

## <u>CR CASELETS – 2</u>

- 1. Prediction, the hallmark of natural sciences, appears to have been possible by reducing phenomena to mathematical expressions. Some social scientists also want the power to predict accurately and assume they ought to perform the same reduction. But this would be a mistake; it would neglect data that are not easily mathematized and thereby would only distort the social phenomena. Which one of the following most accurately expresses the main conclusion of the argument?
  - A. The social sciences do not have as much predictive power as the natural sciences.
  - B. Mathematics plays a more important role in the natural sciences than it does in the social sciences.
  - C. There is a need in the social sciences to improve the ability to predict.
  - D. Phenomena in the social sciences should not be reduced to mathematical formulas.
  - E. Prediction is responsible for the success of the natural sciences.
- Psychologist: Although studies of young children have revealed important facts about the influence of the environment on language acquisition, it is clear that one cannot attribute such acquisition solely to environmental influences: innate mechanisms also play a role. So, the most reasonable question that ought to be studied is whether \_\_\_\_\_.
  - Which one of the following most logically completes the passage?
  - A. language acquisition can ever be fully explained
  - B. innate mechanisms are a contributing factor in language learning
  - C. language acquisition is solely the product of innate mechanisms
  - D. parents and peers are the most important influence on a child's learning of a language
  - E. innate mechanisms play a more important role in language acquisition than a child's immediate environment
- 3. People with serious financial problems are so worried about money that they cannot be happy. Their misery makes everyone close to them—family, friends, and colleagues—unhappy as well. Only if their financial problems are solved can they and those around them be happy. Which one of the following statements can be properly inferred from the passage?
  - A. Only serious problems make people unhappy.
  - B. People who solve their serious financial problems will be happy.
  - C. People who do not have serious financial problems will be happy.
  - D. If people are unhappy, they have serious financial problems.
  - E. If people are happy, they do not have serious financial problems.
- 4. Some types of organisms originated through endosymbiosis, the engulfing of one organism by another so that a part of the former becomes a functioning part of the latter. An unusual nucleomorph, a structure that contains DNA and resembles a cell nucleus, has been discovered within a plant known as a chlorarachniophyte. Two versions of a particular gene have been found in the DNA of this nucleomorph, and one would expect to find only a single version of this gene if the nucleomorph were not the remains of an engulfed organism's nucleus. Which one of the following is most strongly supported by the information above?
  - A. Only organisms of types that originated through endosymbiosis contain nucleomorphs.
  - B. A nucleomorph within the chlorarachniophyte holds all of the genetic material of some other organism.
  - C. Nucleomorphs originated when an organism endosymbiotically engulfed a chlorarachniophyte.
  - D. Two organisms will not undergo endosymbiosis unless at least one of them contains a nucleomorph.
  - E. Chlorarachniophytes emerged as the result of two organisms having undergone endosymbiosis.
- 5. If you have no keyboarding skills at all, you will not be able to use a computer. And if you are not able to use a computer, you will not be able to write your essays using a word processing program. If the statements above are true, which one of the following must be true?
  - A. If you have some keyboarding skills, you will be able to write your essays using a word processing program.
  - B. If you are not able to write your essays using a word processing program, you have no keyboarding skills.
  - C. If you are able to write your essays using a word processing program, you have at least some keyboarding skills.
  - D. If you are able to use a computer, you will probably be able to write your essays using a word processing program.
  - E. If you are not able to write your essays using a word processing program, you are not able to use a computer.
- 6. The axis of Earth's daily rotation is tilted with respect to the plane of its orbit at an angle of roughly 23 degrees. That angle can be kept fairly stable only by the gravitational influence of Earth's large, nearby Moon. Without such a stable and moderate axis tilt, a planet's climate is too extreme and unstable to support life. Mars, for example, has only very small moons, tilts at wildly fluctuating angles, and cannot support life. If the statements above are true, which one of the following must also be true on the basis of them?
  - A. If Mars had a sufficiently large nearby moon, Mars would be able to support life.
  - B. If Earth's Moon were to leave Earth's orbit Earth's climate would be unable to support life.



- C. Any planet with a stable, moderate axis tilt can support life.
- D. Gravitational influences other than moons have little or no effect on the magnitude of the tilt angle of either Earth's or Mars's axis.
- E. No planet that has more th+an one moon can support life.
- Editorialist: Drivers with a large number of demerit points who additionally have been convicted of a serious 7. driving-related offense should either be sentenced to jail or be forced to receive driver reeducation, since to do otherwise would be to allow a crime to go unpunished. Only if such drivers are likely to be made more responsible drivers should driver re-education be recommended for them. Unfortunately, it is always almost impossible to make drivers with a large number of demerit points more responsible drivers. If the editorialist's statements are true, they provide the most support for which one of the following?
  - A. Drivers with a large number of demerit points who have been convicted of a serious driving-related offense should be sent to jail.
  - B. Driver re-education offers the best chance of making drivers with a large number of demerit points responsible drivers.
  - C. Driver re-education is not a harsh enough punishment for anyone convicted of a serious driving-related offense who has also accumulated a large number of demerit points.
  - D. Driver re-education should not be recommended for those who have committed no serious driving-related offenses.
  - E. Drivers with a large number of demerit points but no conviction for a serious driving-related offense should receive driver re-education rather than jail.
- Muscular strength is a limited resource, and athletic techniques help to use this resource efficiently. Since top 8 athletes do not differ greatly from each other in muscular strength, it follows that a requirement for an athlete to become a champion is a superior mastery of athletic techniques. Which one of the following most accurately expresses the conclusion of the argument?
  - A. Only champion athletes have a superior mastery of athletic techniques.
  - B. Superior muscular strength is a requirement for an athlete to become a champion.
  - C. No athlete can become a champion without a superior mastery of athletic techniques.
  - D. The differences in muscular strength between top athletes are not great.
  - E. Athletic techniques help athletes use limited resources efficiently.
- If there are any inspired musical performances in the concert, the audience will be treated to a good show. But 9 there will not be a good show unless there are sophisticated listeners in the audience, and to be a sophisticated listener one must understand one's musical roots. If all of the statements above are true, which one of the following must also be true?
  - A. If there are no sophisticated listeners in the audience, then there will be no inspired musical performances in the concert.
  - No people who understand their musical roots will be in the audience if the audience will not be treated to a B. good show.
  - C. If there will be people in the audience who understand their musical roots, then at least one musical performance in the concert will be inspired.
  - D. The audience will be treated to a good show unless there are people in the audience who do not understand their musical roots.
  - E. If there are sophisticated listeners in the audience, then there will be inspired musical performances in the concert.
- 10. A politician can neither be reelected nor avoid censure by his or her colleagues if that politician is known to be involved in any serious scandals. Several prominent politicians have just now been shown to be involved in a conspiracy that turned into a serious scandal. These politicians will therefore not be reelected. If the statements above are all true, which one of the following statements must also be true?
  - A. The prominent politicians cannot escape censure by their colleagues.
  - B. If there had been no scandal, the prominent politicians would be reelected.
  - C. No politician is censured unless he or she is known to be involved in a serious scandal.
  - D. The prominent politicians initially benefited from the conspiracy that caused the scandal.
  - E. Some politicians who are involved in scandalous conspiracies avoid detection and censure.
- 11. Leachate is a solution, frequently highly contaminated, that develops when water permeates a landfill site. If and only if the landfill's capacity to hold liquids is exceeded does the leachate escape into the environment, generally in unpredictable quantities. A method must be found for disposing of leachate. Most landfill leachate is sent directly to sewage treatment plants, but not all sewage plants are capable of handling the highly contaminated water. Which one of the following can be inferred from the passage?
  - A. The ability to predict the volume of escaping landfill leachate would help solve the disposal problem.
  - B. If any water permeates a landfill, leachate will escape into the environment.
  - C. No sewage treatment plants are capable of handling leachate.



- D. Some landfill leachate is sent to sewage treatment plants that are incapable of handling it.
- E. If leachate does not escape from a landfill into the environment, then the landfill's capacity to hold liquids has not been exceeded.
- 12. From 1973 to 1989 total energy use in this country increased less than 10 percent. However, the use of electrical energy in this country during this same period grew by more than 50 percent, as did the gross national product—the total value of all goods and services produced in the nation. If the statements above are true, then which one of the following must also be true?
  - A. Most of the energy used in this country in 1989 was electrical energy.
  - B. From 1973 to 1989 there was a decline in the use of energy other than electrical energy in this country.
  - C. From 1973 to 1989 there was an increase in the proportion of energy use in this country that consisted of electrical energy use.
  - D. In 1989 electrical energy constituted a larger proportion of the energy used to produce the gross national product than did any other form of energy.
  - E. In 1973 the electrical energy that was produced constituted a smaller proportion of the gross national product than did all other forms of energy combined.
- 13. The number of North American children who are obese—that is, who have more body fat than do 85 percent of North American children their age—is steadily increasing, according to four major studies conducted over the past 15 years. If the finding reported above is correct, it can be properly concluded that
  - A. when four major studies all produce similar results, those studies must be accurate
  - B. North American children have been progressively less physically active over the past 15 years
  - C. the number of North American children who are not obese increased over the past 15 years
  - D. over the past 15 years, the number of North American children who are underweight has declined
  - E. the incidence of obesity in North American children tends to increase as the children grow older
- 14. Ditrama is a federation made up of three autonomous regions: Korva, Mitro, and Guadar. Under the federal revenue-sharing plan, each region receives a share of federal revenues equal to the share of the total population of Ditrama residing in that region, as shown by a yearly population survey. Last year, the percentage of federal revenues Korva received for its share decreased somewhat even though the population survey on which the revenue-sharing was based showed that Korva's population had increased. If the statements above are true, which one of the following must also have been shown by the population survey on which last year's revenue sharing in Ditrama was based?
  - A. Of the three regions, Korva had the smallest number of residents.
  - B. The population of Korva grew by a smaller percentage than it did in previous years.
  - C. The populations of Mitro and Guadar each increased by a percentage that exceeded the percentage by which the population of Korva increased.
  - D. Of the three regions, Korva's numerical increase in population was the smallest.
  - E. Korva's population grew by a smaller percentage than did the population of at least one of the other two autonomous regions.
- 15. Students from outside the province of Markland, who in any given academic year pay twice as much tuition each as do students from Markland, had traditionally accounted for at least two-thirds of the enrollment at Central Markland College. Over the past 10 years academic standards at the college have risen, and the proportion of students who are not Marklanders has dropped to around 40 percent. Which one of the following can be properly inferred from the statements above?
  - A. If it had not been for the high tuition paid by students from outside Markland, the college could not have improved its academic standards over the past 10 years.
  - B. If academic standards had not risen over the past 10 years, students who are not Marklanders would still account for at least two-thirds of the college's enrollment.
  - C. Over the past 10 years, the number of students from Markland increased and the number of students from outside Markland decreased.
  - D. Over the past 10 years, academic standards at Central Markland College have risen by more than academic standards at any other college in Markland.
  - E. If the college's per capita revenue from tuition has remained the same, tuition fees have increased over the past 10 years.
- 16. Most antidepressant drugs cause weight gain. While dieting can help reduce the amount of weight gained while taking such antidepressants, some weight gain is unlikely to be preventable. The information above most strongly supports which one of the following?
  - A. A physician should not prescribe any antidepressant drug for a patient if that patient is overweight.
  - B. People who are trying to lose weight should not ask their doctors for an antidepressant drug.
  - C. At least some patients taking antidepressant drugs gain weight as a result of taking them.
  - D. The weight gain experienced by patients taking antidepressant drugs should be attributed to lack of dieting.
  - E. All patients taking antidepressant drugs should diet to maintain their weight.



- 17. Maria won this year's local sailboat race by beating Sue, the winner in each of the four previous years. We can conclude from this that Maria trained hard. The conclusion follows logically if which one of the following is assumed?
  - A. Sue did not train as hard as Maria trained.
  - B. If Maria trained hard, she would win the sailboat race.
  - C. Maria could beat a four-time winner only if she trained hard.
  - D. If Sue trained hard, she would win the sailboat race.
  - E. Sue is usually a faster sailboat racer than Maria.
- 18. If something would have been justifiably regretted if it had occurred, then it is something that one should not have desired in the first place. It follows that many forgone pleasures should not have been desired in the first place. The conclusion above follows logically if which one of the following is assumed?
  - A. One should never regret one's pleasures.
  - B. Forgone pleasures that were not desired would not have been justifiably regretted.
  - C. Everything that one desires and then regrets not having is a forgone pleasure.
  - D. Many forgone pleasures would have been justifiably regretted.
  - E. Nothing that one should not have desired in the first place fails to be a pleasure.
- 19. Psychiatrist: Take any visceral emotion you care to consider. There are always situations in which it is healthy to try to express that emotion. So, there are always situations in which it is healthy to try to express one's anger. The conclusion of the argument follows logically if which one of the following is assumed?
  - A. Anger is always expressible.
  - B. Anger is a visceral emotion.
  - C. Some kinds of emotions are unhealthy to express.
  - D. All emotions that are healthy to express are visceral.
  - E. An emotion is visceral only if it is healthy to express.
- 20. Marian Anderson, the famous contralto, did not take success for granted. We know this because Anderson had to struggle early in life, and anyone who has to struggle early in life is able to keep a good perspective on the world. The conclusion of the argument follows logically if which one of the following is assumed?
  - A. Anyone who succeeds takes success for granted.
  - B. Anyone who is able to keep a good perspective on the world does not take success for granted.
  - C. Anyone who is able to keep a good perspective on the world does not take success for g
  - D. Anyone who does not take success for granted has to struggle early in life.
  - E. Anyone who does not take success for granted is able to keep a good perspective on the world.

Answer Key									
1. D	2. E	3. E	4. E	5. C	6. B	7. A	8. C	9. A	10.A
11.A	12.C	13.C	14.E	15.E	16.C	17.C	18.D	19.B	20.B

## Answer Key