

Rufus has a total of 20 coins of 2 types, Type Q and Type R. The value of each Type Q coin is  $5q$  currency units (cu), and the value of each Type R coin is  $5r$  cu, where  $q$  and  $r$  are positive integers and  $q < r$ . The total value of the Type Q coins is  $Q$  cu and the total value of the Type R coins is  $R$  cu. Additionally,  $Q + R = 130$ , and there are more Type Q coins than Type R coins.

In the table, select a value for  $Q$  and a value for  $R$  that are jointly consistent with the given information. Make only two selections, one in each column.

Q	R	
<input type="radio"/>	<input type="radio"/>	25
<input checked="" type="radio"/>	<input checked="" type="radio"/>	60
<input type="radio"/>	<input type="radio"/>	65
<input checked="" type="radio"/>	<input checked="" type="radio"/>	70
<input type="radio"/>	<input type="radio"/>	105

<https://gmatclub.com/forum/rufus-has-a-total-of-20-coins-of-2-types-type-q-and-type-r-426030.html>

✗ Which of the following is a value of  $x$  for which  $x^{-9} - x^{-7} > 0$ ?

- ☐ -2
- ☐ -1
- ☒  $-\frac{1}{2}$
- ☐ 1
- ☐ 2

✗ Juana mailed at least one letter on each day last week. Was the total number of letters that Juana mailed on the 7 days greater than 27?

- (1) Juana mailed fewer than 8 letters on each of the 7 days.
- (2) Juana mailed a different number of letters on any two of the 7 days.
- ☐ Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
- ☒ Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
- ☒ BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
- ☐ EACH statement ALONE is sufficient.
- ☐ Statements (1) and (2) TOGETHER are NOT sufficient.

The original price of a computer was increased by  $x\%$  to reach its current price. If Elena used a coupon that allowed her to purchase the computer at a  $y\%$  discount off the current price, was the price at which she purchased the computer less than the original price of the computer?

- (1)  $x = 12$  and  $y < 12$
- (2)  $y > 9$
- ☒ Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
- ☐ Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
- ☐ BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
- ☐ EACH statement ALONE is sufficient.
- ☒ Statements (1) and (2) TOGETHER are NOT sufficient.

正负号 大于小于符号一定要搞清楚!!!

Frederick Snyder proposed the idea that rapid eye movement (REM) sleep serves a sort of sentinel function because it is a state of much neural activity. The hypothesis is that episodes of REM sleep allow an animal to be ready to escape once awake should a predator attack, and that the brief periods of wakefulness associated with REM sleep also serve an antipredator function.

The sentinel hypothesis is appealing in many respects. Mammals in REM sleep are clearly more physiologically prepared for wakefulness than are those in deep slow-wave (SW) sleep. Furthermore, humans and rats can detect and process information to a surprising degree during REM sleep. Paradoxically, however, thresholds for arousal from REM sleep tend to be higher than from SW sleep. Additionally, the brief periods of wakefulness associated with REM sleep may not be frequent enough to have much benefit from an antipredator perspective.

Moreover, the hypothesis has never really been tested, and its predictions are not obvious. One would expect that REM sleep would be more prominent in species that suffer high predation or would become so when the perceived risk of predation increases. However, this prediction does not hold. One would also expect that an increase in predation risk would lead to shorter cycles of REM sleep and thus more arousals to wakefulness.

- Based on the information in the first paragraph, it is most reasonable to attribute to Snyder which of the following assumptions?
- ☐ Sleep that involves much neural activity is the least restful form of sleep.
  - ☐ The greater the amount of an animal's neural activity, the sharper its perception of the surrounding environment.
  - ☒ REM sleep occurs in most animal species and serves to protect them against predators.
  - ☐ REM sleep generally does not occur in animals except when they fear a high risk of predation.
  - ☐ Animals waking from sleep during low levels of neuroactivity are unlikely to achieve the fastest possible responses.

City Official: At City Hospital, uninsured patients tend to have shorter stays and fewer procedures performed than do insured patients, even though insured patients, on average, have slightly less serious medical problems at the time of admission to the hospital than uninsured patients have. Critics of the hospital have concluded that **the uninsured patients are not receiving proper medical care**. However, **this conclusion is almost certainly false**. Careful investigation has recently shown two things: insured patients have much longer stays in the hospital than necessary, and they tend to have more procedures performed than are medically necessary.

In the city official's argument, the two **boldface** portions play which of the following roles?

- ☐ The first states the conclusion of the city official's argument; the second provides support for that conclusion.
- ☐ The first is used to support the conclusion of the city official's argument; the second states that conclusion.
- ☐ The first was used to support the conclusion drawn by hospital critics; the second states the position that the city official's argument opposes.
- ☐ The first was used to support the conclusion drawn by hospital critics; the second provides support for the conclusion of the city official's argument.
- ☐ The first states the position that the city official's argument opposes; the second states the conclusion of the city official's argument.

Earth's mantle lies below the crust and above the core. Scientists cannot examine the mantle directly but have inferred its structure by measuring how seismic waves from earthquakes are distorted as they traverse it. In laboratory experiments, researchers have also studied mineral formation at the high pressures and temperatures in the mantle. These measurements and experiments indicate that the mantle consists of several concentric layers, with different minerals predominating at different depths. As pressures and temperatures increase toward the core, they force the elements to rearrange into new crystal structures, forming different minerals.

Until 2004, scientists believed that the lower mantle was fairly uniformly composed of a dense form of magnesium silicate belonging to a family of crystals called perovskite that extended all the way down to the boundary between the mantle and the core. But seismic measurements revealed the lower mantle's bottommost layer to be substantially denser than the rest. Since magnesium silicate perovskite has a tightly packed geometry that seemed to maximize the mass per unit volume, the higher pressures in this bottommost layer were not expected to change the perovskite's geometry. Thus, scientists assumed that a greater abundance of heavy elements within the crystal must explain the higher density. However, this assumption was also problematic, because convection should stir the lower mantle, mixing the layers and producing a uniform distribution of elements.

- Based on the passage, the implications of the discovery of postperovskite most likely challenged many geophysicists' beliefs about
- ☐ why Earth's inner core strengthens Earth's magnetic field
  - ☐ when the elements in Earth's inner core first became solid
  - ☐ which elements are present in Earth's core and mantle
  - ☐ whether crystalline magnesium silicate can form in Earth's lower mantle
  - ☒ what causes magnesium silicate crystals to have a tightly packed geometry

In 2004, geophysicists managed to expose magnesium silicate to the extreme pressures and temperatures of this bottommost layer, producing an unexpected new, denser crystalline structure they called postperovskite. Because postperovskite would conduct heat away from Earth's core more rapidly than perovskite would, scientists hypothesize that the early Earth's core must have been hotter than previously thought. This suggests that the inner core cooled enough to solidify only about one billion years ago. The solid inner core strengthens Earth's magnetic field. This field shields the surface from radiation from space, which can cause genetic mutations and would be especially dangerous for life on land. Thus, the growing intensity of the magnetic field about one billion years ago may have first allowed life to expand from the seas onto dry land. So postperovskite's discovery may help explain the timing of developments in life's evolution.

**Journal** **Review Rules** **Reviewers/Authors**

The editor of *Metathesis*, a new academic journal of literature, manages the peer-review of articles submitted for publication. The journal accepts articles focusing on any of three general subject areas: comparative literature, modernist literature, and postcolonial literature.

When an article is submitted, the editor has the article peer-reviewed by exactly three experts, none of whom authored or coauthored the article. The table (see the Reviewers/Authors tab) consists of all the authors or coauthors who have recently submitted articles and all the experts who currently peer-review or have recently peer-reviewed those articles. It also lists the general subject areas for each of the authors and reviewers.

Each author of each submitted article specializes in the general subject area of the article. Moreover, each recently submitted article was peer-reviewed by experts listed in the table.

Suppose that Farkas and Kenyatta were both selected as reviewers for a certain review article. For each of the following statements, select *Yes* if the statement must be true in this supposition and the information provided. Otherwise, select *No*.

Yes	No	
<input checked="" type="radio"/>	<input type="radio"/>	Laprade was not a reviewer of the article.
<input type="radio"/>	<input checked="" type="radio"/>	Farkas was a primary reviewer of the article.
<input type="radio"/>	<input checked="" type="radio"/>	Borsky was the secondary reviewer of the article.

Sea otters in Kedrick Bay feed on sea urchins and thus keep the local sea urchin population from growing large enough to destroy the kelp beds on which the urchins feed. Therefore, any oil spill that destroyed the sea otter population in Kedrick Bay would guarantee the destruction of the kelp beds by the urchins.

Which of the following, if true, would most seriously call into question the reasoning in the argument above?

- ☐ An oil spill severe enough to destroy the Kedrick Bay otter population would be likely to diminish the populations of other animal species that feed on Kedrick Bay's sea urchins.
- ☐ If the population of sea otters in Kedrick Bay declined in number as the result of an oil spill, sea otters from other locales would not soon replace them.
- ☐ In locales where both sea urchins and sea otters are present, sea urchins are the sea otter's main food source.
- ☐ Because of the pattern of ocean currents in and around Kedrick Bay, there is little likelihood that even a major oil spill in the area would affect the size of the local sea otter population.
- ☐ The sea urchin population in Kedrick Bay would be likely to be harmed by any oil spill that reduced the size of the local sea otter population.

In a ten-year study, one group of volunteers was given a medical screening for disease X every year, whereas an otherwise similar group of the same size was only screened for disease X at the end of the study. Nine percent of the first group were diagnosed with disease X during the study and received treatment, but only six percent of the second group were diagnosed with disease X when they received the screening at the end of the study. The researchers concluded that during the ten-year period, disease X must have disappeared without medical treatment in some individuals in the second group.

In order to evaluate the strength of the researcher's reasoning, it would be most helpful to know which of the following?

- ☐ Whether there were statistically significant lifestyle differences between the individuals who were diagnosed with disease X and those who were not
- ☐ How many people volunteered for the study because they knew that they had an especially high risk for disease X
- ☐ How long it takes to be treated for disease X
- ☐ Whether volunteers were told what disease they were being screened for
- ☒ How frequently on average the medical screening used in the study produces erroneous diagnoses of disease X

If an investment has produced no profit, tax relief predicated on having made the investment is no help; any corporate manager who fears that a new asset will not make money is scarcely comforted by promises of reductions in taxes the corporation will not owe.

Which of the following is the most reliable inference to draw from the passage above?

- (A) An effective way to discourage unprofitable corporate investment is to predicate tax relief on the making of profitable investments.
- (B) Corporate managers are likely to ignore tax considerations in deciding to invest in assets they believe will be profitable.
- (C) The promise of tax benefits for making new investments will not in and of itself stimulate new investment.
- (D) The less importance a corporate manager attaches to tax considerations, the more likely it is that the manager will accurately predict the profitability of an investment.
- (E) The critical factor in a corporate investment decision is likely to be a corporate manager's emotional response to perceived business conditions.

[Show Answer](#)



03:48

A 9%

B 4%

C 51%

D 21%

E 14%

Your answer has been saved in your [Error Log!](#)



Add  
Notes

SHOW DIFFICULTY AND TIMER STATISTICS

Corporate social responsibility (CSR) is based on the idea that firms should act responsibly to promote public benefit and that they can profit through such activities, but this idea is inherently flawed. Companies inevitably try to maximize their profits, and social welfare is not the primary motive in most cases; for example, cases in which social welfare is delivered by serving healthier foods or by opting for fuel-efficient vehicles. Therefore, social welfare is a by-product rather than an objective in most CSR activities.

**Which of the following is an assumption made by the author?**

- A. Products such as fuel-efficient cars are created because of consumer demands.
- B. Most CSR activities are affiliated to products such as healthier foods or fuel-efficiency.
- C. In most instances of CSR activities, it is not possible for companies to extract any additional profit by going the non-CSR route.
- D. Companies' long-term interests are oriented more toward profit acquisition than social welfare.
- E. The higher a company's desire to maximize its profits, the lower is its prioritizing of the objective of social welfare.

[Show Answer](#)



Antoine: The alarming fact is that among children aged 19 years and younger, the number taking antipsychotic medicines soared 73 percent in the last four years. That is greater than the increase in the number of adults taking antipsychotic medicines during the same period.

Lucy: But the use of antipsychotic drugs by adults is considered normal at the current rate of 11 adults per 1,000 taking the drugs. In contrast, the number of children on antipsychotic medication last year was 6.6 per 1,000 children.

Lucy's argument relies on the assumption that \_\_\_\_\_.

- (A) normal levels of antipsychotic drug use are rarely exceeded.
- (B) the percentage of adults taking antipsychotic medication is always higher than the percentage of children on such medication.
- (C) the use of antipsychotic medication in children is no different from the use of such medications in adults.
- (D) Antoine is not consciously distorting the statistics he presents.
- (E) a rapid increase in the number of children taking antipsychotic drugs generates more fear of random violence by adolescents than does knowledge of the absolute number of children on such medications.

overlooks the possibility that democracy promotes political freedom without being necessary or sufficient by itself to produce it

这句话的意思是：“忽略了这样一种可能性，即民主能够促进政治自由，但民主本身既不是产生政治自由的必要条件，也不是充分条件。”

具体解释如下：

- **overlooks the possibility:** 忽略了这样一种可能性
- **that democracy promotes political freedom:** 即民主能够促进政治自由
- **without being necessary or sufficient by itself to produce it:** 但民主本身既不是产生政治自由的必要条件，也不是充分条件

换句话说，这句话指出了一种观点，即虽然民主可以促进政治自由，但民主本身并不是唯一需要的条件，也不是唯一足够的条件来产生政治自由。

Political scientist: As a political system, democracy does not promote political freedom. There are historical examples of democracies that ultimately resulted in some of the most oppressive societies. Likewise, there have been enlightened despotisms and oligarchies that have provided a remarkable level of political freedom to their subjects.

The reasoning in the political scientist's argument is flawed because it

- (A) confuses the conditions necessary for political freedom with the conditions sufficient to bring it about
- (B) fail to consider that a substantial increase in the level of political freedom might cause a society to become more democratic
- (C) appeals to historical examples that are irrelevant to the causal claim being made
- (D) overlooks the possibility that democracy promotes political freedom without being necessary or sufficient by itself to produce it
- (E) bases its historical case on a personal point of view

[Show Answer](#)



+1 Kudos

request expert reply

Report a Problem

Quote

In response to advertisements for systems engineers, the IT firms in Gorgia received 3% higher number of applications in 2014 than in 2006. Nearly the same thing was witnessed in 2015 when the percentage of applications received was 3.5% higher than in 2006. It was surprising that Gorgia IT firms did not face any surplus of systems engineers around 2018, given the fact that the number of projects in Gorgia IT firms had been steadily decreasing and so had the number of systems engineers' resignations.

Which of the following, if true, would contribute most to an explanation of the apparent discrepancy above?

- A. The number of clients served by the IT firms in Gorgia has decreased rapidly since 2007 when many IT firms set up business in the adjacent county
- B. The number of vacancies for the post of systems engineer in 2006 in Gorgia's IT firms was 35% more than the applications received against advertisements.
- C. The engineering colleges in Gorgia produced 4% more IT graduates than Computer Science graduates in 2014 and 2015.
- D. The city council of Gorgia has planned to set up more engineering colleges by 2018 to cater to the growing demand for engineers in the IT firms.
- E. The IT firms did not decrease the number of systems engineers assigned to each project.