

2018年度 総合政策学部 一般入学試験問題 訂正

教科・科目	ページ	設問	誤	→	正
数学および外国語	13		問題冊子のインデックス 英語(選択)	→	問題冊子のインデックス <u>英語</u>

英語 - I

次の文章に関して、空欄補充問題と読解問題の二つがあります。まず、[31]から[40]の空所を埋めるのに、文脈的に最も適切な語を1から3の中から選び、その番号を解答欄 (31) から (40) にマークしなさい。次に、内容に関する[41]から[45]の設問には、1から4の選択肢が付されています。そのうち、文章の内容からみて最も適切なものを選び、その番号を解答欄 (41) から (45) にマークしなさい。

- 1 A recent report from the U.K. suggested that the country eliminate speed bumps from its roads to ease vehicle passage and limit carbon emissions. This has since given rise to heated debate. In the U.S., homeowners often push for more speed bumps in their neighborhoods to slow drivers, making local routes for deliveries more [31](1. cumbersome 2. scenic 3. overbearing) each year. But – from the point of view of an economist – are these bumps actually a good idea?
- 2 On one hand, the bumps slow down traffic, and that probably saves some lives. Yet the calculus is not so simple, in part because speed bumps bring unintended secondhand consequences. Many cars or trucks [32](1. swipe 2. swap 3. swerve) around them, which is arguably more dangerous than having no obstacle in the first place, or drivers may rev up their engines to accelerate once the bump is past. The constant “bump bump” noises or screeching brakes have led many nearby homeowners to request that the bumps be removed. The bumps may drive too much traffic to alternate routes, and they slow down the response of emergency vehicles.
- 3 Traffic obstacles [33](1. also 2. still 3. instead) raise the cost of deliveries sent to our homes, such as by UPS or FedEx truck. The result may be more individual trips to retail stores, which may boost the number of accidents and deaths. Don’t assume that apparent safety precautions always means more safety, as economic inefficiencies bring their own dangers, even if they are less visible.
- 4 One way to systematically evaluate speed bumps would be to look at home values in streets with and without the bumps, as you might [34](1. contemplate 2. think 3. ponder) that safer homes would sell for more. But one study – with imperfect controls – found no difference in real estate values, so that doesn’t settle the question.
- 5 Another economic approach would consider whether the private sector, when trying to accommodate customer demand, finds that speed bumps help or hurt business. That’s a kind of market test of the concept, and indeed I often see speed bumps in shopping mall parking lots, to slow down traffic and ease the risk of accidents, including to pedestrians. The mall and parking lot owners have decided that the benefits of greater safety will attract more customers than the inconveniences of driving more slowly, and other possible costs, will put customers [35](1. off 2. on 3. up). That is a seat-of-the-pants cost-benefit test, and it suggests some role for the bumps in the broader world.

6 That said, my personal impression is that these private-sector speed bumps are smoother and gentler than the ones I often find in neighborhoods. When it comes to local roads, the residents are actively trying to keep outside drivers away, [36](1. whereas 2. hence 3. thereby) the shopping mall and parking lot owners seek the best overall environment for commercial reasons. As a tentative conclusion, I think some speed bumps are a good idea, but many are too [37](1. obsessive 2. obstructive 3. obsolete) and perhaps they are too numerous as well; this view is supported by some recent research. Another angle of the speed bumps debate is how much it revolves around issues of symbolic value, and that in part explains why the discussion can become so heated.

7 By its very design, a speed bump is a deliberate obstacle with maximum transparency as such. It is sending a message that the social goals of safety or neighborhood quiet are sufficiently important that it is worth slowing people’s progress when they travel. There are many regulations that try to make our lives safer, but most of them are hidden, with nontransparent costs, such as auto-safety regulations as applied through crash tests. A speed bump, [38](1. similarly 2. by extension 3. in contrast), can work only if people notice it each time. So to the extent a society accepts speed bumps, it is visibly advertising the notion that limits to fast transportation – a symbol of progress – are acceptable in the name of safety and cozy locality.

8 You might be wondering why, in such a high-tech era, we need speed bumps at all. Why not use cameras or sensors to detect and [39](1. defer 2. deter 3 deny) speeders and other irresponsible drivers? There are at least two reasons: greater expense and privacy. Many people in a neighborhood don’t want there to be an electronic [40](1. record 2. album 3. memento) of their comings and goings, and thus they are willing to embrace what is essentially Stone Age technology.

9 In sum, one side of the speed bumps debate feels it is up against enemies of smooth transport and progress, while the other is seeking to protect privacy and comfortable communities.

10 Since both progress and privacy are in such scarce supply these days, is it any wonder that everyone goes away unhappy?

—Based on Cowen, T. (2017). “Caution: Debate over speed bumps ahead,” *Bloomberg*.

[41] What is true according to the article?

1. The author suggests that speed bumps should be removed from America.
2. British citizens often push for more residential speed bumps.
3. Dangerous delays for ambulances and firetrucks may be caused by speed bumps.
4. Installing speed bumps may cause privacy and environmental issues.

[42] In the 5th paragraph, what is specifically meant by “a market test of the concept”?

1. It may be possible to measure the economic impact of speed bumps by researching the market value of houses in areas containing them, versus areas that don't.
2. Speed bumps would be removed from business areas if they hurt profits too much, so by the very fact that they remain, they can be seen to have value.
3. After extensive surveying, it is evident that most Americans want speed bumps more than their British counterparts.
4. It is a large-scale project that explores the use and non-use of speed bumps in supermarket parking lots throughout the UK and America.

[43] In the 5th and 6th paragraphs, what is a key difference between residential and private-sector speed bumps?

1. Residential speed bumps are smoother to protect the cars of the nearby homeowners.
2. Commercial area speed bumps are meant to be welcoming and residential unwelcoming.
3. Delivery companies such as UPS and FedEx prefer residential speed bumps.
4. Commercial speed bumps tend to be much higher and much noisier.

[44] Which of the following is implied as an issue associated with speed bumps?

1. Less efficient security cameras are being replaced by speed bumps.
2. Speed bumps must be noticed and abided by in order to be effective.
3. Speed bumps could lead to more competition among delivery companies like FedEx.
4. The safety of speed bumps is not worth the inconvenience to mall owners.

[45] In the 10th paragraph, why does the author conclude “is it any wonder that everyone goes away unhappy?”

1. Reconciling differences on issues of safety, economics, and privacy is difficult.
2. Speed bumps are such a hassle around homes and businesses that people are left dissatisfied.
3. America and the UK cannot agree on speed bump policy, so all concerned parties are left discontent.
4. Businesses and individuals are “bumping heads” due to drastically opposing opinions.

英語 - II

次の文章に関して、空欄補充問題と読解問題の二つがあります。まず、[46]から[55]の空所を埋めるのに、文脈的に最も適切な語を1から3の中から選び、その番号を解答欄（46）から（55）にマークしなさい。次に、内容に関する[56]から[60]の設問には、1から4の選択肢が付されています。そのうち、文章の内容からみて最も適切なものを選び、その番号を解答欄（56）から（60）にマークしなさい。

- 1 Would you advise someone to wave towels in a burning house? To bring a flyswatter to a gunfight? Yet the counsel we hear on climate change could scarcely be more out of sync with the nature of the crisis. The email in my inbox last week offered thirty suggestions to green my office space: use reusable pens, redecorate with light colors, stop using the elevator. Back at home, done climbing stairs, I could get on with other [46](1. opinions 2. options 3. opposition): change my lightbulbs, buy local veggies, purchase eco-appliances, put a solar panel on my roof. And a study released on Thursday claimed it had figured out the single best way to fight climate change: I could [47](1. swear off 2. advise against 3. allow for) ever having a child.

- 2 These pervasive exhortations to individual action — in corporate ads, school textbooks, and the campaigns of mainstream environmental groups, especially in the west — seem as natural as the air we breathe. But we could hardly be worse-served.

- 3 While we busy ourselves greening our personal lives, fossil fuel corporations are rendering these efforts [48](1. impertinent 2. irrelevant 3. inaccessible). The breakdown of carbon emissions since 1988? A hundred companies alone are responsible for an astonishing 71%. You tinker with those pens or that panel; they go on torching the planet. The freedom of these corporations to pollute — and the fixation on a feeble lifestyle response — is no [49](1. accident 2. incident 3. intent). It is the result of an ideological war, waged over the last 40 years, against the possibility of collective action. Devastatingly successful, it is not too late to reverse it.

- 4 The political project of neoliberalism has pursued two principal objectives. The first has been to [50](1. distrust 2. disenfranchise 3. dismantle) any barriers to the exercise of unaccountable private power. The second has been to erect them to the exercise of any democratic public will.

- 5 Its trademark policies are that [51](1. to 2. for 3. of) privatization, deregulation, tax cuts, and free trade deals. These have liberated corporations to accumulate enormous profits and treat the atmosphere like a sewage dump, and hamstrung our ability as individuals to plan for our collective welfare.

- 6 Anything resembling a collective [52](1. check 2. break 3. run) on corporate power has become a target of the elite. At the very moment when climate change demands an unprecedented collective

public response, neoliberal ideology stands in the way. Which is why, if we want to bring down emissions fast, we will need to overcome all of its free-market mantras: take railways and utilities and energy grids back into public control; regulate corporations to phase out fossil fuels; and raise taxes to pay for massive investment in climate-ready infrastructure and renewable energy — [53](1. so 2. but 3. with) that solar panels can go on everyone’s rooftop, not just on those who can afford it.

7 Studies show that people who have grown up under this era have indeed become more individualistic and consumerist. Steeped in a culture telling us to think of ourselves as consumers instead of citizens, as self-reliant instead of interdependent, is it any wonder we deal with a systemic issue by turning in droves to ineffectual, individual efforts?

8 Of course we need people to consume less and innovate low-carbon alternatives – build sustainable farms, invent new batteries, spread zero-waste methods. But individual choices will most count when the economic system can provide viable, environmental options for everyone — not just an affluent or intrepid few.

9 If affordable mass transit isn’t available, people will commute with cars. If local organic food is too expensive, they won’t opt out of fossil fuel-intensive super-market chains. If cheap mass produced goods flow endlessly, they will buy and buy and buy. This is the deception of neoliberalism: to persuade us to address climate change through our pocket-books, rather than through power and politics.

10 Eco-consumerism may [54](1. expire 2. expiate 3. exterminate) your guilt. But it’s only mass movements that have the power to alter the trajectory of the climate crisis. This requires of us first a resolute mental break from the spell cast by neoliberalism: to stop thinking like individuals.

11 The good news is that the impulse of humans to come together is inextinguishable – and the collective imagination is already making a political come-back. The climate justice movement is blocking pipelines, forcing the divestment of trillions of dollars, and winning support for 100% clean energy economies in cities and states across the world. New ties are being made to Black Lives Matter, immigrant and indigenous rights, and fights for better wages. On the [55](1. heels 2. haunches 3. hairs) of such movements, political parties seem finally ready to defy neoliberal dogma.

12 So grow some carrots and jump on a bike: it will make you happier and healthier. But it is time to stop obsessing with how personally green we live – and start collectively taking on corporate power.

—Based on Lukacs, M. (2017). *The Guardian*.

[56] In the 1st paragraph, why does the author mention a gunfight?

1. The battle against neoliberalism is so heated that it has inspired violent metaphors.
2. It is an assertion that climate change is now at a fight-to-the-death stage.
3. To emphasize the inadequacy of current policies and strategies to fight climate change.
4. As an analogy between the speed and danger of misleading e-mails and bullets.

[57] In the 5th paragraph, what does the article claim is being “hamstrung”?

1. Promotion of effective individual action for the cause of saving the environment.
2. Regulation prohibiting corporations from having the resources to fight climate change.
3. Devastation of the environment by people who do not take personal responsibility.
4. Incapacitation of group action by diverting all focus to relatively minor individual action.

[58] In the 6th paragraph, what best exemplifies a “free-market mantra”?

1. Claims that free markets are harmful and should be replaced with publicly owned utilities.
2. The belief by the markets that environmental protection will make them free.
3. The assertion that free-market policies will improve services like transportation.
4. The idea that free power sources, such as solar, wind, and water, will save the planet.

[59] Which of the following is ***NOT*** true according to the article?

1. Less than a dozen companies release most of the greenhouse gases released into the air.
2. Neoliberalism makes people feel like they are doing something more important than they are.
3. Putting utilities such as power companies and trains in private hands is problematic.
4. Black Lives Matter is a hopeful example of the resurgence of collective action to fight problems.

[60] Which of the following would be the best title for this article?

1. Individual Responsibility is Key to Environmental Change
2. The Con Job of Neoliberalism
3. Neoliberalism Breaks Down Walls to Collective Action
4. The 30 Ways to Green Your Life and Save the Planet

注意事項 2

問題冊子に数字の入った \square があります。それらの数字は解答用紙の解答欄の番号を表しています。対応する番号の解答欄の 0 から 9 までの数字または - (マイナスの符号) をマークしてください。

\square が 2 個以上つながったとき、数は右詰めで入れ、左の余った空欄には 0 を入れてください。負の数の場合には、マイナスの符号を先頭の \square に入れてください。

$$(例) \quad 12 \quad \rightarrow \quad \begin{array}{|c|c|c|} \hline 0 & 1 & 2 \\ \hline \end{array}$$

$$-3 \quad \rightarrow \quad \begin{array}{|c|c|c|} \hline - & 0 & 3 \\ \hline \end{array}$$

分数は約分した形で解答してください。マイナスの符号は分母には使えません。

$$(例) \quad \frac{4}{8} \quad \rightarrow \quad \frac{1}{2} \quad \rightarrow \quad \begin{array}{|c|c|} \hline 0 & 1 \\ \hline 0 & 2 \\ \hline \end{array}$$

$$-\frac{6}{9} \quad \rightarrow \quad -\frac{2}{3} \quad \rightarrow \quad \begin{array}{|c|c|} \hline - & 2 \\ \hline 0 & 3 \\ \hline \end{array}$$

ルート記号の中は平方因子を含まない形で解答してください。

$$(例) \quad \sqrt{50} \quad \rightarrow \quad \begin{array}{|c|c|} \hline 0 & 5 \\ \hline \end{array} \sqrt{\begin{array}{|c|c|} \hline 0 & 2 \\ \hline \end{array}}$$

$$-\sqrt{24} \quad \rightarrow \quad \begin{array}{|c|c|} \hline - & 2 \\ \hline \end{array} \sqrt{\begin{array}{|c|c|} \hline 0 & 6 \\ \hline \end{array}}$$

$$\sqrt{13} \quad \rightarrow \quad \begin{array}{|c|c|} \hline 0 & 1 \\ \hline \end{array} \sqrt{\begin{array}{|c|c|} \hline 1 & 3 \\ \hline \end{array}}$$

数式については、つぎの例のようにしてください。分数式は約分した形で解答してください。

$$(例) \quad -a^2 - 5 \quad \rightarrow \quad \begin{array}{|c|c|} \hline - & 1 \\ \hline \end{array} a^2 + \begin{array}{|c|c|} \hline 0 & 0 \\ \hline \end{array} a + \begin{array}{|c|c|} \hline - & 5 \\ \hline \end{array}$$

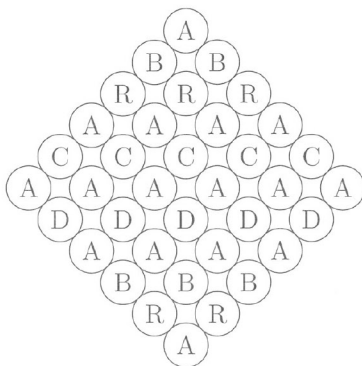
$$\frac{4a}{2a-2} \quad \rightarrow \quad \frac{-2a}{1-a} \quad \rightarrow \quad \frac{\begin{array}{|c|c|} \hline 0 & 0 \\ \hline \end{array} + \begin{array}{|c|c|} \hline - & 2 \\ \hline \end{array} a}{1 - \begin{array}{|c|c|} \hline 0 & 1 \\ \hline \end{array} a}$$

選択肢の番号を選ぶ問題では、同じ選択肢を何回選んでもかまいません。

数学 - III

「アブラカダブラ (ABRACADABRA)」という語は、「ごたごたしてわけのわからない言葉」というような意味である。かつては魔法の言葉として人々に信じられてきた時代もあったという。

(1) いま、アルファベットの書かれたおはじきが下図のように置かれている。

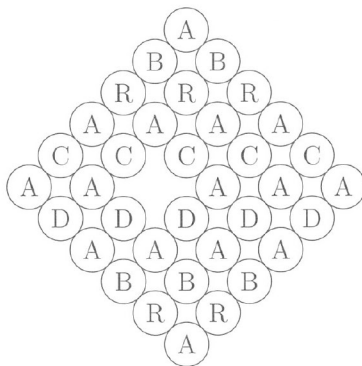


隣り合ったおはじきの文字をつなげることで、「アブラカダブラ (ABRACADABRA)」は

(61)	(62)	(63)
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 通りの方法で読むことができる。

(2) もし、下図のように A のおはじき 1 個が取り除かれたとき



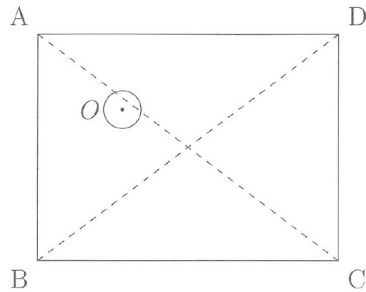
「アブラカダブラ (ABRACADABRA)」は

(64)	(65)	(66)
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 通りの方法で読むことができる。

数学 - IV

辺 AB と CD の長さが 12, 辺 BC と DA の長さが 16 の長方形 ABCD の内部に, 半径 1 の円 O が完全に含まれている.



- (1) 円 O の中心の存在しうる領域の面積は

(67)	(68)	(69)
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 である.
- (2) 円 O が長方形 ABCD の対角線 AC と少なくとも 1 つの共有点をもつとき, 円 O の中心の存在しうる領域の面積は

(70)	(71)	(72)
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 である.
- (3) 円 O が長方形 ABCD の対角線 AC あるいは BD と少なくとも 1 つの共有点をもつとき, 円 O の中心の存在しうる領域の面積は $\frac{\begin{array}{|c|c|c|} \hline (73) & (74) & (75) \\ \hline \end{array}}{\begin{array}{|c|c|c|} \hline (76) & (77) & (78) \\ \hline \end{array}}$ である.

数学 - V

以下の3種類のコインを使って、景気の動向が企業の将来の利益に与える影響を考える。

- コイン A: 表の出る確率が $\frac{1}{2}$, 裏の出る確率が $\frac{1}{2}$ のコイン
- コイン B: 表の出る確率が $\frac{5}{8}$, 裏の出る確率が $\frac{3}{8}$ のコイン
- コイン C: 表の出る確率が $\frac{1}{4}$, 裏の出る確率が $\frac{3}{4}$ のコイン

コイン A は、表が出れば景気が良い状態をあらわし、裏が出れば景気が悪い状態をあらわす。コイン B とコイン C はそれぞれ、景気が良い状態および悪い状態のときの企業の利益に対応し、表が出れば企業の1年間の利益が1億円出ることであらわし、裏が出れば利益が出ないことをあらわす。

- (1) 来年の景気は良くなるが再来年の景気は悪くなるというシナリオ 1 を考える。来年の利益を X_1 億円, 再来年の利益を X_2 億円とすると、 X_1 と X_2 の動きは、コイン B を1回投げ、続いてコイン C を1回投げることによってあらわすことができる。来年と再来年の利益の和 $S_1 = X_1 + X_2$

の期待値 m_1 は $\frac{\begin{array}{|c|c|} \hline (79) & (80) \\ \hline (81) & (82) \\ \hline \end{array}}{\quad}$ となる。

- (2) S_1 が期待値 m_1 から離れる度合いである S_1 の分散は、 $Z_1 = (S_1 - m_1)^2$ の期待値によってあらわすことができる。 Z_1 の期待値は $\frac{\begin{array}{|c|c|} \hline (83) & (84) \\ \hline (85) & (86) \\ \hline \end{array}}{\quad}$ である。

- (3) 来年と再来年の2年間の景気は、良くなり続けるか悪くなり続けるかのどちらかであるが、そのどちらかは分からないというシナリオ 2 を考える。2年間の利益の動きは、まずコイン A を投げ来年と再来年の景気がどうなるかを決め、その結果が表ならばコイン B を2回、裏ならばコイン C を2回投げるによってあらわすことができる。このシナリオにおける来年の利益を Y_1 億円, 再来年の利益を Y_2 億円とすると、このシナリオ 2 における来年と再来年の利益の和 $S_2 = Y_1 + Y_2$ の期待値 m_2 は、シナリオ 1 の期待値 m_1 と等しい。 S_2 の分散は、 $Z_2 = (S_2 - m_2)^2$ の期待値であり、その値は $\frac{\begin{array}{|c|c|} \hline (87) & (88) \\ \hline (89) & (90) \\ \hline \end{array}}{\quad}$ である。