

In the United States, of the people who moved from one state to another when they retired, the percentage who retired to Florida has decreased by three percentage points over the past ten years. Since many local businesses in Florida cater to retirees, this decline is likely to have a noticeably negative economic effect on these businesses.

Which of the following, if true, most seriously weakens the argument?

A.

Florida attracts more people who move from one state to another when they retire than does any other state.

B.

The number of people who move out of Florida to accept employment in other states has increased over the past ten years.

C.

There are far more local businesses in Florida that cater to tourists than there are local businesses that cater to retirees.

D.

The total number of people who retired and moved to another state for their retirement has increased significantly over the past ten years.

E.

The number of people who left Florida when they retired to live in another state was greater last year than it was ten years ago.

The spacing of the four holes on a fragment of a bone flute excavated at a Neanderthal campsite is just what is required to play the third through sixth notes of the diatonic scale—the seven-note musical scale used in much of Western music since the Renaissance. Musicologists therefore hypothesize that the diatonic musical scale was developed and used thousands of years before it was adopted by Western musicians.

Which of the following, if true, most strongly supports the hypothesis?

A.

Bone flutes were probably the only musical instrument made by Neanderthals.

B.

No musical instrument that is known to have used a diatonic scale is of an earlier date than the flute found at the Neanderthal campsite.

C.

The flute was made from a cave-bear bone and the campsite at which the flute fragment was excavated was in a cave that also contained skeletal remains of cave bears.

D.

Flutes are the simplest wind instrument that can be constructed to allow playing a diatonic scale.

E.

The cave-bear leg bone used to make the Neanderthal flute would have been long

enough to make a flute capable of playing a complete diatonic scale.

A company plans to develop a prototype weeding machine that uses cutting blades with optical sensors and microprocessors that distinguish weeds from crop plants by differences in shade of color. The inventor of the machine claims that it will reduce labor costs by virtually eliminating the need for manual weeding.

Which of the following is a consideration in favor of the company's implementing its plan to develop the prototype?

A.

There is a considerable degree of variation in shade of color between weeds of different species.

B.

The shade of color of some plants tends to change appreciably over the course of their growing season.

C.

When crops are weeded manually, overall size and leaf shape are taken into account in distinguishing crop plants from weeds.

D.

Selection and genetic manipulation allow plants of virtually any species to be economically bred to have a distinctive shade of color without altering their other characteristics.

E.

Farm laborers who are responsible for the manual weeding of crops carry out other agricultural duties at times in the growing season when extensive weeding is not necessary.

Studies in restaurants show that the tips left by customers who pay their bill in cash tend to be larger when the bill is presented on a tray that bears a credit-card logo. Consumer psychologists hypothesize that simply seeing a credit-card logo makes many credit-card holders willing to spend more because it reminds them that their spending power exceeds the cash they have immediately available.

Which of the following, if true, most strongly supports the psychologists' interpretation of the studies?

A.

The effect noted in the studies is not limited to patrons who have credit cards.

B.

Patrons who are under financial pressure from their credit-card obligations tend to tip less when presented with a restaurant bill on a tray with credit-card logo than when the tray has no logo.

C.

In virtually all of the cases in the studies, the patrons who paid bills in cash did not

possess credit cards.

D.

In general, restaurant patrons who pay their bills in cash leave larger tips than do those who pay by credit card.

E.

The percentage of restaurant bills paid with given brand of credit card increases when that credit card's logo is displayed on the tray with which the bill is prepared.

Economist: Tropicorp, which constantly seeks profitable investment opportunities, has been buying and clearing sections of tropical forest for cattle ranching, although pastures newly created there become useless for grazing after just a few years. The company has not gone into rubber tapping, even though greater profits can be made from rubber tapping, which leaves the forest intact. Thus, some environmentalists conclude that Tropicorp has not acted wholly out of economic self-interest. However, these environmentalists are probably wrong. The initial investment required for a successful rubber-tapping operation is larger than that needed for a cattle ranch. Furthermore, there is a shortage of workers employable in rubber-tapping operations, and finally, taxes are higher on profits from rubber tapping than on profits from cattle ranching.

In the economist's argument, the two boldfaced portions play which of the following roles?

A.

The first supports the conclusion of the economist's argument; the second calls that conclusion into question.

B.

The first states the conclusion of the economist's argument; the second supports that conclusion.

C.

The first supports the environmentalists' conclusion; the second states that conclusion.

D.

The first states the environmentalists' conclusion; the second states the conclusion of the economist's argument.

E.

Each supports the conclusion of the economist's argument.

Brochure: Help conserve our city's water supply. By converting the landscaping in your yard to a water-conserving landscape, you can greatly reduce your outdoor water use. A water-conserving landscape is natural and attractive, and it also saves you money.

Criticism: For most people with yards, the savings from converting to a water-conserving landscape cannot justify the expense of new landscaping, since typically the conversion would save less than twenty dollars on a homeowner's yearly water bills.

Which of the following, if true, provides the best basis for a rebuttal of the criticism?

A.

Even homeowners whose yards do not have water-conserving landscapes can conserve water by installing water-saving devices in their homes.

B.

A conventional landscape generally requires a much greater expenditure on fertilizer and herbicide than does a water-conserving landscape.

C.

A significant proportion of the residents of the city live in buildings that do not have yards.

D.

It costs no more to put in water-conserving landscaping than it does to put in conventional landscaping.

E.

Some homeowners use more water to maintain their yards than they use for all other purposes combined.

Shipping Clerk: The five specially ordered shipments sent out last week were sent out on Thursday. Last week, all of the shipments that were sent out on Friday consisted entirely of building supplies, and the shipping department then closed for the weekend. Four shipments were sent to Truax Construction last week, only three of which consisted of building supplies.

If the shipping clerk's statements are true, which of the following must also be true?

A.

At least one of the shipments sent to Truax Construction last week was specially ordered.

B.

At least one of last week's specially ordered shipments did not consist of building supplies.

C.

At least one of the shipments sent to Truax Construction was not sent out on Thursday of last week.

D.

At least one of the shipments that were sent out on Friday of last week was sent to Truax Construction.

E.

At least one of the shipments sent to Truax Construction last week was sent out before Friday.

Community activist: If Morganville wants to keep its central shopping district healthy, it should prevent the opening of a huge SaveAll discount department store on the

outskirts of Morganville. Records from other small towns show that whenever SaveAll has opened a store outside the central shopping district of a small town, within five years the town has experienced the bankruptcies of more than a quarter of the stores in the shopping district.

The answer to which of the following would be most useful for evaluating the community activist's reasoning?

A.

Have community activists in other towns successfully campaigned against the opening of a SaveAll store on the outskirts of their towns?

B.

Do a large percentage of the residents of Morganville currently do almost all of their shopping at stores in Morganville?

C.

In towns with healthy central shopping districts, what proportion of the stores in those districts suffer bankruptcy during a typical five-year period?

D.

What proportion of the employees at the SaveAll store on the outskirts of Morganville will be drawn from Morganville?

E.

Do newly opened SaveAll stores ever lose money during their first five years of operation?

In the past the country of Siduria has relied heavily on imported oil. Siduria recently implemented a program to convert heating systems from oil to natural gas. Siduria already produces more natural gas each year than it burns, and oil production in Sidurian oil fields is increasing at a steady pace. If these trends in fuel production and usage continue, therefore, Sidurian reliance on foreign sources for fuel should decline soon.

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

A.

In Siduria the rate of fuel consumption is rising no more quickly than the rate of fuel production.

B.

Domestic production of natural gas is rising faster than is domestic production of oil in Siduria.

C.

No fuel other than natural gas is expected to be used as a replacement for oil in Siduria.

D.

Buildings cannot be heated by solar energy rather than by oil or natural gas.

E.

All new homes that are being built will have natural-gas-burning heating systems.

Historian: Newton developed mathematical concepts and techniques that are fundamental to modern calculus. Leibniz developed closely analogous concepts and techniques. It has traditionally been thought that these discoveries were independent. Researchers have, however, recently discovered notes of Leibniz' that discuss one of Newton's books on mathematics. Several scholars have argued that since the book includes a presentation of Newton's calculus concepts and techniques, and since the notes were written before Leibniz' own development of calculus concepts and techniques, it is virtually certain that the traditional view is false. A more cautious conclusion than this is called for, however. Leibniz' notes are limited to early sections of Newton's book, sections that precede the ones in which Newton's calculus concepts and techniques are presented.

In the historian's reasoning, the two boldfaced portions play which of the following roles?

A.

The first provides evidence in support of the overall position that the historian defends; the second is evidence that has been used to support an opposing position.

B.

The first provides evidence in support of the overall position that the historian defends; the second is that position.

C.

The first provides evidence in support of an intermediate conclusion that is drawn to provide support for the overall position that the historian defends; the second provides evidence against that intermediate conclusion.

D.

The first is evidence that has been used to support a conclusion that the historian criticizes; the second is evidence offered in support of the historian's own position.

E.

The first is evidence that has been used to support a conclusion that the historian criticizes; the second is further information that substantiates that evidence.

Five years ago, as part of a plan to encourage citizens of Levaska to increase the amount of money they put into savings, Levaska's government introduced special savings accounts in which up to \$3,000 a year can be saved with no tax due on the interest unless money is withdrawn before the account holder reaches the age of sixty-five. Millions of dollars have accumulated in the special accounts, so the government's plan is obviously working.

Which of the following, if true, most seriously weakens the argument?

A.

A substantial number of Levaskans have withdrawn at least some of the money they had invested in the special accounts.

B.

Workers in Levaska who already save money in long-term tax-free accounts that are offered through their workplace cannot take advantage of the special savings accounts introduced by the government.

C.

The rate at which interest earned on money deposited in regular savings accounts is taxed depends on the income bracket of the account holder.

D.

Many Levaskans who already had long-term savings have steadily been transferring those savings into the special accounts.

E.

Many of the economists who now claim that the government's plan has been successful criticized it when it was introduced.

Proposal: Carbon dioxide and methane in the atmosphere block the escape of heat into space. So emission of these "greenhouse" gases contributes to global warming. In order to reduce global warming, emission of greenhouse gases needs to be reduced. Therefore, the methane now emitted from open landfills should instead be burned to produce electricity.

Objection: The burning of methane generates carbon dioxide that is released into the atmosphere.

Which of the following, if true, most adequately counters the objection made to the proposal?

A.

Every time a human being or other mammal exhales, there is some carbon dioxide released into the air.

B.

The conversion of methane to electricity would occur at a considerable distance from the landfills.

C.

The methane that is used to generate electricity would generally be used as a substitute for a fuel that does not produce any greenhouse gases when burned.

D.

Methane in the atmosphere is more effective in blocking the escape of heat from the Earth than is carbon dioxide.

E.

The amount of methane emitted from the landfills could be reduced if the materials whose decomposition produces methane were not discarded, but recycled.

Exposure to certain chemicals commonly used in elementary schools as cleaners or pesticides causes allergic reactions in some children. Elementary school nurses in Renston report that the proportion of schoolchildren sent to them for treatment of allergic reactions to those chemicals has increased significantly over the past ten years. Therefore, either Renston's schoolchildren have been exposed to greater quantities of the chemicals, or they are more sensitive to them than schoolchildren were ten years ago.

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

A.

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

B.

The number of school nurses employed by Renston's elementary schools has not decreased over the past ten years.

C.

Children who are allergic to the chemicals are no more likely than other children to have allergies to other substances.

D.

The chemicals are not commonly used as cleaners or pesticides in houses and apartment buildings in Renston.

E.

Children attending elementary school do not make up a larger proportion of Renston's population now than they did ten years ago.

A significant number of complex repair jobs carried out by Ace Repairs have to be reworked under the company's warranty. The reworked jobs are invariably satisfactory. When initial repairs are inadequate, therefore, it is not because the mechanics lack competence; rather, there is clearly a level of focused concentration that complex repairs require that is elicited more reliably by rework jobs than by first-time jobs.

The argument above assumes which of the following?

A.

There is no systematic difference in membership between the group of mechanics who do first-time jobs and the group of those who do rework jobs.

B.

There is no company that successfully competes with Ace Repairs for complex repair jobs.

C.

Ace Repairs' warranty is good on first-time jobs but does not cover rework jobs.

D.

Ace Repairs does not in any way penalize mechanics who have worked on complex repair jobs that later had to be reworked.

E.

There is no category of repair jobs in which Ace Repairs invariably carries out first-time jobs satisfactorily.

Environmentalism: The use of snowmobiles in the vast park north of Milville create unacceptable levels of air pollution and should be banned.

Milville business spokesperson: Snowmobiling brings many out-of-towners to Milville in winter months, to the great financial benefit of many local residents. So, economics dictate that we put up with the pollution.

Environmentalism: I disagree: A great many cross-country skiers are now kept from visiting Milville by the noise and pollution that snowmobiles generate.

Environmentalism responds to the business spokesperson by doing which of the following?

A.

Challenging an assumption that certain desirable outcome can derive from only one set of circumstances

B.

Challenging an assumption that certain desirable outcome is outweighed by negative aspects associated with producing that outcome

C.

Maintaining that the benefit that the spokesperson desires could be achieved in greater degree by a different means

D.

Claiming that the spokesperson is deliberately misrepresenting the environmentalism's position in order to be better able to attack it

E.

Denying that an effect that the spokesperson presents as having benefited a certain group of people actually benefited those people

Escalating worldwide demand for corn has led to a sharp increase in the market price of corn, and corn prices are likely to remain high. Corn is extensively used as feed for livestock, and because profit margins are tight in the livestock business, many farmers are expected to leave the business. With fewer suppliers, meat prices will surely rise. Nonetheless, observers expect an immediate short-term decrease in meat prices.

Which of the following, if true, most helps to justify the observers' expectation?

A.

The increase in corn prices is due more to a decline in the supply of corn than to a growth in demand for it.

B.

Generally, farmers who are squeezed out of the livestock business send their livestock to market much earlier than they otherwise would.

C.

Some people who ate meat regularly in the past are converting to diets that include little or no meat.

D.

As meat prices rise, the number of livestock producers is likely to rise again.

E.

Livestock producers who stay in the business will start using feed other than corn more extensively than they did in the past.

Last year all refuse collected by Shelbyville city services was incinerated. This incineration generated a large quantity of residue ash. In order to reduce the amount of residue ash Shelbyville generates this year to half of last year's total, the city has revamped its collection program. This year city services will separate for recycling enough refuse to reduce the number of truckloads of refuse to be incinerated to half of last year's number.

Which of the following is required for the revamped collection program to achieve its aim?

A.

This year, no materials that city services could separate for recycling will be incinerated.

B.

Separating recyclable materials from materials to be incinerated will cost Shelbyville less than half what it cost last year to dispose of the residue ash.

C.

Refuse collected by city services will contain a larger proportion of recyclable materials this year than it did last year.

D.

The refuse incinerated this year will generate no more residue ash per truckload incinerated than did the refuse incinerated last year.

E.

The total quantity of refuse collected by Shelbyville city services this year will be no greater than that collected last year.

A diet high in saturated fats increases a person's risk of developing heart disease. Regular consumption of red wine reduces that risk. Per-capita consumption of saturated fats is currently about the same in France as in the United States, but there is less heart disease there than in the United States because consumption of red wine is higher in France. The difference in regular red-wine consumption has been narrowing, but no similar convergence in heart-disease rates has occurred.

Which of the following, if true, most helps to account for the lack of convergence noted above?

A.

Consumption of saturated fats is related more strongly to the growth of fatty deposits on artery walls, which reduce blood flow to the heart, than it is to heart disease directly.

B.

Over the past 30 years, per-capita consumption of saturated fats has remained essentially unchanged in the United States but has increased somewhat in France.

C.

Reports of the health benefits of red wine have led many people in the United States to drink red wine regularly.

D.

Cigarette smoking, which can also contribute to heart disease, is only slightly more common in France than in the United States.

E.

Regular consumption of red wine is declining dramatically among young adults in France, and heart disease typically does not manifest itself until middle age.

In January of last year the Moviemania chain of movie theaters started propping its popcorn in canola oil, instead of the less healthful coconut oil that it had been using until then. Now Moviemania is planning to switch back, saying that the change has hurt popcorn sales. That claim is false, however, since according to Moviemania's own sales figures, Moviemania sold 5 percent more popcorn last year than in the previous year.

Which of the following, if true, most strongly supports the argument against Moviemania's claim?

A.

Total sales of all refreshments at Moviemania's movie theaters increased by less than 5 percent last year.

B.

Moviemania makes more money on food and beverages sold at its theaters than it does on sales of movie tickets.

C.

Moviemania's customers prefer the taste of popcorn popped in coconut oil to that of popcorn popped in canola oil.

D.

Total attendance at Moviemania's movie theaters was more than 20 percent higher last year than the year before.

E.

The year before last, Moviemania experienced a 10 percent increase in popcorn sales over the previous year.

Denoma, a major consumer-electronics maker, had a sizable decline in sales revenue for its most recent fiscal year. This result appears surprising, because electronics retailers report that although their overall sales were considerably lower than in the previous year, their sales revenue from Denoma models actually grew, largely thanks to some innovative and popular models that Denoma introduced.

Which of the following, if true, does most to explain the apparently surprising result?

A.

Because of the need to educate the public about its new models' capabilities, Denoma's advertising spending was higher than normal over the period.

B.

For the period at issue, Denoma's major competitors reported declines in revenue that were, in percentage terms, greater than Denoma's.

C.

A significant proportion of Denoma's revenue comes from making components for other consumer-electronics manufacturers.

D.

Unlike some of its major competitors, Denoma has no lines of business outside consumer electronics to provide revenue when retail sales of consumer electronics are weak.

E.

During the period, consumer-electronics retailers sold remaining units of Denoma's superseded models at prices that were deeply discounted from those models' original prices.

The Earth's rivers constantly carry dissolved salts into its oceans. Clearly, therefore, by taking the resulting increase in salt levels in the oceans over the past hundred years and then determining how many centuries of such increases it would have taken the oceans to reach current salt levels from a hypothetical initial salt-free state, the maximum age of the Earth's oceans can be accurately estimated.

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

A.

The quantities of dissolved salts deposited by rivers in the Earth's oceans have not been unusually large during the past hundred years.

B.

At any given time, all the Earth's rivers have about the same salt levels.

C.

There are salts that leach into the Earth's oceans directly from the ocean floor.

D.

There is no method superior to that based on salt levels for estimating the maximum age of the Earth's oceans

E.

None of the salts carried into the Earth's oceans by rivers are used up by biological activity in the oceans.

Several of a certain bank's top executives have recently been purchasing shares in their own bank. This activity has occasioned some surprise, since it is widely believed that the bank, carrying a large number of bad loans, is on the brink of collapse. Since the executives are well placed to know their bank's true condition, it might seem that their share purchases show that the danger of collapse is exaggerated. However, the available information about the bank's condition is from reliable and informed sources, and corporate executives do sometimes buy shares in their own company in a calculated attempt to calm worries about their company's condition. On balance, therefore, it is likely that the executives of the bank are following this example.

In the argument given, the two boldfaced portions play which of the following roles?

A.

The first describes the circumstance the explanation of which is the issue that the argument addresses; the second states the main conclusion of the argument.

B.

The first describes the circumstance the explanation of which is the issue the argument addresses; the second states a conclusion that is drawn in order to support the main conclusion of the argument.

C.

The first provides evidence to defend the position that the argument seeks to establish against opposing positions; the second states the main conclusion of the argument.

D.

The first provides evidence to support the position that the argument seeks to establish; the second states a conclusion that is drawn in order to support the argument's main conclusion.

E.

Each provides evidence to support the position that the argument seeks to establish.

Often patients with ankle fractures that are stable, and thus do not require surgery, are given follow-up x-rays because their orthopedists are concerned about possibly having misjudged the stability of the fracture. When a number of follow-up x-rays were reviewed, however, all the fractures that had initially been judged stable were found to have healed correctly. Therefore, it is a waste of money to order follow-up x-rays of ankle fracture initially judged stable.

Which of the following, if true, most strengthens the argument?

A.

Doctors who are general practitioners rather than orthopedists are less likely than

orthopedists to judge the stability of an ankle fracture correctly.

B.

Many ankle injuries for which an initial x-ray is ordered are revealed by the x-ray not to involve any fracture of the ankle.

C.

X-rays of patients of many different orthopedists working in several hospitals were reviewed.

D.

The healing of ankle fractures that have been surgically repaired is always checked by means of a follow-up x-ray.

E.

Orthopedists routinely order follow-up x-rays for fractures of bone other than ankle bones.

The traditional treatment of strep infections has been a seven-day course of antibiotics, either penicillin or erythromycin. However, since many patients stop taking those drugs within three days, reinfection is common in cases where these drugs are prescribed. A new antibiotic requires only a three-day course of treatment. Therefore, reinfection will probably be less common in cases where the new antibiotic is prescribed than in cases where either penicillin or erythromycin is prescribed.

Which of the following, if true, most strengthens the argument

A.

Some of people who are allergic to penicillin are likely to be allergic to the new antibiotic.

B.

A course of treatment with the new antibiotic costs about the same as a course of treatment with either penicillin or erythromycin.

C.

The new antibiotic has been shown to be effective in eradicating bacterial infections other than strep.

D.

Some physicians have already begun to prescribe the new antibiotic instead of penicillin or erythromycin for the treatment of some strep infections

E.

Regardless of whether they take a traditional antibiotic or the new one, most patients feel fully recovered after taking the drug for three days.

Macrophages are cells that play a role in the response of the immune system of mice and other mammals to invasive organisms such as bacteria. Unlike other mice, mice that are genetically incapable of making these particular cells do not show elevated levels of nitrates when infected with bacteria.

The statements above, if true, provide the most support for which of the following conclusions?

A.

Mice that are unable either to make macrophages or to make them in sufficient numbers will protect themselves from bacterial infections in some other way.

B.

Mice that show elevated levels of nitrates can easily fight off most types of bacterial infections.

C.

In mice, macrophages play a role in the production of nitrates or inhibit a process by which nitrates are broken down or otherwise eliminated.

D.

When a healthy mouse becomes infected with an invasive organism, the number of macrophages in the mouse's body decreases.

E.

Injections of nitrates into mice that lack macrophages will not enhance the ability of these animals' immune systems to fight off infection.

The emission of sulfur dioxide when high-sulfur coal is burned is restricted by law. New coal-burning plants usually comply with the law by installing expensive equipment to filter sulfur dioxide from their emissions. These new plants could save money by installing instead less expensive cleaning equipment that chemically removes most sulfur from coal before combustion.

Which of the following, if known, would be most relevant to evaluating the claim above about how new-coal burning plants could save money?

A.

Whether existing oil-burning plants are required to filter sulfur dioxide from their emissions.

B.

Whether the expense of installing the cleaning equipment in a new plant is less than the expense of installing the cleaning equipment in an older plant.

C.

Whether the process of cleaning the coal is more expensive than the process of filtering the emissions

D.

Whether lawful emissions of sulfur dioxide from coal-burning plants are damaging the environment.

E.

Whether existing plants that use the filtering equipment could replace this equipment with the cleaning equipment and still compete with new plants that install the cleaning equipment.

The milk of many mammals contains cannabinoids, substances that are known to stimulate certain receptors in the brain. To investigate the function of cannabinoids, researchers injected newborn mice with a chemical that is known to block cannabinoids from reaching their receptors in the brain. The injected mice showed far less interest in feeding than normal newborn mice do. Therefore, cannabinoids probably function to stimulate the appetite.

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

A.

Newborn mice do not normally ingest any substance other than their mothers milk.

B.

Cannabinoids are the only substances in mammals milk that stimulate the appetite.

C.

The mothers of newborn mice do not normally make any effort to encourage their babies to feed.

D.

The milk of mammals would be less nutritious if it did not contain cannabinoids.

E.

The chemical that blocks cannabinoids from stimulating their brain receptors does not independently inhibit the appetite.

Kernland imposes a high tariff on the export of unprocessed cashew nuts in order to ensure that the nuts are sold to domestic processing plants. If the tariff were lifted and unprocessed cashew were sold at world market prices, more farmers could profit by growing cashews. However, since all the processing plants are in urban areas, removing the tariff would seriously hamper the governments effort to reduce urban unemployment over the next five years.

Which of the following, if true, most seriously weakens the argument?

A.

Some of the by-products of processing cashews are used for manufacturing plants and plastics

B.

Other countries in which cashews are processed subsidize their processing plants

C.

More people in kernland are engaged in farming cashews than in processing them

D.

Buying unprocessed cashews at lower than world market prices enables cashew processors in kernland to sell processed nuts at competitive prices

E.

A lack of profitable crops is driving an increasing number of small farmers in kernland

off their land and into the cities

In the years following an eight-cent increase in the federal tax on a pack of cigarettes, sales of cigarettes fell ten percent. In contrast, in the year prior to the tax increase, sales had fallen one percent. The volume of cigarette sales is therefore strongly related to the after-tax price of a pack of cigarettes.

The argument above requires which of the following assumptions?

A.

During the year following the tax increase, the pretax price of a pack of cigarettes did not increase by as much as it had during the year prior to the tax increase.

B.

The one percent fall in cigarette sales in the year prior to tax increases was due to a smaller tax increase.

C.

The pretax price of a pack of cigarettes gradually decreased throughout the year before and the year after the tax increase.

D.

For the year following the tax increase, the pretax price of a pack of cigarettes was not eight or more cents lower than it had been the previous year.

E.

As the after-tax price of a pack of cigarettes rises, the pretax price also rises.

The growing popularity of computer-based activities was widely expected to result in a decline in television viewing, since it had been assumed that people lack sufficient free time to maintain current television-viewing levels while spending increasing amounts of free time on the computer. That assumption, however, is evidently false: in a recent mail survey concerning media use, a very large majority of respondents who report increasing time spent per week using computer report no change in time spent watching television.

Which of the following would be most useful to determine in order to evaluate the argument?

A.

Whether a large majority of the survey respondents reported watching television regularly

B.

Whether the amount of time spent watching television is declining among people who report that they rarely or never use computers

C.

Whether the type of television programs a person watches tends to change as the amount of time spent per week using computer increases

D.

Whether a large majority of the computer owners in the survey reported spending increasing amounts of time per week using computers

E.

Whether the survey respondents reports of time spent using computers included time spent using computers at work.

Scientists typically do their most creative work before the age of forty. It is commonly thought that this happens because aging by itself brings about a loss of creative capacity. However, a study has found that almost all scientists who produce highly creative work beyond the age of forty entered their fields late and less than a dozen years before their creative breakthroughs. Since creative breakthroughs by scientists under forty also generally occur within a dozen years of the scientists entry into the field, the study's finding strongly suggests that the real reason why scientists over forty rarely produce highly creative work is not due to age but rather because most have spent too long in their fields.

In the argument given, the two portions in boldface play which of the following roles?

A.

The first is the position that the argument as a whole depends; the second is evidence that is advanced as part of that evidence.

B.

The first and second are both claims that have been advanced in support of a position that the argument as a whole opposes.

C.

The first is an explanation that the argument challenges; the second provides evidence in support of a competing explanation that the argument defends.

D.

The first is an explanation that the argument challenges; the second is evidence that has been used against an alternative explanation that the argument defends.

E.

The first is an explanation that the argument defends; the second is evidence that has been used to challenge that explanation.

The percentage of households with an annual income of more than \$40,000 is higher in county than in any other county. However, the percentage of households with an annual income of \$60,000 or more is highest in county.

If the statements above are true, which of the following can properly be concluded on the basis of them?

A.

No households in Merton county has an annual income of \$60,000 or more

B.

Some households in Merton county have an annual income between \$40,000 and \$60,000

C.

The number of households with an annual income of more than \$40,000 is greater in Merton than in Sommer county.

D.

Average annual household income is higher in Sommer than in Merton county.

E.

The percentage of households with an annual income of \$80,000 is higher in Sommer than in Merton county.

Which of the following most logically completes the passage?

Appendicitis (inflammation of the appendix) is potentially fatal; consequently, patients with symptoms strongly suggesting appendicitis almost always have their appendix removed. The appropriate surgery is low-risk but performed unnecessarily in about 20 percent of all cases. A newly developed internal scan for appendicitis is highly accurate, producing two misdiagnoses for every 98 correct diagnoses. Clearly, using this test, doctors can largely avoid unnecessary removals of the appendix without, however, performing any fewer necessary ones than before, since _____.

A.

the patients who are correctly diagnosed with this test as not having appendicitis invariably have medical conditions that are much less serious than appendicitis

B.

the misdiagnoses produced by this test are always instances of attributing appendicitis to someone who does not, in fact, have it

C.

all of the patients who are diagnosed with this test as having appendicitis do, in fact, have appendicitis

D.

every patient who is diagnosed with this test as having appendicitis has more than one of the symptoms generally associated with appendicitis

E.

the only patients who are misdiagnosed using this test are patients who lack one or more of the symptoms that are generally associated with appendicitis

Escalating worldwide demand for corn has led to a sharp increase in the market price of corn, and corn prices are likely to remain high. Corn is extensively used as feed for livestock, and because profit margins are tight in the livestock business, many farmers are expected to leave the business. With fewer suppliers, meat prices will surely rise. Nonetheless, observers expect an immediate short-term decrease in meat prices.

Which of the following, if true, most helps to justify the observers' expectation?

A.

The increase in corn prices is due more to a decline in the supply of corn than to a growth in demand for it.

B.

Generally, farmers who are squeezed out of the livestock business send their livestock to market much earlier than they otherwise would.

C.

Some people who ate meat regularly in the past are converting to diets that include little or no meat.

D.

As meat prices rise, the number of livestock producers is likely to rise again.

E.

Livestock producers who stay in the business will start using feed other than corn more extensively than they did in the past.

Mel: The official salary for judges has always been too low to attract the best candidates to the job. The legislature's move to raise the salary has done nothing to improve the situation, because it was coupled with a ban on receiving money for lectures and teaching engagements.

Pat: No, the raise in salary really does improve the situation. Since very few judges teach or give lectures, the ban will have little or no negative effect.

Pat's response to Mel is inadequate in that it

A.

attempts to assess how a certain change will affect potential members of a group by providing evidence about its effect on the current members.

B.

mistakenly takes the cause of a certain change to be an effect of that change

C.

attempts to argue that a certain change will have a positive effect merely by pointing to the absence of negative effects

D.

simply denies Mel's claim without putting forward any evidence in support of that denial

E.

assumes that changes that benefit the most able members of a group necessarily benefit all members of that group.

In Kantovia, physicians' income comes from insurance companies, which require physicians to document their decisions in treating patients and to justify deviations from

the companies' treatment guidelines. Ten years ago physicians were allowed more discretion. Most physicians believe that the companies' requirements now prevent them from spending enough time with patients. Yet the average amount of time a patient spends with a physician during an office visit has actually increased somewhat over the last ten years.

Which of the following, if true, most helps to resolve the apparent discrepancy between physicians' perceptions and the change in the actual time spent?

A.

Patients are more likely to be in a hurry nowadays and are less willing to wait a long time to see their physician.

B.

Physicians today typically have a wider range of options in diagnosis and treatment to consider with the patient before prescribing.

C.

Physicians are increasingly likely to work in group practices, sharing the responsibility of night and weekend work.

D.

Most patients would rather trust their physicians than their insurance companies to make decisions about their treatment.

E.

Since the insurance companies pay physicians a set amount for each office visit, it is to physicians' financial advantage to see as many patients as possible.

The chemical adenosine is released by brain cells when those cells are active. Adenosine then binds to more and more sites on cells in certain areas of the brain, as the total amount released gradually increases during wakefulness. During sleep, the number of sites to which adenosine is bound decreases. Some researchers have hypothesized that it is the cumulative binding of adenosine to a large number of sites that causes the onset of sleep.

Which of the following, if true, provides the most support for the researchers' hypothesis?

A.

Even after long periods of sleep when adenosine is at its lowest concentration in the brain, the number of brain cells bound with adenosine remains very large.

B.

Caffeine, which has the effect of making people remain wakeful, is known to interfere with the binding of adenosine to sites on brain cells.

C.

Besides binding to sites in the brain, adenosine is known to be involved in biochemical reactions throughout the body.

D.

Some areas of the brain that are relatively inactive nonetheless release some adenosine.

E.

Stress resulting from a dangerous situation can preserve wakefulness even when brain levels of bound adenosine are high.

Plantings of cotton bioengineered to produce its own insecticide against bollworms, a major cause of crop failure, sustained little bollworm damage until this year. This year the plantings are being seriously damaged by bollworms. Bollworms, however, are not necessarily developing resistance to the cotton's insecticide. Bollworms breed on corn, and last year more corn than usual was planted throughout cotton-growing regions. So it is likely that the cotton is simply being overwhelmed by corn-bred bollworms.

In evaluating the argument, which of the following would be most useful to establish?

A.

Whether corn could be bioengineered to produce the insecticide

B.

Whether plantings of cotton that does not produce the insecticide are suffering unusually extensive damage from bollworms this year

C.

Whether other crops that have been bioengineered to produce their own insecticide successfully resist the pests against which the insecticide was to protect them

D.

Whether plantings of bioengineered cotton are frequently damaged by insect pests other than bollworms

E.

Whether there are insecticides that can be used against bollworms that have developed resistance to the insecticide produced by the bioengineered cotton

Kate: The recent decline in numbers of the Tennessee warbler, a North American songbird that migrates each fall to coffee plantations in South America, is due to the elimination of the dense tree cover that formerly was a feature of most South American coffee plantations.

Scott: The population of the spruce budworm, the warbler's favorite prey in North America, has been dropping. This is a more likely explanation of the warbler's decline.

Which of the following, if true, most seriously calls Scott's hypothesis into question?

A.

The numbers of the Baltimore oriole, a songbird that does not eat budworms but is as dependent on South American coffee plantations as is the Tennessee warbler, are

declining.

B.

The spruce budworm population has dropped because of a disease that can infect budworms but not Tennessee warblers.

C.

The drop in the population of the spruce budworm is expected to be only temporary.

D.

Many Tennessee warblers have begun migrating in the fall to places other than traditional coffee plantations.

E.

Although many North American songbirds have declined in numbers, no other species has experienced as great a decline as has the Tennessee warbler.

Critics of certain pollution-control regulations have claimed that the money spent over the last decade in order to reduce emissions of carbon monoxide and of volatile organic compounds has been wasted. The evidence they offer in support of this claim might appear compelling: despite the money spent, annual emissions of these pollutants have been increasing steadily. This evidence is far from adequate, however, since over the last decade a substantial number of new industrial facilities that emit these pollutants have been built.

In the reasoning given, the two portions in boldface play which of the following roles?

A.

The first identifies a claim that the reasoning seeks to show is false; the second is evidence that has been cited by others in support of that claim.

B.

The first identifies a claim that the reasoning seeks to show is false; the second is a position for which the reasoning seeks to provide support.

C.

The first is a position that the reasoning contends is inadequately supported by the evidence; the second is a position for which the reasoning seeks to provide support.

D.

The first is a position that the reasoning contends is inadequately supported by the evidence; the second is evidence used to support the reasoning's contention.

E.

The first is a position that the reasoning contends is inadequately supported by the evidence; the second is evidence that has been used to support that position.

Whales originated in the freshwater lakes and rivers of ancient Asia about sixty million years ago. Not until about ten million years later did species of whales develop specialized kidneys enabling them to drink salt water. Although fossil evidence shows that some early whale species that lacked such kidneys sometimes swam in the Earth's saltwater oceans, these species must have had to return frequently to freshwater rivers

to drink.

Which of the following is most strongly supported by the information given?

A.

Fossils of whale species dating from between sixty million and fifty million years ago will not be found on continents that were at the time separated from ancient Asia by wide expanses of ocean.

B.

Among whale fossils that date from later than about fifty million years ago, none are fossils of whale species that drank only fresh water.

C.

Fossils of whale species that drank fresh water will not be found in close proximity to fossils of whale species that drank salt water.

D.

The earliest whales that drank salt water differed from fresh-water-drinking whales only in their possession of specialized kidneys

E.

Between sixty million and fifty million years ago, the freshwater lakes and rivers in which whales originated were gradually invaded by salt water.

Manatees, aquatic mammals inhabiting Florida's rivers and coastal waters, swim close to the surface and are frequently killed in collisions with boats. To address the problem, boat traffic in manatee-populated waters is being required to maintain very low speeds. Unfortunately, manatees are unable to hear low-pitched sounds and a boat's sound lowers in pitch as the boat slows. Therefore, this approach may in fact make things worse rather than better.

Which of the following, if true, casts most doubt on the conclusion?

A.

The areas where boats would have to maintain low speeds were decided partly on the basis of manatee-population estimates and partly from numbers of reported collisions between manatees and boats.

B.

Because the water hyacinth that manatees feed on grows best in water that is nearly still, water hyacinth beds can be disturbed or damaged by fast-moving boat traffic.

C.

Over the last several decades, boat traffic in Florida's coastal waters has been increasing almost continuously and now represents the greatest threat to the endangered manatee population.

D.

The sound of a boat engine generally travels much further under water than it does through the air.

E.

When experimenters exposed manatees to the recorded sounds of boats moving at various speeds, the creatures were unable to discern the sounds over normal background noise.

The total market value of real estate in Altonville has steadily declined over the past four years. This decline has meant that the overall figure on which the city's property tax is based—the assessed value of that real estate—has also declined. The percentage of assessed value that was paid as property taxes to the city, however, did not change from year to year during this period.

The information above most strongly supports which of the following?

A.

The percentage of Altonville's yearly revenue that comes from money collected in property taxes did not change over the past four years.

B.

The percentage of Altonville's yearly revenue that comes from money collected in property taxes has declined steadily over the past four years.

C.

The amount of revenue that Altonville collected from property taxes was lower last year than it was four years ago.

D.

During the past four years, Altonville officials increased tax rates on other sources of revenue such as retail sales and business profits.

E.

Altonville will soon require property owners to pay a higher percentage of the assessed value of their property as property tax.

Rabbits were introduced to Numa Island in the nineteenth century. Overgrazing by the enormous population of rabbits now menaces the island's agriculture. The government proposes to reduce the population by using a virus that has caused devastating epidemics in rabbit populations elsewhere. There is, however, a chance that the virus will infect the bilby, an endangered native marsupial. The government's plan, therefore, may serve the interests of agriculture but will clearly increase the threat to native wildlife.

Which of the following, if true, most seriously weakens the argument?

A.

There is less chance that the virus will infect domestic animals on Numa than that it will infect bilbies.

B.

There are no species of animals on the island that prey on the rabbits.

C.

Overgrazing by rabbits endangers many of the plants on which bilbies feed.

D.

The virus that the government proposes to use has been successfully used elsewhere to control populations of rabbits.

E.

There is no alternative means of reducing the rabbit population that would involve no threat to the bilby.

In Patton City, days are categorized as having heavy rainfall (more than two inches), moderate rainfall (more than one inch, but no more than two inches), light rainfall (at least a trace, but no more than one inch), or no rainfall. In 1990, there were fewer days with light rainfall than in 1910 and fewer with moderate rainfall, yet total rainfall for the year was 20 percent higher in 1990 than in 1910.

If the statements above are true, then it is also possible that in Patton City

A.

the number of days with heavy rainfall was lower in 1990 than in 1910

B.

the number of days with some rainfall, but no more than two inches, was the same in 1990 as in 1910

C.

the number of days with some rainfall, but no more than two inches, was higher in 1990 than in 1910

D.

the total number of inches of rain that fell on days with moderate rainfall in 1990 was more than twice what it had been in 1910

E.

the average amount of rainfall per month was lower in 1990 than in 1910

Industrial accidents are more common when some of the people in safety-sensitive jobs have drinking problems than when none do. Since, even after treatment, people who have had drinking problems are somewhat more likely than other people to have drinking problems in the future, any employer trying to reduce the risk of accidents should bar anyone who has ever been treated for a drinking problem from holding a safety-sensitive job.

Which of the following, if true, most seriously undermines the argument above?

A.

Some companies place employees who are being treated for drinking problems in residential programs and allow them several weeks of paid sick leave.

B.

Many accidents in the workplace are the result of errors by employees who do not hold safety-sensitive jobs.

C.

Workers who would permanently lose their jobs if they sought treatment for a drinking problem try instead to conceal their problem and continue working for as long as possible.

D.

People who hold safety-sensitive jobs are subject to stresses that can exacerbate any personal problems they may have, including drinking problems.

E.

Some industrial accidents are caused by equipment failure rather than by employee error.

In countries where automobile insurance includes compensation for whiplash injuries sustained in automobile accidents, reports of having suffered such injuries are twice as frequent as they are in countries where whiplash is not covered. Some commentators have argued, correctly, that since there is presently no objective test for whiplash, spurious reports of whiplash injuries cannot be readily identified. These commentators are, however, wrong to draw the further conclusion that in the countries with the higher rates of reported whiplash injuries, half of the reported cases are spurious: clearly, in countries where automobile insurance does not include compensation for whiplash, people often have little incentive to report whiplash injuries that they actually have suffered.

In the argument given, the two boldfaced portions play which of the following roles?

A.

The first is a finding whose accuracy is evaluated in the argument; the second is an intermediate conclusion drawn to support the judgment reached by the argument on the accuracy of that finding.

B.

The first is a finding whose accuracy is evaluated in the argument; the second is evidence that has been used to challenge the accuracy of that finding.

C.

The first is a finding whose implications are at issue in the argument; the second is an intermediate conclusion that has been used to support a conclusion that the argument criticizes.

D.

The first is a claim that the argument disputes; the second is a narrower claim that the argument accepts.

E.

The first is a claim that has been used to support a conclusion that the argument accepts; the second is that conclusion.

In the past, every ten-percentage-point increase in cigarette prices in the country of Coponia has decreased per capita sales of cigarettes by four percent. Coponia is about

to raise taxes on cigarettes by 9 cents per pack. The average price of cigarettes in Coponia is and has been for more than a year 90 cents per pack. So the tax hike stands an excellent chance of reducing per capita sales of cigarettes by four percent.

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

A.

Tobacco companies are unlikely to reduce their profit per pack of cigarettes to avoid an increase in the cost per pack to consumers in Coponia.

B.

Previous increases in cigarette prices in Coponia have generally been due to increases in taxes on cigarettes. Coponia

C.

Any decrease in per capita sales of cigarettes in Coponia will result mainly from an increase in the number of people who quit smoking entirely. Coponia

D.

At present, the price of a pack of cigarettes in Coponia includes taxes that amount to less than ten percent of the total selling price.

E.

The number of people in Coponia who smoke cigarettes has remained relatively constant for the past several years.

The cause of the wreck of the ship Edmund Fitzgerald in a severe storm on lake Superior is still unknown when the sunken wreckage of the vessel was found, searchers discovered the hull in two pieces lying close together, The storm's violent waves would have caused separate pieces floating even briefly on the surface to drift apart. Therefore, the breakup of the hull can be ruled out as the cause of the sinking.

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

A.

Ships as large as the Edmund Fitzgerald rarely sink except in the most violent weather.

B.

Under water currents at the time of the storm did not move the separated pieces of the hull together again.

C.

Pieces of the hull would have sunk more quickly than the intact hull would have

D.

The waves of the storm were not violent enough to have caused the breakup

E.

If the ship broke up before sinking the pieces of the hull would not have remained on the surface for very long

Last August the XT chain of gasoline stations had a temporary sales promotion in effect.

In the promotion, any customer who made a purchase of ten or more gallons of gasoline was entitled to a free car wash. For the month of August, XT experienced a ten percent increase in gasoline sales as compared to sales in August the previous year, so evidently the promotion was successful as a means of boosting sales.

In evaluating the argument, it would be most helpful to answer which of the following?

A.

In the areas in which XT's gasoline stations operate, how did total combined gasoline sales for all gasoline stations last August compare with sales for the previous August?

B.

Was the money that XT earned from the increase in gasoline sales enough to offset the cost of providing free car washes during the promotion?

C.

Were there any customers who bought ten or more gallons at an XT gasoline station during the promotion who would have bought fewer gallons at an XT gasoline station in lower quantities, but more frequently, if the promotion had not been in effect?

D.

Did XT or any of its gasoline stations have to pay other businesses to provide the car washes that customers were offered in the promotion?

E.

Are XT's gasoline sales in August usually significantly higher than one twelfth of XT's annual gasoline sales?

The sense of delayed gratification, of working now for later pleasure, has helped shape the economic behavior of our society. However, that sense is no longer nurtured as consistently in our children as it once was. For example, it used to take a bit of patience to put together the toys that children got in cereal boxes; now the toys come from the boxes whole.

Which of the following is an assumption of the passage above?

A.

The toys in cereal boxes have changed partly because the economic conditions of our society have improved.

B.

The influence of promotion gimmicks on the economic behavior of our society has increased over the years.

C.

The toys that used to come in cereal boxes were put together by the same children who played with them.

D.

Part of the pleasure of any toy lies in putting the toy together before playing with it.

E.

Today's children do not expect a single toy to provide pleasure for a long period of time.

The population of desert tortoises in Targland's Red Desert has declined, partly because they are captured for sale as pets and partly because people riding all-terrain vehicles have damaged their habitat. Targland plans to halt this population decline by blocking the current access routes into the desert and announcing new regulations to allow access only on foot. Targland's officials predict that these measures will be adequate, since it is difficult to collect the tortoises without a vehicle.

Which of the following would it be most important to establish in order to evaluate the officials' prediction?

A.

Whether possessing the tortoises as pets remains legally permissible in Targland

B.

Whether Targland is able to enforce the regulations with respect to all-terrain vehicle entry at points other than the current access routes Targland

C.

Whether the Red Desert tortoises are most active during the day or at night Targland

D.

Whether people who travel on foot in the Red Desert often encounter the tortoises Targland

E.

Whether the Targland authorities held public hearings before restricting entry by vehicle into the Red Desert

Which of the following most logically completes the argument?

A new drug, taken twice daily for one month, is an effective treatment for a certain disease. The drug now most commonly prescribed for the disease occasionally has serious side effects such as seizures; in field tests, the new drug's side effects, though no worse than mild nausea, turned out to be much more frequent. Nevertheless, the new drug is clearly preferable as a treatment, since _____.

A.

people who experience nausea are prone to discontinue use of the new drug prematurely

B.

it is possible that the drug now most commonly prescribed has side effects that have not yet been attributed to it

C.

other drugs for the disease have typically been prescribed only for patients allergic to the most commonly prescribed drug

D.

people who have received effective treatment for disease do not generally contract the

disease again

E.

there is a nonprescription medication that when taken with the new drug prevents the onset of nausea