

1. Read the passage and answer the question that follows.*

A company ran two advertisements, one in a print magazine and another on that magazine's web site. The company could not get data about how customers reacted to the print advertisement. But they found that fewer customers responded to the web advertisement than is usual for similar web advertisements. They concluded that probably fewer customers than usual responded to the advertisement in the print magazine.

Which of the following best describes how the company reached that conclusion?

- They predicted the strength of the result based on the strength of the cause.
- They used direct evidence about one case to make a conclusion about a similar case for which there is no direct evidence.
- They used information about the frequency of a kind of event to conclude the likelihood of a particular event of that kind.
- They made a statistical generalization based on a large number of previous cases.

2. Read the passage. One of the four statements can be logically inferred from the story. Choose the correct statement, and explain why it can be inferred and the other statements cannot.*

During the construction of the Quebec Bridge in 1907 the bridge's designer, Theodore Cooper, received word that the section being built was bending downward slightly. Before he could arrive at the bridge to tell the builders to stop, the whole section broke off and fell into the river, killing more than seventy workers. It was the worst bridge construction disaster in history. As a result of the inquiry that followed, the "rules of thumb" engineers had used to build thousands of bridges were replaced. Modern bridge engineers use more rigorous mathematical analysis.

Which one of the following statements can be logically inferred from the passage?

- Bridges built before 1907 were built without mathematical analysis and, therefore, were unsafe to use.
- Theodore Cooper's absence from the Quebec Bridge construction site resulted in the accident.
- Bridge engineers relied on rules of thumb because analytical methods were inadequate to solve their design problems.
- Engineering rules of thumb used before 1907 were not sufficient to assure the safety of bridges under construction.

3. Read the passage. Based on the information in the passage, try to fill in the missing premises for each argument that follows.

Solar cells can be made from barium silicide crystals (BaSi_2) on a metal substrate. BaSi_2 crystals grow on pure silicon, but this is not useful for solar cells. Engineers succeeding in growing BaSi_2 crystals on titanium metal substrates, but when they put BaSi_2 on nickel substrates it produced nickel silicide (NiSi) crystals instead of BaSi_2 . Based on these results, they decided to use BaSi_2 on a titanium substrate to develop new solar cells.

P1. Solar cells can be made from BaSi_2 crystals on a metal substrate.

P2. _____

C. Therefore, solar cells can be made from BaSi_2 on a titanium substrate.

P1. Solar cells can be made from BaSi_2 crystals on a metal substrate.

P2. _____

C. Therefore, solar cells cannot be made from BaSi_2 on a nickel substrate.

P1. Solar cells can be made from BaSi_2 crystals on a metal substrate.

P2. Solar cells cannot be made from BaSi_2 on a pure silicon substrate.

C. Therefore, _____

* Adapted from: Law School Admissions Council (2015) "Logical reasoning questions". <http://www.lsac.org/jd/lsat/prep/logical-reasoning>

4. Read the passage. Choose the statement that most weakens the argument. Explain why each statement does or does not weaken the argument.[†]

A guidebook contains the following observation. “I have visited hotels throughout the country and have noticed that in those built before 1930 the quality of the original carpentry work is generally superior to that in hotels built afterwards. Therefore, carpenters working on hotels before 1930 must have worked with more skill, care, and effort than carpenters who have worked on hotels built subsequently.”

Which of the following facts, if true, most weakens the guidebook author’s conclusion?

- a. The quality of carpentry in hotels is generally better than the quality of carpentry in houses.
 - b. Hotels built after 1930 generally have more rooms for guests than hotels built before 1930.
 - c. The materials used to build hotels before 1930 are not significantly different from the materials used after 1930.
 - d. Buildings with better quality carpentry work are less likely to be torn down or remodeled later.
 - e. The average length of training for carpenters has declined significantly since 1930.
5. Consider the following argument between two people. (Note that *argument* here does not mean “a sequence of premises and conclusion”; it means “a disagreement about what is true.”) Answer the question that follows, and explain why the answer you choose is correct.[†]

Marijuana advocate: If marijuana were legal, the government could charge taxes on the drug, increasing revenues. Since sales would be legal, the criminal culture supporting the drug would vanish, saving money on fighting crime. Overall, there is a tremendous amount to gain by making the drug legal.

Prosecutor: Studies of legalizing previously illegal drugs in other countries suggests that criminals controlling the business will not give up their profits or play by the rules. Moreover, removing money from crime-fighting after such legalization gives those criminals more freedom.

Which of the following techniques does the prosecutor use?

- a. He cites additional evidence which proves that the marijuana advocate’s conclusion is false.
- b. He points out that the advocate’s argument is invalid, because the conclusion doesn’t follow from the premises.
- c. He questions the relationship between cause and effect in the advocate’s argument.
- d. He argues that the same evidence could be used to support a different conclusion.
- e. He suggests, by analogy, potential drawbacks that might outweigh the predicted advantages of making the drug legal.

[†] Adapted from: Mike McGarry (2012, 2013) “Magoosh GMAT Blog”. magoosh.com/gmat/