

Necessary Assumption

1. J. J. Thomson, the discoverer of the electron and a recipient of the Nobel Prize in physics, trained many physicists, among them seven Nobel Prize winners, 32 fellows of the Royal Society of London, and 83 professors of physics. This shows that the skills needed for creative research can be taught and learned.

Which one of the following is an assumption on which the argument depends?

- (A) J. J. Thomson was an internationally known physicist, and scientists came from all over the world to work with him.
- (B) All the scientists trained by J. J. Thomson were renowned for their creative scientific research.
- (C) At least one of the eminent scientists trained by J. J. Thomson was not a creative researcher before coming to study with him.
- (D) Creative research in physics requires research habits not necessary for creative research in other fields.
- (E) Scientists who go on to be the most successful researchers often receive their scientific education in classes taught by renowned research scientists.

2. How do the airlines expect to prevent commercial plane crashes? Studies have shown that pilot error contributes to two-thirds of all such crashes. To address this problem, the airlines have upgraded their training programs by increasing the hours of classroom instruction and emphasizing communication skills in the cockpit. But it is unrealistic to expect such measures to compensate for pilots' lack

of actual flying time. Therefore, the airlines should rethink their training approach to reducing commercial crashes.

Which one of the following is an assumption upon which the argument depends?

- (A) Training programs can eliminate pilot errors.
- (B) Commercial pilots routinely undergo additional training throughout their careers.
- (C) The number of airline crashes will decrease if pilot training programs focus on increasing actual flying time.
- (D) Lack of actual flying time is an important contributor to pilot error in commercial plane crashes.
- (E) Communication skills are not important to pilot training programs.

3. Two prestigious fine art schools are located in New England, Central and Northeast. Talented vocal students attend each school. At Central, voice students are required to take voice lessons twice each week and to practice their singing at least one hour each day. At Northeast, voice students are required to take voice lessons only once per week, and they are required to practice only three times each week. The voice students from both schools were recently tested on a variety of vocal techniques, including breath control. Voice students at Central were able to hold a single note for 60 seconds, which was 15 seconds longer than the Northeast voice students. Thus, one must conclude that Northeast voice students will improve their breath control only if they increase their voice lessons to twice per week and their practice to one hour each day. The paragraph assumes which one of the following?
- (A) All students would be able to hold a note for 60 seconds if they take frequent voice lessons and practice their singing at least one hour per day.
 - (B) All students can have the same quality singing voices if they take voice lessons and practice one hour per day.
 - (C) Students with better breath control appreciate music more.
 - (D) Taking voice lessons twice per week and practicing one hour each day are essential factors in the ability of Central voice students to hold notes longer than the Northeast voice students.
 - (E) If students practice singing regularly, they will prefer voice to other forms of musical expression.
4. One theory of school governance can be pictured as an upside-down triangle. Students, teachers and the faculty/parent committee make up the body of the triangle, but the triangle has no point, that is, it has no school principal. Schools are run by the faculty/parent committee, which makes all significant decisions concerning academic standards, curriculum, discipline, extra-curricular activities, etc. As a result, under this theory, innovative teaching methods and progressive academic programs cannot be implemented. The argument depends upon which one of the following assumptions?
- (A) Innovative teaching methods and progressive academic programs are usually implemented by individual private schools, not by public school systems.
 - (B) Only principals will try new methods and programs.
 - (C) A person acting by himself is more likely to direct that new methods be tried than if he is acting as part of a committee.
 - (D) All school principals achieved their positions by taking academic risks.
 - (E) All innovative teaching methods and progressive academic programs encompass some risk.

5. Over the past two decades, a wide gap in pay has arisen between medical professionals who practice in the public health arena as opposed to those who practice privately. As a result, many doctors, nurses and other health professionals employed by public and nonprofit agencies have left their public health jobs in favor of private clinics and hospitals. Public and nonprofit agencies will be able to entice these professionals to return to public health jobs if salaries are made commensurate with those paid in the private sector. The quality of medical care provided by public and nonprofit agencies will thus be improved.

Which one of the following is presumed in the position stated above?

- (A) The experience obtained by medical professionals in private clinics and hospitals will be especially important in the public health arena.
- (B) How well public and nonprofit health agencies perform depends for the most part upon the experience level of their health professionals.
- (C) Unless public and nonprofit health agencies act, the salaries paid to medical professionals in private practice will continue to outpace those paid in the public health arena.
- (D) Medical health professionals who moved from the public sector to the private sector would change jobs again.
- (E) If the pay disparity between the public and private medical sectors continues to increase, many doctors and nurses will move from

private practice to the public health area.

6. Studies have shown that children who watch a lot of television do not typically read above grade level. In the United States, more than three out of ten children watch television at least 35 hours per week. In other western countries, less than one child out of ten watches that much television. In contrast, these other children perform much better than American children on reading tests and more often read above grade level. A majority of these non American children read above their school grade level; a smaller percentage of American children read above grade level. In order to read as well as children in other western countries, American children will have to reduce the amount of time they spend watching television.

The passage depends upon which one of the following assumptions?

- (A) American children are not as interested in reading well as children in other western countries.
- (B) Other children are more structured in their studies than children in the United States.
- (C) If a child wants to become a better reader, he or she will not watch as much television.
- (D) If a child watches less television, his or her reading level will increase.
- (E) The methods American teachers and parents use to teach readings are not significantly worse than the methods used by teachers and parents in other western countries.

7. Edward Grieg: Your gallery is biased against my paintings. I have submitted twenty canvases in the last three years and you have not accepted any of them for display. You are punishing me because I won the Western Art award three years ago and your manager thought the award should have gone to his artist son.

Gallery owner: You are wrong! Our acceptance standards and display policies do not discriminate against you. Our staff covers the painters' names, so the review board does not know who the artist is when it determines which pieces of art will be accepted for display and sale. The review board would not know which paintings you submitted.

Which one of the following assumptions does the gallery owner make in his reply?

- (A) The gallery manager holds no bad feelings about Edward Grieg winning the Western Art award over his artist son.
- (B) Many artists submit their work to galleries without having any pieces accepted for display.
- (C) The review board cannot recognize Edward Grieg's paintings without seeing his name on the canvases.
- (D) The gallery accepts only nature studies, and Edward Grieg's paintings frequently portray people and interior settings.
- (E) The review board has tended to favor oil paintings over the last several years and Edward Grieg more typically paints water colors.

8. In the last decade, the use of bicycle helmets has increased tremendously, particularly among young children. Although bicycle helmets appear to be as sturdy and safe as football helmets,

they are exempt from the safety standards the government has imposed upon the manufacture of football helmets. As a result, a child involved in a bicycle accident is more likely to suffer a serious head injury than is a child injured in a football game.

The argument depends upon which one of the following assumptions:

- (A) Youngsters ride their bicycles less carefully when they wear helmets.
- (B) The government has mandated a set of safety standards for manufacturers of bicycle helmets.
- (C) Children are more likely to be injured riding their bicycles than playing football.
- (D) More children ride bicycles than play football.
- (E) Bicycle helmets are less likely to meet the government's helmet safety standards than are football helmets, which are subject to the safety standards.

9. Steve Cooper, senior sales officer, has trained many top salespeople in this company, including 14 who have become the top salespersons in their regions and 3 who have won the top salesperson award. Although there is an art to selling, Mr. Cooper's success at training top salespeople shows that the skills required to become a top salesperson can be both taught and learned.

The argument depends on which one of the following assumptions?

- (A) Mr. Cooper does not teach the hard-sell method. Nor does he teach the I'll-be-your-pal method. Instead, he stresses the professional-client relationship.
 - (B) More than 50% of the people trained by Mr. Cooper went on to become successful salespeople.
 - (C) One of the successful salespeople who trained under Mr. Cooper was not an accomplished salesperson before learning the Cooper Method.
 - (D) There is a large and expanding industry dedicated to training salespeople.
 - (E) There is no one method with which to approach sales; a method that works for one person may not for another person.
10. The number of citations issued to convenience stores for selling tobacco products to minors has dramatically decreased in recent years. Between the years 1985-1990, a total of 5,511 citations were issued to convenience stores for this infraction. For the period 1990-1995, however, only 3,189 citations were issued. These statistics prove that local enforcement agencies have seriously neglected their

inspection and surveillance of tobacco sales practices since 1990.

Which one of the following does the author assume in reaching his conclusion?

- (A) Monitoring and enforcement of tobacco violations became more lax due to a change in the political climate in Washington, D.C.
- (B) The decrease in the number of citations was not due to a reduction in the number of tobacco sales actually made to minors.
- (C) Authorities focused more on enforcing the ban on liquor sales to minors than the ban on the sale of tobacco products to minors.
- (D) Local enforcement agencies suffered from a reduction in personnel during the period 1990-1995.
- (E) For several years prior to 1985, in excess of 1,500 citations per year were issued in connection with tobacco sales to minors.

11. Saunders: Everyone at last week's neighborhood association meeting agreed that the row of abandoned and vandalized houses on Carlton Street posed a threat to the safety of our neighborhood. Moreover, no one now disputes that getting the houses torn down eliminated that threat. Some people tried to argue that it was unnecessary to demolish what they claimed were basically sound buildings, since the city had established a fund to help people in need of housing buy and rehabilitate such buildings. The overwhelming success of the demolition strategy, however, proves that the majority, who favored demolition, were right and that those who claimed that the problem could and should be solved by rehabilitating the houses were wrong.

Which one of the following principles, if established, would determine that demolishing the houses was the right decision or instead would determine that the proposal advocated by the opponents of demolition should have been adopted?

- (A) When what to do about an abandoned neighborhood building is in dispute, the course of action that would result in the most housing for people who need it should be the one adopted unless the building is believed to pose a threat to neighborhood safety.
- (B) When there are two proposals for solving a neighborhood problem, and only one of them would preclude the possibility of trying the other approach if the first proves unsatisfactory, then the approach that does not foreclose the other possibility should be the one adopted.

- (C) If one of two proposals for renovating vacant neighborhood buildings requires government funding whereas the second does not, the second proposal should be the one adopted unless the necessary government funds have already been secured.
- (D) No plan for eliminating a neighborhood problem that requires demolishing basically sound houses should be carried out until all other possible alternatives have been thoroughly investigated.
- (E) No proposal for dealing with a threat to a neighborhood's safety should be adopted merely because a majority of the residents of that neighborhood prefer that proposal to a particular counterproposal.

12. Until he was dismissed amid great controversy, Hastings was considered one of the greatest intelligence agents of all time. It is clear that if his dismissal was justified, then Hastings was either incompetent or else disloyal. Soon after the dismissal, however, it was shown that he had never been incompetent. Thus, one is forced to conclude that Hastings must have been disloyal.

Which one of the following states an assumption upon which the argument depends?

- (A) Hastings' dismissal was justified.
- (B) Hastings was a high-ranking intelligence officer.
- (C) The dismissal of anyone who was disloyal would be justified.
- (D) Anyone whose dismissal was justified was disloyal.
- (E) If someone was disloyal or incompetent, then his dismissal was justified.

13. This past holiday weekend, the number of traffic accidents that occurred on a particular stretch of Highway 79 was 25 percent lower than the corresponding number of accidents last year in the same location over the same holiday weekend. This is good evidence that the Highway Patrol's publicity campaign against speeding has resulted in safer driving habits among motorists.

Which of the following is assumed in reaching the conclusion above?

(A) Traffic accident rates on the particular stretch of Highway 79 will continue to drop as long as the

Highway Patrol's publicity campaign continues.

(B) The two holiday weekends cover exactly the same calendar dates.

(C) Highway Patrol cars are patrolling the particular stretch of Highway 79 more frequently.

(D) The total number of miles driven on the particular stretch of Highway 79 has not decreased 25% or more since last year.

(E) A reduction in speeding is the only driving habit that has improved since last year.