

- ① it is essential to actively guide students in developing these skills
- ② neglecting real world problems leads to the failure of mathematics education
- ③ mathematical thinking is necessary to transform quantification into qualitative analysis
- ④ mathematics needs to be taught in an interdisciplinary way, connecting it with other subjects
- ⑤ that there is no justification for providing students with explicit support to help them develop these skills

Measurement is not a simple and unmediated estimation of independently existing properties, but a determination of certain magnitudes before the background of a number of accepted theories.

Measuring mass can range in \_\_\_\_\_ (A) depending on the object, from using a balance for a bowling ball to applying theoretical models for distant stars. For binary stars, their mass is determined by analyzing the center of mass, distance, orbital period, and Kepler's Third Law. Measurement involves finding values based on \_\_\_\_\_ (B) theories.

#### 40. 다음 빙칸에 들어갈 말로 가장 적절한 것은? [21]

Imagine that your usually stingy friend delights in buying you a Christmas present after taking a generosity booster. How would you feel? Undoubtedly, there is something praiseworthy about the action. You'd be pleased to receive the gift. You'd say 'thank you', and mean it. But his change of heart is not entirely satisfying. According to Zagrebaki, an American philosopher, he is not really generous. When we praise someone's character, we use words for various virtues 'generous', 'kind', 'courageous', etc. A person who gives one gift isn't generous. Instead, generosity is a stable part of a person's 'moral identity', an emotional habit that is part of who you are. Thus, virtues, as opposed to nontypical impulse, are the result of your personal history. They are part of who you are, as they are part of how your character was formed. \_\_\_\_\_ is therefore impossible. Pooping a pill cannot make you a better person.

- |                   |                    |
|-------------------|--------------------|
| ① Stable virtue   | ② Moral identity   |
| ③ Typical impluse | ④ Emotional virtue |
| ⑤ Sudden morality |                    |

#### 41. 다음 글의 내용을 한 문장으로 요약하고자 한다. 빙칸 (A), (B)에 들어갈 말로 가장 적절한 것은? [22]

To determine the mass of my bowling ball, I might put it onto a balance and compare it with a known mass, such as a number of metal cubes each weighing 1, 10, or 100 grams. Things get much more complicated if I want to know the mass of a distant star. How do I measure it? We can roughly say that measuring the mass of a star involves various theories. If we want to measure the mass of a binary star, we first determine a center of mass between the two stars, then their distance from that center which we can then use, together with a value for the period and a certain instance of Kepler's Third Law, to calculate the mass. In other words, in order to "measure" the star mass, we measure other quantities and use those values, together with certain equations, to calculate the mass.

- ① simplicity - outdated
- ② uniformity - hypothetical
- ③ complexity - outdated
- ④ simplicity - hypothetical
- ⑤ difficulty - accepted

#### 42. 다음 글의 내용을 한 문장으로 요약하고자 한다. 빙칸 (A), (B)에 들어갈 말로 가장 적절한 것은? [23]

Based on discoveries in neuroscience, pain and pleasure are formed and processed in the same area of the brain. Our bodies constantly strive for homeostasis, which is defined as the balance of bodily functions. Without the body's effective compensatory mechanisms, which may cushion potential highs and lows, we would not be capable of surviving. Pleasure and pain are like two sides of the same coin; they seem to work together and are heavily reliant on one another and keep balance. If you imagine pleasure and pain as the two opposite points on a scale, you can easily understand that as one of the two points rises, the other must correspondingly fall. We've all heard the expression, "No pain, no gain." Well, according to psychiatrist Dr. Anna Lembke, there may be some truth to these words. She says that our attempts to escape being miserable are in fact making us even more miserable. This is because pain is actually an essential component of our ability to maintain a neutral state, and allowing it will in turn reset our internal scale back to balance.

Pain and pleasure are \_\_\_\_\_ (A) \_\_\_\_\_ in the brain, and even if we allow pain, balance can be \_\_\_\_\_ (B) \_\_\_\_\_ rather than we get lost in the misery.

- ① parallel - collapsed
- ② separate - broken
- ③ independent - reversed
- ④ interdependent - destroyed
- ⑤ interconnected - restored

#### 43. 다음 빈칸에 들어갈 말로 가장 적절한 것은? [24]

Manufacturers masterfully sow seeds of doubt about the adequacy of our current devices. Suddenly, the phone that was your lifeline a year ago is now a museum piece, unable to keep pace with your digital demands. And thus, the itch to upgrade begins, often before there's a genuine need. This cycle isn't just confined to our digital companions. It spills over into almost every aspect of consumer electronics, from the self-driving car to the smart fridge. Every product seems to be on an unstoppable march towards the next version, the next generation that promises to revolutionize your life. What's fascinating, or perhaps disturbing, is the utter efficacy of this cycle in shaping our desires. It's not so much that we want the newest device; we're led to believe we need it. The distinction between want and need blurs, shifting our financial priorities in favor of staying current with trends. For all the logical arguments against this ceaseless upgrading, the temptation remains \_\_\_\_\_.

- |                |              |
|----------------|--------------|
| ① upsetting    | ② disturbing |
| ③ irresistible | ④ sensible   |
| ⑤ mandatory    |              |

#### 44. 다음 글의 내용을 아래처럼 요약하고자 한다. 빈칸 (A), (B)에 들어갈 말로 가장 적절한 것은? [29]

Conditioned Place Preference is a way of finding out what animals want. Researchers train them to associate one place with an experience such as food or a loud noise and another place with something completely different, usually where nothing happens. The two places are made obviously different to make it as easy as possible for the animal to associate each place with what happened to it there. The animal's preference for being in one place or another is measured both before and after its experiences in the two places. If there is a shift in where the animal chooses to spend its time for the reward, this suggests that it liked the experience and is trying to repeat it. Conversely, if it now avoids the place the stimulus appeared and starts to prefer the place it did not experience it, then this suggests that it found the stimulus unpleasant. For example, mice with cancer show a preference for the place where they have been given morphine, a drug used to relieve pain, rather than where they have received saline whereas healthy mice developed no such preference. This suggests that the mice with cancer wanted the morphine.

Conditioned Place Preference shows what animals prefer by pairing places to specific experiences. Animals spend more time in places linked to positive stimuli and avoid \_\_\_\_\_ (A) \_\_\_\_\_ ones. For example, mice with cancer favor areas where they received morphine for pain \_\_\_\_\_ (B) \_\_\_\_\_.

- ① pleasant - ease
- ② pleasant - relief
- ③ unpleasant - intensify
- ④ unpleasant - reinforce
- ⑤ unpleasant - relief

**45. 다음 빈칸에 들어갈 말로 가장 적절한 것은? [31]**

One factor that may hinder creativity is unawareness of the resources required in each activity in students' learning. Often students are unable to identify the resources they need to perform the task required of them. We need to remember that \_\_\_\_\_. For example, it may be that students desire to conduct some experiments in their projects. There must be a prior investigation of whether the students will have access to the laboratory, equipment, and chemicals required for the experiment. It means preparation is vital for the students to succeed, and it may be about human and financial resources such as laboratory technicians, money to purchase chemicals, and equipment for their learning where applicable. Even if some of the resources required for a task may not be available, identifying them in advance may help students' creativity. It may even lead to changing the topic, finding alternative resources, and other means.

- ① preparing supplementary resources can result in failure to complete the task
- ② ensuring mandatory resources can ease the completion of specific learning tasks
- ③ discarding optional resources can provide flexibility in completing specific learning tasks
- ④ using mandatory resources could make the task more complicated, needing thorough thought
- ⑤ acquiring necessary resources may avoid procrastination during particular learning activities

**46. 다음 글의 제목으로 가장 적절한 것은? [32]**

All translators feel some pressure from the community of readers for whom they are doing their work. And all translators arrive at their interpretations in dialogue with other people. The English poet Alexander Pope had pretty good Greek, but when he set about translating Homer's Iliad in the early 18th century he was not on his own. He had Greek commentaries to refer to, and translations that had already been done in English, Latin, and French — and of course he had dictionaries. Translators always draw on more than one source text. Even when the scene of translation consists of just one person with a pen, paper, and the book that is being translated, or even when it is just one person translating orally for another, that person's linguistic knowledge arises from lots of other texts and other conversations. And then his or her idea of the translation's purpose will be influenced by the expectations of the person or people it is for. In both these senses every translation is a crowd translation.

- ① The Lonely Art of Translation
- ② The Secret Life of Translators
- ③ Translators: Masters of Language

④ Translations: A Product of Many Minds

⑤ The Dilemma of Translators Burdened by Sources

**47. (A), (B), (C)의 각 네모 안에서 문맥에 맞는 낱말로 가장 적절한 것은? [33]**

Some people argue that there is a single, logically consistent concept known as reading that can be neatly set apart from everything else people do with books. Is reading really that simple? The most productive way to think about reading is as a loosely related set of behaviors that belong together owing to family resemblances, as Ludwig Wittgenstein used the phrase, without having in common a single defining trait. Consequently, efforts to distinguish reading from nonreading are destined to **(A) [fail / succeed]** because there is no agreement on what qualifies as reading in the first place. The **(B) [less / more]** one tries to figure out where the border lies between reading and not-reading, the more edge cases will be found to stretch the term's flexible boundaries. Thus, it is worth attempting to collect together these exceptional forms of reading into a single forum, one highlighting the challenges faced by anyone wishing to **(C) [establish / abolish]** the boundaries where reading begins and ends. The attempt moves toward an understanding of reading as a spectrum that is expansive enough to accommodate the distinct reading activities.

① succeed - less - establish

② fail - more - establish

③ succeed - more - establish

④ fail - less - abolish

⑤ succeed - more - abolish

**48. 다음 빈칸에 들어갈 말로 가장 적절한 것은? [34]**

Weber's law concerns the perception of difference between two stimuli. It suggests that we might not be able to detect a 1-mm difference when we are looking at lines 466 mm and 467 mm in length, but we may be able to detect a 1-mm difference when we are comparing a line 2 mm long with one 3 mm long. Another example of this principle is that we can detect 1 candle when it is lit in an otherwise dark room. But when 1 candle is lit in a room in which 100 candles are already burning, we may not notice the light from this candle. Therefore, the Just-noticeable difference (JND) varies as a function of the strength of the signals. For example, the JND is greater for very loud noises than it is for much more quiet sounds. When a sound is very weak, we can tell that another sound is louder, \_\_\_\_\_. When a sound is very loud, to tell that another sound is even louder, it has to be much louder. Thus, Weber's law means that it is harder to distinguish between two samples when those samples are larger or stronger levels of the stimuli.

- ① reduced - investigation
- ② expanded - collaboration
- ③ maximized - competition
- ④ diminished - coordination
- ⑤ redistributed - protection

**50. 다음 빙칸에 들어갈 말로 가장 적절한 것은? [36]**

- ① even if it is not heard at all
- ② despite it being only slightly louder
- ③ as it has nothing to do with the JND
- ④ only if Weber notices it from a distance
- ⑤ unless it is measured in a room lit by candles

**49. 다음 글의 내용을 한 문장으로 요약하고자 한다. 빙칸 (A), (B)에 들어갈 말로 가장 적절한 것은? [35]**

Any new resource (e.g., a new airport, a new mall) always opens with people benefiting individually by sharing a common resource (e.g., the city or state budget). Soon, at some point, the amount of traffic grows too large for the "commons" to support. Traffic jams, overcrowding, and overuse lessen the benefits of the common resource for everyone — the tragedy of the commons! If the new resource cannot be expanded or provided with additional space, it becomes a problem, and you cannot solve the problem on your own, in isolation from your fellow drivers or walkers or competing users. The total activity on this new resource keeps increasing, and so does individual activity; but if the dynamic of common use and overuse continues too long, both begin to fall after a peak, leading to a crash. What makes the "tragedy of commons" tragic is the crash dynamic — the destruction or degeneration of the common resource's ability to regenerate itself.

The "tragedy of the commons" occurs when a shared resource becomes overused and the benefits for everyone are \_\_\_\_\_ (A) \_\_\_\_\_. Without expansion or \_\_\_\_\_ (B) \_\_\_\_\_, the resource's ability to restore itself eventually declines, ultimately resulting in its collapse.