

「英 語」

試験時間 60分

配点 100点

【1】 次の英文の文脈に適合するように下線部(1)～(5)の [] 内の語(句)を並べ替えると
き、それぞれ3番目と6番目にくるものを選び、その番号をマークせよ。

As shown by the recent trend of *jimikon* (simple weddings), more and more couples are
(1)[① avoiding ② ceremonies ③ elaborate ④ holding ⑤ save ⑥ to ⑦ wedding]
money. The VR (virtual reality) software aims to reverse that.

Ateam is a Japanese smartphone games developer. Its app, named Sugukon VR,
combining *sugu* (soon) with *kon* from *kekkon* (marriage), is used with headphones and
goggles that people slip their smartphones into. It is unique because the videos are taken
from the perspectives of both bride and groom. Other attempts at VR software merely
imposed clients' images on magazine ads for wedding locations, but Ateam tried hard to
make the experience more realistic by advancing to videos and audio.

The video responds to one's movements. For example, with the goggles on, the groom
can turn to see his bride in all her finery. If he then swings back, he sees the wedding
guests. Couples can also use the software to check out wedding locations at hotel resorts
overseas (2)[① avoid ② checking ③ of ④ out ⑤ the expense ⑥ them ⑦ to] in
person.

Ateam's app uses the technology it developed for a horse racing game (3)[① from
② lets ③ players ④ race ⑤ that ⑥ the ⑦ view] the point of view of a jockey. It
is a response to the fact that fewer engaged couples are holding elaborate ceremonies.

According to a survey, approximately 670,000 couples get married every year but around
300,000 stop short of holding a wedding ceremony. This means (4)[① are ② chances
③ fewer ④ for ⑤ there ⑥ to ⑦ young people] attend weddings. The number of
people who do not know what to do in a wedding is increasing.

A staff member at Ateam said, "By using VR technology, we can create a system so that
(5)[① and ② away ③ cannot ④ far ⑤ live ⑥ relatives ⑦ who] attend the
wedding will still be able to experience it." Ateam will film different wedding locations in
Japan and other countries and allow clients to virtually experience them at their customer
service counters.

出典： THE JAPAN TIMES Tuesday, September 20, 2016

App maker aims to perk up flagging wedding industry with VR nuptials より抜粋.

一部改変

【2】 次の英文を読み、以下の問いに答えよ。

Women in statistics classes do better academically than men over a semester despite having more negative attitudes regarding their own abilities, according to our recent study in the *Journal of Statistics and Data Science Education*.

(1) data from more than 100 male and female students from multiple statistics classes, my colleague and I assessed gender differences in grades over the course of a semester. As part of the study, students also answered surveys at the start and end of the semester that measured six different things: their fear of statistics teachers in general; their thoughts about the usefulness of statistics; their perceptions of their own mathematical ability; their anxiety in taking tests; their anxiety in interpreting statistics; and their fear of asking for help.

Overall, we found that students with more negative perceptions of their own mathematical ability had lower grades over the course of the semester. What's even more interesting are the gender differences that emerged.

Even though men and women scored similarly on exams at the start of the semester, women finished the semester with almost 10% higher final exam grades. (2)This was the case even though women had significantly worse attitudes about their mathematical abilities at the start of the semester than their male counterparts.

At the beginning of the semester specifically, women were more likely to rate their mathematical abilities as lower than men in the class and report more anxiety toward exams and toward interpreting statistical findings. However, (3)each of these self-assessments improved over the course of the semester such that women's attitudes didn't differ from men's by the end.

Meanwhile, the grades of male students who reported fear of statistics teachers or fear of asking for help decreased more sharply over the course of the semester. For men (4) attitudes improved during the semester, grades also improved — though not as much as women's grades improved.

A number of studies have shown that from an early age, boys and girls learn math equally well. However, girls are less likely to be called on in math classes than boys, even when they raise their hands as much as boys do. Moreover, some teachers unconsciously grade girls' math tests more harshly than boys'. By middle school, gender differences in math scores emerge. (5)These factors may () () (5a) () (5b) () to rate themselves as less mathematically skilled than men. As a result, women are also less likely to pursue STEM — science, technology, engineering and math — occupations.

The results from our study, in line with others, (6)bolster the notion that women have the potential to do as well as men, and even better, in STEM fields, such as statistics. We contend that women would benefit from additional mentoring to encourage them as they

begin pursuing STEM-related education.

The evidence above provides hints at some of the causes of the gender discrepancy in perceived ability. However, there is much we still don't know. For example, why did the attitudes of the women in our study improve over time? Was it based on their confidence in their abilities as their grades improved, or did their statistics teachers influence their perception of their own abilities over time?

More research is needed to understand exactly how women differed from men in their attitudes over the course of the school semester, among other questions. In particular, we'd like to (7)disentangle exactly which classroom or instructor factors can lead to better attitudes among students, ultimately translating to better grades.

出典 : <https://theconversation.com/technology/2022/08>

問1 空所(1)に入る語(句)として最も適当なものを次の①～④から1つ選び、その番号をマークせよ。

- ① Use ② Using ③ Used by ④ To use

問2 下線部(2)が表す内容として最も適当なものを次の①～④から1つ選び、その番号をマークせよ。

- ① Both men and women obtained nearly identical scores on the initial exam at the start of the semester.
② Both men and women who held more negative perceptions of their own mathematical abilities experienced lower grades over the semester.
③ Women demonstrated a notable performance advantage over men, reflected in their higher final exam grades at the semester's end.
④ Women got significantly better exam grades compared to men, throughout the entire semester.

問3 下線部(3)が表す意味に最も近いものを次の①～④から1つ選び、その番号をマークせよ。

- ① The evaluations made by women regarding their mathematical abilities and anxieties related to their studies changed drastically during the semester, resulting in a shift in how women approached mathematical problems.
② The evaluations made by women regarding their mathematical abilities and anxieties related to their studies deteriorated over the course of the semester, and as a result, they performed poorly in mathematics.
③ Women's assessments of their mathematical abilities and anxieties related to their studies got much better over the course of the semester, which thus led to women surpassing men in mathematics.

- ④ Women's assessments of their mathematical abilities and anxieties related to their studies progressed through the course of the semester, and the gender gap in perceptions toward mathematics almost disappeared.

問4 空所(4)に入る語として最も適当なものを次の①～④から1つ選び、その番号をマークせよ。

- ① how ② who ③ whose ④ why

問5 下線部(5)が意味の通る文になるように次の①～⑦の語(句)を各空所に入れるとき、(5a)と(5b)に該当する番号をそれぞれマークせよ。なお、不要な語(句)が1つ含まれている。

- ① adult women's ② being ③ contribute ④ less
⑤ likely ⑥ more ⑦ to

問6 下線部(6)と置き換えられる語として最も適当なものを次の①～④から1つ選び、その番号をマークせよ。

- ① dismiss ② reinforce ③ shatter ④ undermine

問7 下線部(7)と置き換えられる語句として最も適当なものを次の①～④から1つ選び、その番号をマークせよ。

- ① figure out ② let out ③ rule out ④ turn out

問8 本文の内容に一致するものを次の①～④から1つ選び、その番号をマークせよ。

- ① It was revealed that how students perceived their own mathematical abilities had only a minimal effect on their grades over the course of the semester.
② Men with positive attitudes improved their grades throughout the semester, with a degree of improvement comparable to that observed among women.
③ The study the authors carried out supports the idea that women possess the capabilities to perform at the same level as, or even surpass, men in STEM fields.
④ Women who lacked confidence in their mathematical abilities remained in that state and therefore their grades didn't improve throughout the semester.

【3】 Read the following passage and answer each question.

Siler collingwoodi* (S. collingwoodi) is a spider that jumps and wears a coat of vibrant and metallic blues, oranges and sometimes reds. It also does impressions, copying the movements of an assortment of ant species.

The jumping spider* doesn't mimic ants for attention — rather, (1)the opposite. Ants are aggressively territorial and are known in the insect world (A) their deadly jaws and their use of venom* and other defensive strategies. Hundreds of spider species imitate ants to avoid being eaten by predators.

But (2)colorful S. collingwoodi does something distinctive among mimics. Researchers have found that the jumping spider imitates certain features of multiple ant species in its habitat. By looking like — but not perfectly imitating — the ants, this makes it what the researchers call an imperfect mimic. But that imperfection is enough to fool one of the jumping spider's most dangerous predators.

The researchers also found that the spiders may find another layer of protection by blending into a similarly brilliant plant in their habitat. The findings were published Wednesday in *iScience*.

(i) scaring off a predator, many species attempt “perfect” mimicry because, (ii), appearing nearly identical to something scary would make the chances of survival more likely.

“Most studies in mimicry in spiders have been focused (B) the perfect mimics,” said Hua Zeng, a behavioral scientist at Peking University in China and an author of the study. “However, there are also (3)many imperfect mimics, which deserve investigation (C) terms of their ecological significance.”

While in the field, Dr. Zeng and colleagues noticed that the S. collingwoodi displayed walking patterns similar to those of ants. The spiders would even occasionally hold up their first pair of legs in a way that looked like an ant holding up its antennae.

The researchers theorized that S. collingwoodi could be adopting the movements of more than one ant species, giving itself more tactics to protect itself from predators, said Wei Zhang, another author of the study and an evolutionary biologist also at Peking University. The jumping spider may even be able to expand its habitat this way.

To test this idea, the researchers collected S. collingwoodi, a non-mimicking jumping spider and five ant species from locations on Hainan Island in southern China. Back in the lab, they compared the movement of the ants and spiders and found that S. collingwoodi not only displayed pseudo* antennae and bobbed* its abdomen like an ant, but also showed a similar gait*, pattern of movement and speed (D) many of the ants as it walked. The other spider did not show these similarities.

The researchers then put the S. collingwoodi's proposed imperfect mimicry to the test with two of its predators: a mantid* species and another jumping spider, Portia labiata (P.

3. Which of the following is **NOT** correct as an example of underlined part (3) “many imperfect mimics”? Choose the most appropriate answer and mark the number on your Answer Sheet.

- ① The spider has something almost equal to ants’ antennae.
- ② The spider makes use of deadly venom to attack its predators.
- ③ The spider moves its abdomen up and down like ants.
- ④ The spider walks with much the same speed as ants.

4. Which of the following best describes underlined part (4) “For the mantid, both spiders were fair game.”? Choose the most appropriate answer and mark the number on your Answer Sheet.

- ① Both spiders became easy targets for the predator.
- ② Both spiders fought a fair battle with the predator.
- ③ Both spiders played a seesaw match with the predator.
- ④ Both spiders worked together to beat off the predator.

5. From what perspective does Marta Skowron Volponi say underlined part (5) “work like this is important for conservation”? Choose the most appropriate answer and mark the number on your Answer Sheet.

- ① The discovery of multiple ant species and their behavior mimicked by *S. collingwoodi*.
- ② The effectiveness of *S. collingwoodi*’s imperfect mimicry in scaring off predators.
- ③ The necessity of protecting endangered prey species and their connected predators.
- ④ The researchers’ findings regarding the mimicry of *S. collingwoodi* and ant species.

6. Choose the most appropriate word from below to fill in each blank space from (A) to (E) and mark the number on your Answer Sheet. (Each word should be used only **ONCE**.)

- ① as ② at ③ by ④ for ⑤ from
- ⑥ in ⑦ on ⑧ to ⑨ with

7. Choose the most appropriate phrase from below to fill in each blank space from (i) to (iii) and mark the number on your Answer Sheet. (Note that each phrase can only be used **ONCE** and that the first letter of each word is lowercased even when it is placed at the beginning of a sentence.)

- ① in order to ② in practice ③ in that case
- ④ in theory ⑤ to say nothing of ⑥ when it comes to

8 . Choose the most appropriate title for this article and mark the number on your Answer Sheet.

- ① A Mystery between Species — Investigating the Impact of Venom in Ant-Mimicking Spiders
- ② Ant-Mimic Spiders: The Forest's Masters of Disguise
- ③ Can Ants Beat Spiders? — Siler Collingwood's Ant-Inspired Defense Strategies
- ④ This Spider Is Imperfect, and That May Be the Secret of Its Survival