door."
C "I keep the lamp that ships obey, / and no one climbs these stairs but me."
D "In town the bakers light their ovens / before the church bells ring."

Question 12

Average daily screen time of teenagers in one survey (hours)

Age	School days	Weekend days
13	3.1	4.6
15	4.0	5.8
17	4.4	6.5

A researcher claims that teenagers in the survey spent more time on screens on weekend days than on school days at every age.

Which choice most effectively uses data from the table to support the researcher's claim?

A Thirteen-year-olds spent less time on screens than seventeen-year-olds.

B Seventeen-year-olds spent 6.5 hours on screens on weekend days.

C At ages 13, 15 and 17, weekend screen time (4.6, 5.8 and 6.5 hours) was higher than school-day screen time (3.1, 4.0 and 4.4 hours).

D Screen time on school days rose from 3.1 hours at age 13 to 4.4 hours at age 17.

Question 13

Bird species recorded in a restored wetland

Year	Number of species
2018	34
2020	41
2022	52
2024	57

The wetland was restored in 2017. A conservation group states that the number of bird species recorded there has grown steadily since the restoration.

Which choice best describes data from the table that support the group's statement?

A More species were recorded in 2022 than in 2018.

B The wetland had 41 species in 2020.

C The number of species rose in every survey year, from 34 in 2018 to 57 in 2024.

D The number of species in 2024 was 57.

Question 14

Archaeologists working at a site in the fictional region of Veldra found grinding stones covered with traces of wild grain dated to about 14,000 years ago. Farming did not begin in the region until roughly 11,000 years ago. These findings suggest that _____

Which choice most logically completes the text?

A farming in Veldra began earlier than in any other region.
B the grinding stones were made by the first farmers in Veldra.
C people in Veldra processed wild grain long before they began to farm it.
D wild grain disappeared from Veldra 14,000 years ago.

Question 15

The orchestra rehearsed the new symphony for six _____ composer attended every session and revised the final movement twice.

Which choice completes the text so that it conforms to the conventions of Standard English?

A weeks. The
B weeks the
C weeks, the
D weeks, and, the

Question 16

The research vessel _____ which spent four months mapping the Arctic seafloor, returned to port in October.

Which choice completes the text so that it conforms to the conventions of Standard English?

A Nordlys,
B Nordlys;
C Nordlys
D Nordlys:

Question 17

The recipe calls for only three _____ flour, water and salt.

Which choice completes the text so that it conforms to the conventions of Standard English?

A ingredients
B ingredients;
C ingredients:
D ingredients,

Question 18

The collection of handwritten recipes, which the museum acquired from a family in Lyon, _____ dishes from the early 1800s.

Which choice completes the text so that it conforms to the conventions of Standard English?

A have included
B include
C are including
D includes

Question 19

Last spring, the city's public libraries _____ a program that lends gardening tools as well as books.

Which choice completes the text so that it conforms to the conventions of Standard English?

A launch
B will launch
C are launching
D launched

Question 20

Hoping to photograph the rare snow leopard, _____

Which choice completes the text so that it conforms to the conventions of Standard English?

A the cold lasted for nine days.
B nine days were spent waiting in the cold.
C the snow leopard was finally photographed after nine days.
D the wildlife photographer waited in the cold for nine days.

Question 21

When the twin sisters opened the bakery in 1998, _____ had never run a business before.

Which choice completes the text so that it conforms to the conventions of Standard English?

A they
B she
C them
D it

Question 22

Electric scooters produce no exhaust while they are ridden. _____ manufacturing their batteries requires mining metals such as lithium, which has its own environmental costs.

Which choice completes the text with the most logical transition?

A For example,
B Therefore,
C However,
D Similarly,

Question 23

The town's old train station had been empty for twenty years. Volunteers repaired the roof and painted the walls in 2019. _____ the building reopened as a community art center the following year.

Which choice completes the text with the most logical transition?

A For instance,
B In contrast,
C Nevertheless,
D Eventually,

Question 24

Octopuses have about 500 million neurons. _____ two-thirds of these neurons are located not in the brain but in the arms, which can respond to touch even when separated from the body.

Which choice completes the text with the most logical transition?

A Instead,
B In other words,
C Consequently,
D Remarkably,

Question 25

While researching a topic, a student has taken the following notes:

- The Varenne Bridge was completed in 1931.
- It crosses the Loiret River.
- It is 240 meters long.
- Its central arch was the longest concrete arch in the region at the time.

The student wants to emphasize what made the bridge notable when it was built. Which choice most effectively uses relevant information from the notes to accomplish this goal?

A Completed in 1931, the Varenne Bridge crosses the Loiret River.
B When it was completed in 1931, the Varenne Bridge had the longest concrete arch in the region.
C The Varenne Bridge is 240 meters long.
D The Varenne Bridge crosses the Loiret River.

Question 26

While researching a topic, a student has taken the following notes:

- Kelp forests grow in cold coastal waters.
- Giant kelp can grow up to 60 cm in a single day.
- Coral reefs grow in warm, shallow waters.
- Massive corals, such as brain corals, typically grow about 1 cm per year.

The student wants to contrast the growth rates of giant kelp and massive corals. Which choice most effectively uses relevant information from the notes to accomplish this goal?

A Giant kelp can grow up to 60 cm in a single day.

B Kelp forests grow in cold waters, while coral reefs grow in warm waters.

C Coral reefs grow in warm, shallow waters and grow slowly.

D Giant kelp can grow up to 60 cm in a day, while massive corals typically grow about 1 cm in a year.

Question 27

While researching a topic, a student has taken the following notes:

- Ada Lindqvist is a Swedish architect.
- She designs schools using cross-laminated timber.
- Cross-laminated timber stores carbon absorbed by trees.
- Her Lund primary school opened in 2022.

The student wants to explain an environmental benefit of the material Lindqvist uses. Which choice most effectively uses relevant information from the notes to accomplish this goal?

A Lindqvist's Lund primary school opened in 2022.

B Swedish architect Ada Lindqvist designed a primary school in Lund.

C Lindqvist builds schools from cross-laminated timber, a material that stores carbon absorbed by trees.

D Ada Lindqvist is an architect who designs schools.

Reading and Writing, module 2

27 questions, 32 minutes

Question 28

Although the new law was meant to simplify tax filing, many small-business owners found its instructions so _____ that they hired accountants to interpret them.

Which choice completes the text with the most logical and precise word or phrase?

A generous
B temporary
C concise
D convoluted

Question 29

The documentary does not simply celebrate the explorer; it also _____ his treatment of the guides who carried his equipment, quoting letters in which they described being underpaid.

Which choice completes the text with the most logical and precise word or phrase?

A repeats
B forgets
C scrutinizes
D praises

Question 30

Unlike most spiders, which build a new web every night, the species studied by arachnologist Priya Nair maintains the same web for months, _____ it with fresh silk only where it has been damaged.

Which choice completes the text with the most logical and precise word or phrase?

A abandoning
B hiding
C repairing
D measuring

Question 31

In 1975, the fictional town of Marlow banned cars from its central square. Shop owners protested, predicting that customers would stay away. Within two years, however, foot traffic in the square had doubled, and several of the protesting shop owners opened second stores nearby.

Which choice best states the main purpose of the text?

A To describe the architecture of Marlow's central square
B To show that a decision expected to harm local businesses ended up benefiting them
C To argue that all towns should ban cars from their centers
D To explain why cars were invented later in Marlow than elsewhere

Question 32

The following text is from an original short story. Mrs. Hale has just entered her neighbor's kitchen.

She looked around the room. Everything was in its place, yet nothing seemed lived in. The kettle was cold; the chairs were pushed tightly against the table, as if no one had sat in them for days. Even the clock on the shelf had stopped.

Which choice best describes the function of the underlined portion in the text as a whole?
Underlined: "Even the clock on the shelf had stopped."

A It adds a final detail that reinforces the impression that the house has been left still and empty.
B It explains why Mrs. Hale came to visit her neighbor.
C It introduces a cheerful contrast to the earlier description.
D It reveals the exact time at which Mrs. Hale arrived.

Question 33

Text 1
Many nutrition guides recommend eating breakfast every morning, claiming that skipping it leads people to overeat later in the day.

Text 2
In a controlled trial, researcher Lena Hoff assigned adults either to eat breakfast or to skip it for twelve weeks. Those who skipped breakfast ate slightly more at lunch, but their total daily calories were no higher than those of the breakfast group.

Based on the texts, how would Hoff most likely respond to the claim in Text 1?

A She would point out that skipping breakfast did not increase total daily food intake in her trial.
B She would agree that people who skip breakfast eat more calories overall.
C She would claim that her trial did not measure lunch.
D She would argue that eating breakfast causes people to overeat at lunch.

Question 34

Text 1
Art historian Marc Duval argues that the painter Hélène Rives worked almost entirely from memory, which explains the dreamlike quality of her landscapes.

Text 2
Rives's recently discovered sketchbooks contain hundreds of detailed pencil studies of trees, rivers and hills, each labeled with a date and a precise location.

Based on the texts, how would the author of Text 2 most likely respond to Duval's argument?

A By noting that the sketchbooks suggest Rives carefully observed real places
B By claiming that the sketchbooks were made by another artist
C By agreeing that Rives never drew outdoors
D By arguing that Rives's landscapes are not dreamlike

Question 35

Libraries have long lent books, but some now lend far stranger items. The public library in the fictional city of Ostrava Nova lends sewing machines, telescopes and even fishing rods. Librarians there say the goal is the same as with books: to give residents access to tools for learning that they might not be able to afford on their own.

Which choice best states the main idea of the text?

A Libraries no longer lend books to their residents.
B Telescopes are the most popular items lent by libraries.
C Residents of Ostrava Nova prefer fishing to reading.
D Some libraries lend unusual objects to give people affordable access to tools for learning.

Question 36

A team of economists claims that free public transportation mainly attracts people who previously walked or cycled, rather than people who previously drove.

Which finding, if true, would most directly support the economists' claim?

A Bus drivers in one city reported that buses were more crowded at rush hour.
B Most residents of one city said they liked the free buses.
C After buses became free in one city, car traffic fell by 30%.
D After buses became free in one city, bus ridership rose sharply while car traffic stayed almost unchanged and bicycle trips fell.

Question 37

In the novel *The Salt Road* by Karim Haddad, the narrator's grandfather is portrayed as a man who values patience above all else.

Which quotation from the novel most effectively illustrates this claim?

A "The market opened at dawn, and Grandfather was always the first to arrive."
B "Grandfather wore the same brown coat every winter."
C "'A tree you plant today,' Grandfather said, 'will shade your grandchildren. Do not ask it for fruit this year.'"
D "Grandfather laughed loudly at his own jokes."

Question 38

Average monthly electricity use in four homes before and after installing smart thermostats (kWh)

Home	Before	After
A	820	710
B	640	590
C	930	780
D	560	555

An energy consultant claims that smart thermostats reduced electricity use in all four homes, but by very different amounts.

Which choice best describes data from the table that support the consultant's claim?

A Home A used 710 kWh after the thermostat was installed.
B Homes B and D used less electricity than Homes A and C.
C Use fell in every home, by 150 kWh in Home C but by only 5 kWh in Home D.
D Home C used the most electricity before the thermostats were installed.

Question 39

Share of adults in one country who read at least one book in the past year

Age group	2014	2024
18 to 29	71%	78%
30 to 49	68%	66%
50 and over	64%	63%

A journalist claims that the only age group in which book reading increased between 2014 and 2024 was the youngest.

Which choice most effectively uses data from the table to support the journalist's claim?

A The share rose from 71% to 78% among adults aged 18 to 29 but fell slightly in both older groups.
B In 2024, 78% of adults aged 18 to 29 read at least one book.
C Adults aged 50 and over read the least in both years.
D The share of adults aged 30 to 49 who read was 68% in 2014.

Question 40

Many desert plants open the tiny pores on their leaves, called stomata, only at night, when the air is cooler and more humid. Because plants lose water through open stomata, this habit _____

Which choice most logically completes the text?

A likely helps these plants conserve water in a dry environment.
B prevents these plants from taking in any carbon dioxide.
C makes these plants grow faster during the day.
D shows that these plants need more water than other plants.

Question 41

When the fictional publisher Corvel Press began printing its novels on recycled paper in 2016, its production costs rose by 4%. Over the next three years, however, sales increased by 12%, and customer surveys showed that many readers had chosen Corvel books specifically because of the recycled paper. Taken together, these results suggest that _____

Which choice most logically completes the text?

A readers did not notice the change in paper.
B the switch to recycled paper may have attracted enough new readers to offset its higher cost.
C recycled paper is cheaper to produce than ordinary paper.
D Corvel Press stopped publishing novels after 2019.

Question 42

The festival's three headline acts came from Senegal, Brazil and _____ each performed on a different night.

Which choice completes the text so that it conforms to the conventions of Standard English?

A Japan, and
B Japan; and
C Japan and
D Japan: and

Question 43

Marine biologist _____ who has tagged more than 300 sea turtles, presented her findings at the conference.

Which choice completes the text so that it conforms to the conventions of Standard English?

A Sofia Mendes
B Sofia, Mendes
C Sofia Mendes,
D Sofia Mendes:

Question 44

Bamboo is technically a _____ some species can grow nearly a meter in a single day.

Which choice completes the text so that it conforms to the conventions of Standard English?

A grass
B grass, and
C grass, and,
D grass,

Question 45

Neither the coach nor the players _____ expected the match to be postponed.

Which choice completes the text so that it conforms to the conventions of Standard English?

A has
B had
C is
D was

Question 46

By the time the rescue team reached the summit, the storm _____ for nearly six hours.

Which choice completes the text so that it conforms to the conventions of Standard English?

A will rage
B rages
C is raging
D had been raging

Question 47

The _____ main finding was that the new vaccine remained effective for at least five years.

Which choice completes the text so that it conforms to the conventions of Standard English?

A studies'
B studys'
C study's
D studies

Question 48

After testing the water samples for eighteen months, the two hydrologists published _____ results in a journal of environmental science.

Which choice completes the text so that it conforms to the conventions of Standard English?

A their
B they're
C his
D its

Question 49

In the 1700s, many royal art collections were open only to a small circle of visitors. _____ the royal gallery of the fictional kingdom of Aldermark admitted only guests who carried a letter signed by a court official.

Which choice completes the text with the most logical transition?

A As a result,
B In contrast,
C Nevertheless,
D For example,

Question 50

The research team expected the new fertilizer to increase wheat yields. _____ yields in the treated fields were no higher than in the untreated fields.

Which choice completes the text with the most logical transition?

A Thus,
B Instead,
C Moreover,
D Similarly,

Question 51

Sea otters eat large numbers of sea urchins. Sea urchins, in turn, feed on kelp. _____ where otters are present, kelp forests tend to be healthier.

Which choice completes the text with the most logical transition?

A Consequently,
B However,
C For instance,
D Meanwhile,

Question 52

While researching a topic, a student has taken the following notes:

- The Atacama Desert is in northern Chile.
- Some weather stations there have recorded almost no rain for decades.
- The desert's dry, clear skies make it ideal for astronomy.
- Several major telescopes have been built there.

The student wants to explain why telescopes are built in the Atacama Desert. Which choice most effectively uses relevant information from the notes to accomplish this goal?

A Some weather stations in the Atacama Desert have recorded almost no rain for decades.
B The Atacama Desert is located in northern Chile.
C Several major telescopes have been built in northern Chile.
D Because its skies are dry and clear, the Atacama Desert is ideal for astronomy, and several major telescopes have been built there.

Question 53

While researching a topic, a student has taken the following notes:

- Mansa Musa ruled the Mali Empire in the 14th century.
- In 1324, he traveled to Mecca.
- He brought large amounts of gold on the journey.
- His spending in Cairo reportedly lowered the value of gold there for years.

The student wants to highlight an economic effect of Mansa Musa's journey. Which choice most effectively uses relevant information from the notes to accomplish this goal?

A In 1324, Mansa Musa traveled to Mecca.

B Mansa Musa ruled the Mali Empire in the 14th century.

C Mansa Musa's spending in Cairo during his 1324 journey reportedly lowered the value of gold there for years.

D Mansa Musa brought large amounts of gold to Mecca.

Question 54

While researching a topic, a student has taken the following notes:

- Composer Lili Varga wrote *River Suite* in 2019.
- The piece lasts 22 minutes.
- It uses recordings of the Danube River.
- Varga recorded the river at twelve different points along its course.

The student wants to describe how Varga created the sounds used in *River Suite*. Which choice most effectively uses relevant information from the notes to accomplish this goal?

A *River Suite*, written in 2019, lasts 22 minutes.

B *River Suite* was written by Lili Varga in 2019.

C Lili Varga is a composer who wrote *River Suite*.

D For *River Suite*, Varga recorded the Danube at twelve points along its course and used these recordings in the piece.

Math, module 1

22 questions, 35 minutes, calculatrice autorisée

Question 55

If 5(x − 2) = 3x + 4, what is the value of x?

A 1
B 3
C −7
D 7

Question 56

What is the slope of the line that passes through the points (1, 4) and (5, 12)?

A 2
B 1/2
C 4
D 8

Question 57

The function h is defined by h(x) = −3x + 10. For what value of x does h(x) = 1?

Réponse : _____

Question 58

Line ℓ is perpendicular to the line y = 2x − 7. What is the slope of line ℓ?

A −2
B −1/2
C 1/2
D 2

Question 59

2x + y = 11
x − y = 1
If (x, y) is the solution to the system of equations above, what is the value of y?

Réponse : _____

Question 60

A student has $40 to spend on notebooks that cost $3.50 each. What is the greatest number of notebooks the student can buy?

Réponse : _____

Question 61

A water tank contains 900 liters and is drained at a constant rate of 30 liters per minute. Which equation gives the volume V, in liters, remaining in the tank after t minutes?

A $V = 900 - 30t$

B $V = 30 - 900t$

C $V = 30t$

D $V = 900 + 30t$

Question 62

A gym charges a one-time sign-up fee plus a monthly fee. The total cost for 4 months is $170, and the total cost for 10 months is $380. What is the monthly fee, in dollars?

Réponse : _____

Question 63

Which expression is equivalent to $(2x - 3)(x + 5)$?

A $2x^2 - 15$

B $2x^2 + 7x - 15$

C $2x^2 - 7x - 15$

D $2x^2 + 13x - 15$

Question 64

Which expression is equivalent to $x^2 - 49$?

A $(x - 49)(x + 1)$

B $(x + 7)^2$

C $(x - 7)(x + 7)$

D $(x - 7)^2$

Question 65

What is the positive solution to $x^2 + 2x - 24 = 0$?

Réponse : _____

Question 66

How many real solutions does the equation $x^2 - 4x + 7 = 0$ have?

A Infinitely many
B Exactly two
C Zero
D Exactly one

Question 67

The function f is defined by $f(x) = (x - 2)^2 + 3$. What is the minimum value of f(x)?

A −2
B 2
C 3
D 7

Question 68

If $g(x) = 2x^2 - x$, what is the value of g(−2)?

A 6
B 14
C −6
D 10

Question 69

A car worth $24,000 loses 15% of its value each year. Which function gives the value V, in dollars, of the car t years from now?

A $V = 24{,}000(0.85)^t$
B $V = 24{,}000(1.15)^t$
C $V = 24{,}000(0.15)^t$
D $V = 24{,}000 - 0.15t$

Question 70

Which expression is equivalent to $(x^3)^2 \cdot x^4$, where $x > 0$?

A x^9

B x^{10}

C x^{24}

D x^{12}

Question 71

A jacket originally priced at $80 is on sale for 25% off. What is the sale price, in dollars?

Réponse : _____

Question 72

A recipe uses flour and sugar in a ratio of 5 to 2. If 15 cups of flour are used, how many cups of sugar are needed?

A 6

B 7.5

C 10

D 37.5

Question 73

The data set 4, 7, 7, 9, 13 is changed by replacing 13 with 23. Which statement is true?

A The mean stays the same and the median increases.

B The mean and the median both stay the same.

C The mean and the median both increase.

D The mean increases and the median stays the same.

Question 74

A rectangle has a perimeter of 36 centimeters and a length of 11 centimeters. What is the area of the rectangle, in square centimeters?

Réponse : _____

Question 75

In a triangle, two of the angles measure 48° and 67°. What is the measure, in degrees, of the third angle?

A 115
B 35
C 65
D 75

Question 76

A circle has an area of 49π square units. What is the diameter of the circle?

A 14
B 49
C 7
D 24.5

Math, module 2

22 questions, 35 minutes, calculatrice autorisée

Question 77

The graph of a linear function f passes through (0, −3) and (2, 5). What is the value of f(4)?

A 17
B 8
C 11
D 13

Question 78

In the xy-plane, the line with equation 3x + 4y = 24 crosses the x-axis at the point (a, 0). What is the value of a?

A 24
B 8
C 6
D −8

Question 79

For the function k, the value of k(x) increases by 6 each time x increases by 2, and k(0) = 1. Which equation defines k?

A k(x) = 2x + 6
B k(x) = x + 3
C k(x) = 3x + 1
D k(x) = 6x + 1

Question 80

A school sold 300 tickets for a play. Student tickets cost $5 and adult tickets cost $12. The total revenue was $2,410. How many adult tickets were sold?

Réponse : _____

Question 81

y = 2x + 1
y = −x + 7
The solution to the system of equations above is (x, y). What is the value of x + y?

A 9
B 7
C 2
D 5

Question 82

ax + 3y = 9
4x + 6y = 18
For what value of a does the system of equations above have infinitely many solutions?

Réponse : _____

Question 83

Which value of x satisfies the inequality 7 − 2x ≤ −5?

A −6
B 5
C 0
D 8

Question 84

The equation T = 15 + 0.6d models the temperature T, in degrees Celsius, of the water in a lake at a depth of d meters, for 0 ≤ d ≤ 10. Which statement is the best interpretation of 15 in this context?

A The temperature of the water at the surface is 15°C.
B The temperature increases by 15°C for each meter of depth.
C The temperature at a depth of 10 meters is 15°C.
D The lake is 15 meters deep.

Question 85

If (x + 4)/3 = 6, what is the value of x?

Réponse : _____

Question 86

The function f is defined by $f(x) = x^2 - 6x + 5$. At which x-values does the graph of $y = f(x)$ cross the x-axis?

A −1 and −5
B 2 and 3
C 1 and 5
D −5 and 1

Question 87

The equation $x^2 + bx + 16 = 0$, where b is a positive constant, has exactly one real solution. What is the value of b?

Réponse : _____

Question 88

A colony of bacteria triples every hour. If there are 200 bacteria at noon, how many will there be at 3:00 p.m. the same day?

A 1,800
B 5,400
C 16,200
D 600

Question 89

The function $P(t) = 1{,}500(1.04)^t$ gives the population of a town t years after 2020. Which statement is true?

A The population increases by 40 people each year.
B The population was 1,040 in 2020.
C The population increases by 4% each year.
D The population increases by 104% each year.

Question 90

Which expression is equivalent to $(6x^2 + 9x)/(3x)$, for $x \neq 0$?

A $2x + 9x$
B $2x + 3$
C $2x^2 + 3$
D $6x + 3$

Question 91

The graph of $y = -(x - 1)^2 + 9$ is a parabola. What is the y-coordinate of its vertex?

Réponse : _____

Question 92

For the function $f(x) = \sqrt{(x + 5)}$, what is the value of f(11)?

A √6
B 8
C 4
D 16

Question 93

The price of a train ticket rose from $40 to $46. By what percent did the price increase?

Réponse : _____

Question 94

A bag contains 6 red marbles, 4 blue marbles and 10 green marbles. If one marble is chosen at random, what is the probability that it is not green?

A 3/10
B 1/2
C 1/5
D 2/5

Question 95

The mean of five test scores is 82. Four of the scores are 78, 85, 90 and 74. What is the fifth score?

A 81
B 82
C 83
D 79

Question 96

A ladder 13 feet long leans against a vertical wall. The bottom of the ladder is 5 feet from the base of the wall. How high up the wall, in feet, does the ladder reach?

A 18
B √194
C 8
D 12

Question 97

In a circle with radius 10, a central angle measures 72°. What is the length of the arc intercepted by the angle?

A 4π
B 20π
C 2π
D 72π

Question 98

A cube has a volume of 64 cubic inches. What is the total surface area of the cube, in square inches?

A 384
B 16
C 64
D 96

Grille de réponses

Notez la lettre choisie ou votre réponse.

1		2		3		4	
5		6		7		8	
9		10		11		12	
13		14		15		16	
17		18		19		20	
21		22		23		24	
25		26		27		28	
29		30		31		32	
33		34		35		36	
37		38		39		40	
41		42		43		44	
45		46		47		48	
49		50		51		52	
53		54		55		56	
57		58		59		60	
61		62		63		64	
65		66		67		68	
69		70		71		72	
73		74		75		76	
77		78		79		80	
81		82		83		84	
85		86		87		88	
89		90		91		92	
93		94		95		96	
97		98					

Corrigé détaillé

La bonne réponse, puis l'explication. Le domaine indiqué vous oriente vers la fiche méthode correspondante sur preparation-sat.fr/fiches-methode-sat/.

Question 1 : A (Craft and Structure)
Le texte donne un point fort (il élimine la plupart des bactéries) et un défaut (il se bouche en deux jours). « promising but flawed » résume ces deux aspects. « entirely useless » et « perfectly finished » ne retiennent qu'un côté, « widely copied » n'est pas évoqué.

Question 2 : B (Craft and Structure)
L'écriture est pâle et serrée, il faut une loupe pour lire un mot : l'historienne doit « déchiffrer » chaque page, « decipher ». Publier, jeter ou résumer ne correspondent pas à la difficulté décrite.

Question 3 : B (Craft and Structure)
Les œuvres précédentes avaient des dizaines de danseurs et des décors élaborés : elles étaient somptueuses, « lavish ». « Instead » oppose ensuite la nouvelle pièce, très dépouillée. Les autres mots ne décrivent pas cette abondance.

Question 4 : C (Craft and Structure)
Le texte part d'une croyance ancienne (l'île figure sur les cartes) puis rapporte une observation qui la dément (seulement l'océan profond). Il n'explique pas une formation, ne compare pas de méthodes et ne pose pas de questions.

Question 5 : C (Craft and Structure)
La deuxième phrase affirme que les thés diffèrent par leur traitement. La troisième en donne un exemple précis (l'oxydation complète du thé noir). Ce n'est ni une objection, ni une explication géographique, ni un historique.

Question 6 : B (Craft and Structure)
Chez Barre, la population reste stable sans déchets accessibles, car les renards mangent rongeurs et insectes. Elle nuancerait donc le texte 1 : la nourriture humaine n'est pas indispensable.

Question 7 : C (Craft and Structure)
Elcano fait improviser dès la première leçon et ajoute la lecture ensuite. Il conteste donc l'ordre défendu dans le texte 1. Il ne rejette ni l'harmonie ni la lecture : les réponses qui le font exagèrent.

Question 8 : D (Information and Ideas)
Le texte explique que certaines espèces ont besoin du feu, avec l'exemple du pin gris dont les cônes s'ouvrent après l'incendie. Les autres choix contredisent le texte ou parlent d'éléments absents (insectes).

Question 9 : A (Information and Ideas)
Le texte explique pourquoi Owusu a écrit en twi : certains souvenirs perdaient leur rythme et leur humour en anglais. Rien ne parle d'échec, de traduction par la grand-mère ni d'une règle générale.

Question 10 : A (Information and Ideas)
Si les abeilles retrouvent la ruche alors que les repères visuels sont cachés et que le soleil est visible, c'est bien le soleil qui les guide. Les autres constats ne distinguent pas soleil et repères.

Question 11 : C (Information and Ideas)
Il faut à la fois la fierté et la solitude. « la lampe à laquelle obéissent les navires » exprime la fierté, « personne ne monte ces marches sauf moi » la solitude. Les autres citations décrivent un paysage, la ville ou un souvenir familial.

Question 12 : C (Information and Ideas)
L'affirmation porte sur chaque âge et compare week-end et jours d'école. Seule la bonne réponse fait cette comparaison pour les trois âges. Les autres citent une seule valeur ou comparent les âges entre eux.

Question 13 : C (Information and Ideas)
« Steadily » suppose une hausse à chaque relevé. La bonne réponse montre la progression continue 34, 41, 52, 57. Les autres ne donnent qu'une valeur ou deux années.

Question 14 : C (Information and Ideas)
Les meules portent des traces de céréales sauvages 3 000 ans avant l'agriculture. On en déduit que les habitants transformaient ces céréales avant de les cultiver. Les autres choix contredisent les dates ou ne s'appuient sur rien.

Question 15 : A (Standard English Conventions)
Deux propositions indépendantes : il faut un point (ou un point-virgule). La virgule seule crée une faute (comma splice), l'absence de ponctuation aussi, et « , and, » est mal ponctué.

Question 16 : A (Standard English Conventions)
« which spent four months... seafloor » est une incise non essentielle. Elle s'ouvre et se ferme par une virgule. La virgule de fermeture est déjà présente après « seafloor » : il faut donc une virgule d'ouverture.

Question 17 : C (Standard English Conventions)
Une proposition complète annonce une liste : on utilise les deux-points. Le point-virgule doit séparer deux propositions complètes, ce qui n'est pas le cas ici.

Question 18 : D (Standard English Conventions)
Le sujet est « The collection » (singulier). « of handwritten recipes » et l'incise ne changent pas le sujet. Le verbe doit être au singulier : « includes ».

Question 19 : D (Standard English Conventions)
« Last spring » situe l'action dans le passé, achevée : prétérit « launched ». Le présent et le futur ne conviennent pas.

Question 20 : D (Standard English Conventions)
Le groupe initial « Hoping to photograph... » doit se rapporter à la personne qui espère : le photographe. Les autres choix rattachent ce groupe aux jours, au froid ou au léopard (modificateur mal placé).

Question 21 : A (Standard English Conventions)
Le pronom remplace « the twin sisters », sujet pluriel : « they ». « she » est singulier, « it » renverrait à la boulangerie et « them » est un complément.

Question 22 : C (Expression of Ideas)
La première phrase présente un avantage, la seconde un inconvénient : il faut une opposition, « However ». Les autres liens annoncent un exemple, une conséquence ou une ressemblance.

Question 23 : D (Expression of Ideas)
Le texte suit une chronologie : abandon, travaux, puis réouverture. « Eventually » (finalement) marque cette suite. Aucune opposition ni exemple n'est en jeu.

Question 24 : D (Expression of Ideas)
La seconde phrase ajoute un fait étonnant (deux tiers des neurones dans les bras). « Remarkably » souligne ce caractère surprenant. Ce n'est ni une conséquence, ni un remplacement, ni une reformulation.

Question 25 : B (Expression of Ideas)
Ce qui rendait le pont remarquable à l'époque, c'est son arche, la plus longue de la région. Seule la bonne réponse le dit.

Question 26 : D (Expression of Ideas)
Il faut comparer les vitesses de croissance des deux organismes. La bonne réponse met les deux chiffres face à face. Opposer eaux froides et eaux chaudes compare les milieux, pas la croissance.

Question 27 : C (Expression of Ideas)
Le bénéfice environnemental, c'est le stockage du carbone. Seule la bonne réponse l'associe au matériau utilisé.

Question 28 : D (Craft and Structure)
« Although » annonce l'inverse de la simplicité, et les commerçants ont besoin d'un comptable pour comprendre : les instructions sont alambiquées, « convoluted ». « concise » dit le contraire.

Question 29 : C (Craft and Structure)
« does not simply celebrate » annonce un regard critique, confirmé par les lettres sur les guides sous-payés. Le film examine de près ce traitement : « scrutinizes ». « praises » contredit le texte.

Question 30 : C (Craft and Structure)
L'araignée garde la même toile et ajoute de la soie là où elle est abîmée : elle la répare, « repairing ». Abandonner contredit « maintains ».

Question 31 : B (Craft and Structure)
Le texte présente une crainte (moins de clients) puis un résultat inverse (fréquentation doublée, nouveaux magasins). Il ne généralise pas à toutes les villes et ne décrit pas l'architecture.

Question 32 : A (Craft and Structure)
Toutes les phrases décrivent une maison immobile et inhabitée (bouilloire froide, chaises rangées). L'horloge arrêtée complète cette impression. Elle n'explique pas la visite et ne donne pas d'heure.

Question 33 : A (Craft and Structure)
Dans l'essai de Hoff, le déjeuner augmente un peu mais le total quotidien ne bouge pas. Elle contesterait donc l'idée que sauter le petit-déjeuner fait trop manger. Prétendre que l'essai ne mesurait pas le déjeuner contredit le texte 2.

Question 34 : A (Craft and Structure)
Des études datées et localisées montrent que Rives observait les lieux réels. Cela remet en cause l'idée d'un travail fait presque uniquement de mémoire. Le texte 2 ne parle pas du style onirique ni d'un autre artiste.

Question 35 : D (Information and Ideas)
Le texte décrit des bibliothèques qui prêtent des objets inhabituels et en donne la raison : l'accès à des outils d'apprentissage. Les autres choix sont faux ou non soutenus.

Question 36 : D (Information and Ideas)
Il faut montrer que les nouveaux usagers viennent du vélo ou de la marche, pas de la voiture. La bonne réponse l'établit : bus en hausse, voitures stables, vélos en baisse. Une baisse du trafic automobile contredirait l'affirmation.

Question 37 : C (Information and Ideas)
La phrase sur l'arbre qui ombragera les petits-enfants et dont on ne doit pas exiger de fruits tout de suite exprime la patience. Les autres citations décrivent un vêtement, la ponctualité ou l'humour.

Question 38 : C (Information and Ideas)
L'affirmation a deux parties : une baisse partout et des écarts très différents. La bonne réponse couvre les deux (baisse de 150 kWh contre 5 kWh). Les autres ne parlent pas de la baisse.

Question 39 : A (Information and Ideas)
Il faut montrer une hausse chez les plus jeunes et l'absence de hausse ailleurs. La bonne réponse le fait : +7 points chez les 18 à 29 ans, baisse légère pour les deux autres groupes.

Question 40 : A (Information and Ideas)
L'eau s'échappe par les stomates ouverts. Les ouvrir la nuit, quand l'air est frais et humide, limite donc les pertes : la plante économise l'eau. Les autres choix ne découlent pas du texte.

Question 41 : B (Information and Ideas)
Les coûts montent de 4 %, mais les ventes progressent de 12 % et des lecteurs disent avoir choisi ces livres pour le papier recyclé. Le changement a pu compenser son surcoût. Les autres choix contredisent le texte.

Question 42 : A (Standard English Conventions)
La phrase relie deux propositions indépendantes (« acts came from… » et « each performed… ») par « and » : il faut une virgule avant la conjonction. Sans virgule, les deux propositions se télescopent.

Question 43 : C (Standard English Conventions)
« who has tagged more than 300 sea turtles » est une incise non essentielle, fermée par une virgule après « turtles ». Il faut une virgule d'ouverture après le nom complet, « Sofia Mendes, ». On ne coupe pas le prénom du nom.

Question 44 : B (Standard English Conventions)
Deux propositions indépendantes reliées par « and » : virgule avant la conjonction. La virgule seule est une faute (comma splice), l'absence de ponctuation aussi.

Question 45 : B (Standard English Conventions)
Avec « neither… nor », le verbe s'accorde avec le sujet le plus proche, « the players » (pluriel). « had expected » convient (pluriel, passé). « has », « was » et « is » sont au singulier.

Question 46 : D (Standard English Conventions)
L'action (la tempête) a commencé avant un autre moment passé (l'arrivée au sommet) et dure jusqu'à lui : plus-que-parfait progressif, « had been raging ».

Question 47 : C (Standard English Conventions)
Il s'agit d'une seule étude qui possède un résultat : possessif singulier « study's ». « studies » est un pluriel sans possession, « studies' » un possessif pluriel.

Question 48 : A (Standard English Conventions)
Le possessif renvoie à « the two hydrologists », pluriel : « their ». « its » renvoie à une chose, « his » à une seule personne, et « they're » signifie « they are ».

Question 49 : D (Expression of Ideas)
La seconde phrase illustre l'accès restreint (une lettre signée est exigée) : « For example ». Il n'y a ni opposition ni conséquence.

Question 50 : B (Expression of Ideas)
Le résultat contredit l'attente : « Instead » (au lieu de cela). « Similarly » et « Moreover » ajoutent, « Thus » annonce une conséquence.

Question 51 : A (Expression of Ideas)
Les loutres mangent les oursins, qui mangent le varech : moins d'oursins, donc plus de varech. C'est une conséquence, « Consequently ».

Question 52 : D (Expression of Ideas)
Il faut la raison (ciel sec et dégagé) et le fait (les télescopes). Seule la bonne réponse relie les deux.

Question 53 : C (Expression of Ideas)
L'effet économique, c'est la baisse de la valeur de l'or au Caire. Seule la bonne réponse le mentionne.

Question 54 : D (Expression of Ideas)
Il s'agit de la création des sons : les enregistrements du Danube à douze endroits. Seule la bonne réponse décrit ce procédé.

Question 55 : D (Algebra)
On développe : $5x - 10 = 3x + 4$. On regroupe : $2x = 14$, donc $x = 7$.

Question 56 : A (Algebra)
Pente = $(12 - 4) / (5 - 1) = 8 / 4 = 2$.

Question 57 : 3 (Algebra)
On résout $-3x + 10 = 1$: $-3x = -9$, donc $x = 3$.

Question 58 : B (Algebra)
Deux droites perpendiculaires ont des pentes dont le produit vaut -1. La pente de ℓ est donc $-1/2$.

Question 59 : 3 (Algebra)
En additionnant les équations : $3x = 12$, donc $x = 4$. Puis $4 - y = 1$, donc $y = 3$.

Question 60 : 11 (Algebra)
On cherche le plus grand entier n tel que $3{,}5n \leq 40$. $40 / 3{,}5 \approx 11{,}4$: l'élève peut acheter 11 cahiers (12 coûteraient 42 dollars).

Question 61 : A (Algebra)
On part de 900 litres et on retire 30 litres par minute : $V = 900 - 30t$.

Question 62 : 35 (Algebra)
6 mois de plus coûtent 380 − 170 = 210 dollars, soit 210 / 6 = 35 dollars par mois. (Le droit d'entrée vaut 170 − 4 × 35 = 30 dollars.)

Question 63 : B (Advanced Math)
On développe : $2x \times x + 2x \times 5 - 3 \times x - 3 \times 5 = 2x^2 + 10x - 3x - 15 = 2x^2 + 7x - 15$.

Question 64 : C (Advanced Math)
C'est une différence de deux carrés : $a^2 - b^2 = (a - b)(a + b)$, avec $a = x$ et $b = 7$.

Question 65 : 4 (Advanced Math)
$x^2 + 2x - 24 = (x + 6)(x - 4)$. Les solutions sont −6 et 4 ; la solution positive est 4.

Question 66 : C (Advanced Math)
Discriminant : $b^2 - 4ac = 16 - 28 = -12$. Il est négatif : aucune solution réelle.

Question 67 : C (Advanced Math)
Un carré est toujours positif ou nul : $(x - 2)^2$ vaut au moins 0, atteint pour $x = 2$. Le minimum de f est donc 3.

Question 68 : D (Advanced Math)
$g(-2) = 2 \times (-2)^2 - (-2) = 2 \times 4 + 2 = 10$.

Question 69 : A (Advanced Math)
Perdre 15 % chaque année revient à multiplier par 1 − 0,15 = 0,85 chaque année : $V = 24\,000 \times 0{,}85^t$.

Question 70 : B (Advanced Math)
$(x^3)^2 = x^6$, puis $x^6 \cdot x^4 = x^{10}$: on multiplie les exposants pour une puissance de puissance, on les additionne pour un produit.

Question 71 : 60 (Problem-Solving and Data Analysis)
25 % de 80 = 20. Prix soldé : 80 − 20 = 60 dollars (ou 80 × 0,75).

Question 72 : A (Problem-Solving and Data Analysis)
15 tasses de farine, c'est 3 fois 5. Il faut donc 3 fois 2 = 6 tasses de sucre.

Question 73 : D (Problem-Solving and Data Analysis)
La plus grande valeur augmente : la somme, donc la moyenne, augmente. La médiane reste la valeur du milieu, 7, inchangée.

Question 74 : 77 (Geometry and Trigonometry)
Périmètre = $2(\ell + w) = 36$, donc $\ell + w = 18$ et $w = 18 - 11 = 7$. Aire = $11 \times 7 = 77$ cm².

Question 75 : C (Geometry and Trigonometry)
La somme des angles d'un triangle vaut 180°. 180 − 48 − 67 = 65°.

Question 76 : A (Geometry and Trigonometry)
Aire = $\pi r^2 = 49\pi$, donc $r^2 = 49$ et $r = 7$. Le diamètre vaut $2r = 14$.

Question 77 : D (Algebra)
Pente = $(5 - (-3)) / 2 = 4$ et ordonnée à l'origine -3 : $f(x) = 4x - 3$. Donc $f(4) = 16 - 3 = 13$.

Question 78 : B (Algebra)
Sur l'axe des abscisses, $y = 0$: $3x = 24$, donc $x = 8$.

Question 79 : C (Algebra)
Une hausse de 6 pour 2 unités de x donne une pente de $6 / 2 = 3$. Avec $k(0) = 1$: $k(x) = 3x + 1$.

Question 80 : 130 (Algebra)
Soit a les billets adultes : $5(300 - a) + 12a = 2\,410$, soit $1\,500 + 7a = 2\,410$, donc $7a = 910$ et $a = 130$.

Question 81 : B (Algebra)
$2x + 1 = -x + 7$ donne $3x = 6$, donc $x = 2$ et $y = 5$. $x + y = 7$.

Question 82 : 2 (Algebra)
La seconde équation est la première multipliée par 2 si $2a = 4$, soit $a = 2$. Les deux équations décrivent alors la même droite.

Question 83 : D (Algebra)
$7 - 2x \leq -5$ donne $-2x \leq -12$, puis $x \geq 6$ (on divise par un négatif, le sens s'inverse). Seul 8 convient.

Question 84 : A (Algebra)
15 est la valeur de T quand $d = 0$, c'est-à-dire en surface. 0,6 est la variation par mètre.

Question 85 : 14 (Algebra)
On multiplie par 3 : $x + 4 = 18$, donc $x = 14$.

Question 86 : C (Advanced Math)
$x^2 - 6x + 5 = (x - 1)(x - 5)$: la courbe coupe l'axe des abscisses en $x = 1$ et $x = 5$.

Question 87 : 8 (Advanced Math)
Une seule solution réelle : discriminant nul. $b^2 - 4 \times 16 = 0$, donc $b^2 = 64$ et $b = 8$ (b positif).

Question 88 : B (Advanced Math)
De midi à 15 h, il y a 3 heures : $200 \times 3^3 = 200 \times 27 = 5\,400$.

Question 89 : C (Advanced Math)
Le facteur 1,04 = 1 + 0,04 signifie une hausse de 4 % par an. En 2020 ($t = 0$), la population vaut 1 500.

Question 90 : B (Advanced Math)
On divise chaque terme par $3x$: $6x^2 / 3x = 2x$ et $9x / 3x = 3$.

Question 91 : 9 (Advanced Math)
La forme $y = a(x - h)^2 + k$ a pour sommet (h, k). Ici le sommet est $(1, 9)$: son ordonnée vaut 9.

Question 92 : C (Advanced Math)
f(11) = √(11 + 5) = √16 = 4.

Question 93 : 15 (Problem-Solving and Data Analysis)
Hausse : 46 − 40 = 6 dollars. 6 / 40 = 0,15, soit 15 %.

Question 94 : B (Problem-Solving and Data Analysis)
Il y a 20 billes, dont 10 ne sont pas vertes (6 rouges et 4 bleues). Probabilité : 10 / 20 = 1/2.

Question 95 : C (Problem-Solving and Data Analysis)
Somme des cinq notes : 5 × 82 = 410. Somme des quatre connues : 327. Cinquième note : 410 − 327 = 83.

Question 96 : D (Geometry and Trigonometry)
L'échelle est l'hypoténuse : $h^2 + 5^2 = 13^2$, donc $h^2 = 169 - 25 = 144$ et h = 12.

Question 97 : A (Geometry and Trigonometry)
Longueur de l'arc = (72 / 360) × 2πr = (1/5) × 20π = 4π.

Question 98 : D (Geometry and Trigonometry)
Arête : $\sqrt[3]{64} = 4$. Une face mesure 4 × 4 = 16, et le cube a 6 faces : 6 × 16 = 96.

> Pour estimer votre score et voir vos résultats par domaine, passez ce test en ligne : preparation-sat.fr/test-blanc-sat-2/. Un conseiller SAT First peut aussi analyser vos résultats avec vous au 09 78 45 00 08.