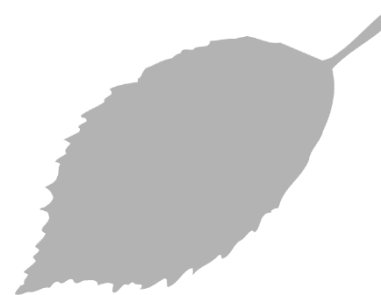


**Massachusetts
Tests for Educator Licensure® (MTEL®)**



**Vocational Technical
Literacy Skills Test–
Reading (191)
PRACTICE TEST
APPENDIX:
Multiple-Choice
Question Analyses**



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MULTIPLE-CHOICE QUESTION ANALYSES

Read the passage below; then answer the five questions that follow.

¹Hydroponics is the method of growing plants in nutrient-rich water instead of soil, which offers several advantages over traditional soil gardening. Many people are surprised to learn that plants can grow without soil, but hydroponic gardening is becoming a popular alternative to traditional gardening.

²Hydroponics is a viable option for areas with poor soil quality or limited gardening space. Since this method eliminates the need for dirt, plants can be grown in barren or confined environments. Plants grown in water are spaced very close to one another, unlike plant spacing in soil gardens. As a result, a hydroponic garden can produce roughly the same harvest as a traditional garden five times its size.

³Because these gardens are typically housed in a climate-controlled environment, hydroponic gardens use significantly less water than other gardens. As water passes through a plant's roots to its leaves, water vapor is produced. The water vapor is then released from the greenhouse, caught in condenser fans, and returned to the plants.

⁴The rate of plant growth in a hydroponic environment tends to be 30 to 50 percent greater than that of plants grown in soil. Experts believe that this is because nutrients are delivered directly to the roots and absorbed quickly. Plants use less energy to search for and break down food in water than in soil, resulting in a greater yield. Hydroponically grown fruits and vegetables also tend to be more flavorful because they are allowed to grow to maturity. Sales of hydroponically grown tomatoes will most likely increase as a result.

⁵Hydroponic gardens may not replace all traditional gardens, but there are several benefits to this method of growing plants, including higher yields and increased flavor. In addition, those with limited space or water sources may benefit from hydroponics.

1. Which of the following is the best synonym for viable in Paragraph 2?
- A. debatable
 - B. fundamental
 - C. reasonable
 - D. temporary

Correct Response: C. The word "viable" means "capable of working." So "Hydroponics is a reasonable option" (C) would be a good substitution in the passage, expressing the same idea that hydroponics may be a good solution for otherwise unfavorable gardening conditions. The word "debatable" (A) implies "uncertain" or "unconvincing," which does not convey the idea that hydroponic gardening is a good option. "Fundamental" (B) means "essential," but hydroponics is an optional gardening method. "Temporary" (D) suggests a short-term solution, inferring that hydroponic gardening may not be sustainable.

2. Which of the following sentences from the passage provides information that will help readers understand the basic principle of hydroponic gardening?
- A. "Hydroponics is the method of growing plants in nutrient-rich water instead of soil, which offers several advantages over traditional soil gardening."
 - B. "Since this method eliminates the need for dirt, plants can be grown in barren or confined environments."
 - C. "Because these gardens are typically housed in a climate-controlled environment, hydroponic gardens use significantly less water than other gardens."
 - D. "Hydroponically grown fruits and vegetables also tend to be more flavorful because they are allowed to grow to maturity."

Correct Response: A. Response A provides the reader with a general understanding of hydroponic gardening by defining the practice. Eliminating the need for dirt (B) and using less water (C) are details that support the advantages of hydroponic gardening. The assertion that hydroponically-grown fruits and vegetables are more flavorful (D) is an opinion about the benefits of this gardening method.

3. This passage is most likely written for:
- A. plant experts.
 - B. produce vendors.
 - C. experienced growers.
 - D. interested gardeners.

Correct Response: D. The information in the passage would have the most appeal to an individual who is interested in gardening (**D**), as it provides useful facts about hydroponic gardening and its benefits. Since the information about hydroponics is very basic, plant experts (**A**) probably would not find it helpful. Produce vendors (**B**) would not find the majority of the information relevant for their purposes, as they are interested primarily in the end product, while experienced growers (**C**) would most likely already have this knowledge.

4. According to the passage, which of the following is one effect of hydroponic gardening?
- A. Fruits and vegetables will be tastier.
 - B. Soil will no longer be stripped of vital nutrients.
 - C. A great deal of water will be needed to sustain the plants.
 - D. The number of traditional gardens will be drastically reduced.

Correct Response: A. As noted in Paragraph 4 of the passage, one result of hydroponic gardening is that fruits and vegetables are tastier (**A**) because they can ripen to maturity before being picked. The impact of hydroponic gardening on soil (**B**) is not discussed in the passage. Hydroponic gardens make use of the water cycle in order to sustain the plants, so most of the water needed can be used over and over again (**C**). There may be a slight reduction in the number of traditional gardens in favor of hydroponic gardens due to their efficiency of space and water (**D**), but there is nothing in the passage to suggest that traditional gardening will be drastically reduced in favor of this new method.

5. Which of the following sentences detracts from the passage by introducing an irrelevant detail?
- A. "Plants grown in water are spaced very close to one another, unlike plant spacing in soil gardens."
 - B. "The water vapor is then released from the greenhouse, caught in condenser fans, and returned to the plants."
 - C. "Sales of hydroponically grown tomatoes will most likely increase as a result."
 - D. "Hydroponic gardens may not replace all traditional gardens, but there are several benefits to this method of growing plants, including higher yields and increased flavor."

Correct Response: C. The idea that sales of hydroponically-grown tomatoes will increase (**C**) is speculation and not relevant to the advantages of hydroponic gardening, which is the main idea of the passage. All of the other response options are relevant to the main idea: **A** highlights one advantage of hydroponic gardening; **B** illustrates the self-sustaining nature of hydroponic gardens; and **D** highlights additional advantages of hydroponic gardening.

Read the passage below; then answer the five questions that follow. This passage contains an error.

¹Many homeowners are surprised when they learn that they are sharing their home with an unwanted fungus—mold. ²While the realization that mold is present is certainly unpleasant, experts say that mold is more common in homes than many people might think. ³Most houses provide an ideal environment for mold growth, including moisture, an optimal temperature, and a food source. ⁴However, there are measures homeowners can take to prevent further growth when an unwanted discovery of mold occurs.

⁵A number of factors create conditions for mold growth, including humidity and temperature. ⁶Mold spores thrive in environments where the temperature is between 60°F and 80°F—which is also the temperature zone that most people find comfortable. ⁷To lessen the possibility of mold growth, homeowners should adjust their thermostats to 74°F–78°F in the summer. ⁸If the temperature setting is too high, air-conditioning cannot effectively take moisture out of the air; if the setting is too low, water vapor can form, creating an overly moist environment. ⁹Alternatively, using a dehumidifier can ensure that moisture levels remain within sufficient parameters to prevent mold growth.

¹⁰While regulating temperatures is an essential step in minimizing humidity in a home, it is equally important to control other sources of moisture. ¹¹Standing water in basements or crawl spaces, broken pipes, leaky roofs, and poor ventilation (especially in bathrooms) also contribute to mold growth. ¹²Any home that has been flooded should be thoroughly dried out, and porous materials such as drywall and carpet should be disposed of immediately.

¹³Mold thrives when it has a food source, which is typically dead, organic material. ¹⁴Homeowners should remove debris such as leaves and paper from the outside perimeter of the home, as well as dispose of damp paper, wood, or textiles inside the house. ¹⁵Mold also feeds on organic material such as skin cells found in dust, so keeping a home dust-free can aid in the reduction of mold.

¹⁶Although these preventive measures may not entirely eliminate the risk of mold, they will significantly reduce its growth and spread. ¹⁷Should the presence of mold inside a home be suspected, an environmental health professional may be helpful in determining the extent of the problem and recommending a plan for remediation.

6. Which of the following sentences from the passage contains a misused word?
- A. Sentence 2: "While the realization that mold is present is certainly unpleasant, experts say that mold is more common in homes than many people might think."
 - B. Sentence 4: "However, there are measures homeowners can take to prevent further growth when an unwanted discovery of mold occurs."
 - C. Sentence 12: "Any home that has been flooded should be thoroughly dried out, and porous materials such as drywall and carpet should be disposed of immediately."
 - D. Sentence 16: "Although these preventive measures may not entirely eliminate the risk of mold, they will significantly reduce its growth and spread."

Correct Response: A. The word "then" in sentence **A** means "after that" or "next," which is not the correct usage in this context. In its place, the writer should have employed the word *than*, which is used to compare two or more ideas. In this case, the writer compares the actual frequency that mold occurs in homes to how often most people think it occurs. Options **B**, **C**, and **D** are all written correctly and do not contain any misused words.

7. Which of the following is the best summary of the second paragraph?
- A. Colder indoor temperatures inhibit the development and spread of mold.
 - B. Turning off the air-conditioning would be an effective action for mold prevention.
 - C. Controlling humidity levels in a home is important to reduce mold growth.
 - D. People must expect mold if they keep their home at a comfortable temperature.

Correct Response: C. Paragraph 2 explains how proper temperature regulation and the use of a dehumidifier can control humidity levels in a home (C) and reduce the possibility of mold. Colder indoor temperatures (A) may not inhibit the growth of mold because cooler temperatures can result in excessive water vapor. According to the information in the paragraph, turning off the air conditioner (B) is not recommended because then air conditioning will not be able to help remove moisture from the atmosphere. Also, while setting thermostats at a comfortable temperature may run the risk of mold, the paragraph points to several remedies—including the use of air conditioners and dehumidifiers—that can allow homeowners to both enjoy their environment and be mold-free (D).

8. Which of the following sentences best reflects the writer's point of view toward the subject of the passage?
- A. Where mold develops, environmental factors play a key role.
 - B. Homeowners should be able to remove existing mold on their own.
 - C. Further research is needed to fully understand the causes of mold.
 - D. Since it is unavoidable, mold remediation is the only realistic solution.

Correct Response: A. The reader can conclude from the passage that environmental factors such as temperature, moisture, and the availability of organic material contribute to mold growth (A). The evidence does not support the statement that homeowners should in all cases be able to remove existing mold on their own (B), since the author suggests "an environmental health professional may be helpful in determining the extent of the problem and recommending a plan for remediation." The passage educates homeowners about the causes of mold but does not indicate the need for further research (C). Although the final paragraph states that "these preventive measures may not entirely eliminate the risk of mold," there is no indication that mold is unavoidable (D).

9. According to the passage, which of the following factors may inhibit mold growth?
- A. opening areas of ventilation
 - B. disposing of food waste properly
 - C. drying carpet soaked by flooding
 - D. removing wet fabrics from the home

Correct Response: D. The passage suggests homeowners should "dispose of damp paper, wood, or textiles inside the house," and textiles include cloth and any woven fabrics (**D**). While the passage notes that poor ventilation may encourage mold (**A**), there are no recommendations for increasing or modifying existing ventilation. The author encourages proper disposal of certain organic materials, but food waste (**B**) is not among the suggested items. The passage strongly recommends that porous materials that have been soaked by flooding, such as carpet, should be disposed of instead of just being dried out (**C**).

10. Which of the following types of information would best enhance the details contained in the passage?
- A. a scientific illustration of the structure of mold
 - B. statistics on the number of homes in the United States containing mold
 - C. examples of the health concerns associated with mold
 - D. a list of the equipment and procedures used by mold remediation specialists

Correct Response: B. Since the author claims that mold is prevalent in homes, data on the number of homes affected by mold (**B**) would enhance the passage by providing evidence to support the claim. A scientific illustration of mold (**A**) would likely be too technical and not relevant to the topic of basic mold prevention. Although health concerns associated with mold may be useful information for a homeowner (**C**), the passage assumes a desire for prevention and provides strategies to do so. The author recommends calling a professional for help eliminating mold, but the specialized types of equipment and procedures used by mold remediation technicians (**D**) would not be relevant to a homeowner looking for common household methods of mold prevention.

Read the memorandum below; then answer the five questions that follow.

TO: All Staff Members

FROM: Mary M. Smith, President of Outside-In Landscaping, Inc.

DATE: November 13

SUBJECT: Changes to Plant Inventory

¹Starting on May 1, we will be eliminating use of nonnative plants in all landscaping projects as part of our ongoing mission to support the environment. In the past, nonnative plants have become invasive and quickly spread among Massachusetts's indigenous plants, which has threatened the survival of these native species. One notorious example is Japanese honeysuckle, an aggressive plant that crowds out other flora when introduced into most environments. According to the Massachusetts Audubon Society, Japanese honeysuckle has become one of the most widespread invasive species in the state, along with multiflora rose and buckthorn. What was once considered a decorative plant has now become an unfortunate threat to the environment. We must do our part to keep other nonnative plants from joining the list.

²Thanks to the loyal support of our clients, Outside-In Landscaping is in a position to set new personal standards for environmental conservation and invest even more in our community's future. This change may initially affect sales as our clients adjust to the new inventory; however, we are confident that clients will come to appreciate our new stock even more than what we have offered in the past. The long-term benefits to the environment and our community will far outweigh any temporary financial losses.

³We will soon be mailing copies of the revised plant list to all current clients, along with a brief letter explaining the reason for the change. Please familiarize yourself with the new inventory, so you can answer questions as you interact with clients. We thank you for your patience and support while we make this transition that we truly believe will help the company grow while our community continues to become more environmentally conscious. If we all work together, we can help change our local environment for the better, preserving native plants and ensuring they can be enjoyed for generations to come.

11. Which of the following is a synonym for the word notorious as it is used in the memorandum?
- A. impressive
 - B. fascinating
 - C. infamous
 - D. remarkable

Correct Response: C. The word "notorious" means "famous" or "well-known," usually for a bad characteristic or deed, while the word "infamous" has essentially the same meaning (C). The word "impressive" (A) means "inspiring admiration," which does not convey the idea that Japanese honeysuckle has the negative characteristic of being invasive. "Fascinating" (B) also tends to have a positive connotation and does not convey the notoriety of Japanese honeysuckle. "Remarkable" (D) means that something grabs attention and although that may be true of Japanese honeysuckle in this case, "remarkable" does not sufficiently express the idea that the plant is famous or well-known.

12. Which of the following best summarizes the main subject of the memorandum?
- A. Despite their beauty, some attractive plants are a nuisance in Massachusetts.
 - B. The company is ending its use of certain plants in order to protect the environment.
 - C. The leadership team is concerned about the impact that the new policy will have on the company's revenue.
 - D. A new plant catalog will include more plants that are popular with clients.

Correct Response: B. The main subject of the memorandum is that the company will be reducing its use of invasive plants in order to support the local environment. In Paragraph 1, the writer says that "starting on May 1st, we will be eliminating use of nonnative plants in all landscaping projects as part of our ongoing mission to support the environment," which directly conveys the main idea of the memorandum. Response **A** is a supporting detail. In Paragraph 2, the memorandum notes that the company's new policy may initially reduce sales (**C**), but this information is offset by the expectation that the new policy will actually win greater customer approval. Although the memorandum does express the hope that the company's new plant inventory will be popular with clients, the main emphasis of the passage is on the environmental benefits of the new policy (**D**).

13. Based on Paragraph 2, which of the following best describes the writer's attitude toward environmental conservation?
- A. Conservation requires the cooperation of the whole community.
 - B. Supporting the environment is a great way to increase sales.
 - C. The long-term benefits of conservation justify temporary business setbacks.
 - D. Environmental efforts are only possible with employee support.

Correct Response: C. In Paragraph 2, the writer argues that "the long-term benefits to the environment and our community will far outweigh any temporary financial losses" (C). The writer does argue that the company's efforts will benefit the community, but there is never any suggestion that the success of those efforts is dependent upon the cooperation of the entire community (A). Although the writer expresses confidence that customers will like the new plant inventory even better than previous offerings, this detail is not provided to suggest that the purpose of environmental efforts is to increase sales (B). The writer also encourages employees to familiarize themselves with the new inventory, but the overall tone of the memo suggests that the leadership team is confident that employees will support the new mission (D).

14. Which of the following is the most reasonable conclusion to draw from the memorandum?
- A. The company has goals that reach beyond the success of the business.
 - B. This company is currently undergoing a change in senior management.
 - C. Invasive plants are especially troublesome in the state of Massachusetts.
 - D. Employees who sell more native plants will likely be rewarded.

Correct Response: A. In Paragraph 3, the writer states: "We thank you for your patience and support while we make this transition that we truly believe will help the company grow while our community continues to become more environmentally conscious." Therefore, **A** states a reasonable conclusion that the company is concerned about the community as well as the success of the business. Although significant changes to the company's inventory are taking place, there is nothing in the memorandum to suggest the product change is due to a shift in leadership (**B**). The passage specifically refers to invasive plants in Massachusetts, but no details are provided regarding how these compare to invasive plants in other states (**C**). While the memorandum reassures employees of the benefits of the company's new conservation efforts, there is no suggestion that employees will be rewarded for selling more native plants (**D**).

15. Which of the following strategies does the writer use to establish credibility?
- A. citing a reputable source on invasive plant species
 - B. acknowledging the beauty of some invasive plants
 - C. expressing dedication to protecting the local environment
 - D. thanking the staff for their ongoing support in this endeavor

Correct Response: A. One way to establish credibility in writing is to cite sources that are reliable and trustworthy. The writer of this passage establishes credibility by referring to the Massachusetts Audubon Society, which is a reputable source with in-depth knowledge of the state's invasive plant species and how they spread (**A**). Responses **B**, **C**, and **D** are used in the passage to influence the emotions of the reader, but they do not establish the writer's credibility.

Read the passage below; then answer the five questions that follow.

¹The annual migration of monarch butterflies is a unique and fascinating phenomenon. Beginning in September, millions of North American monarchs travel south each year to the warmer climate of Mexico to escape harsh winter weather. Monarchs are the only species of butterflies known to migrate, so scientists continue to study their behavior to determine exactly why and how they make such an arduous journey.

²Experts believe that monarchs use environmental clues to know when to begin migrating. The prevailing theory is that the butterflies are prompted to fly south by lower temperatures and decreased daylight hours, as well as by their keen awareness of changes in food quality due to the changing seasons—drier winter conditions cause plants to shrivel, leading monarchs to leave in search of a moister environment.

³Monarch butterflies are known to fly up to a hundred miles per day until they reach their final destination in Mexico. Because of the demands of this long journey, they must rely for fuel on the fat reserves stored in their abdomens. They also frequently ride on the prevailing winds in an effort to conserve energy. All of this travel occurs during the day, and then they roost together at night for the warmth necessary to survive.

⁴Each year, monarchs use the same routes, which are commonly referred to as flyways. All the flyways in North America converge into one large route over Texas, where the monarchs then continue their journey together to the humid oyamel forests in the Sierra Madre Mountains of Mexico. The humidity keeps the butterflies from drying out, and the oyamel trees can support the weight of tens of thousands of monarchs. There, they lay their eggs before making the long return migration back north in the spring.

16. Which of the following words has the *opposite* meaning of the word arduous as used in Paragraph 1?
- A. ambitious
 - B. gratifying
 - C. impressive
 - D. leisurely

Correct Response: D. The word "arduous" means "difficult and tiring." The opposite of "arduous," therefore, is "leisurely" (**D**), which means "unhurried" and "effortless." The word "ambitious" (**A**) means "determined," which conveys the desire to overcome a difficult task and could very well describe the monarch's journey. The word "gratifying" (**B**) indicates satisfaction but does not convey ease or difficulty, while "impressive" (**C**) suggests "worthy of admiration," which may also apply to the monarchs but is a separate idea.

17. Which of the following best describes the organization of the information in the passage?
- A. • How monarchs migrate
 - Common migration routes
 - Research about monarchs
 - B. • Butterfly migratory habits
 - Consistent migratory route
 - Impact of environmental changes
 - C. • Reasons for monarch migration
 - Scientific theories about monarchs
 - Description of the journey
 - D. • Butterfly survival needs
 - Significance of migratory routes
 - Benefits of a warmer climate

Correct Response: C. Response C provides an accurate outline of the passage: "Reasons for monarch migration" (Paragraph 1); "Scientific theories about monarchs" (Paragraph 2); and "Description of the journey" (Paragraphs 3–4). Response A presents ideas contained in the passage, but out of order, while options B and D list supporting, rather than main, ideas from the passage.

18. Which of the following best describes the writer's purpose in this passage?
- A. to describe the route that migratory monarch butterflies use
 - B. to inform readers about the migratory cycle of monarch butterflies
 - C. to update monarch butterfly researchers on the latest scientific findings
 - D. to explain why monarch butterflies journey south for winter

Correct Response: B. The writer's purpose is to present readers with an overview of the unique migratory behavior of monarch butterflies (**B**). Information about migratory routes is included in the passage (**A**), but is only one supporting idea. The information in the passage gives an introductory explanation of monarch migration, which would not provide any new information to butterfly researchers (**C**). The passage does explain why monarchs migrate south (**D**), but many other details on their migratory behavior are also included.

19. According to the passage, which of the following factors may both lead monarch butterflies to begin their migration to Mexico and keep them from reaching their final migratory destination?
- A. low temperatures
 - B. high humidity levels
 - C. prevailing winds
 - D. sufficient food supply

Correct Response: A. According to the passage, the butterflies migrate south during the winter due to "lower temperatures and decreased daylight hours." They also "roost together at night for the warmth necessary to survive" during their period of migration. Without this warmth, the reader can conclude the monarchs would perish before reaching the oyamel forests (**A**). "Drier winter conditions cause plants to shrivel which lead monarchs to leave in search of a moister environment," but high humidity (**B**) is favorable, so the butterflies do not dry out. Although the passage notes that monarchs "also frequently ride on the prevailing winds in an effort to conserve energy" (**C**), this is not a cause of migration nor a reason they may not reach their final destination. Sufficient food supply (**D**) should not prevent monarchs from reaching their destination.

20. In which of the following sentences does the writer express an opinion rather than state a fact?
- A. "The annual migration of monarch butterflies is a unique and fascinating phenomenon."
 - B. "Experts believe that monarchs use environmental clues to know when to begin migrating."
 - C. "They also frequently ride on the prevailing winds in an effort to conserve energy."
 - D. "There, they lay their eggs before making the long return migration back north in the spring."

Correct Response: A. The statement that the monarch butterfly migration is "unique" and "fascinating" (A) reflects the writer's interest in and admiration for the butterflies. While there may be aspects of the monarch's migration that are different from the migratory journeys of other butterflies, the idea that the monarch migration is "fascinating" is an expression of opinion, not a fact. "Experts believe" (B) may be read as "it is the opinion of experts," but the writer provides this information as a fact about the status of scientific research on monarch butterflies. The butterflies' habit of riding on prevailing winds (C) is a scientifically accepted fact. The phrase "long return migration" (D) is provided as a description of the migratory distance rather than as an opinion.

Read the passage below; then answer the five questions that follow.

¹Perhaps you've been hired to cook in a vegan restaurant where no animal products are used—including eggs, an essential ingredient in many recipes. Maybe you're planning a catered meal for customers who are allergic to eggs. How can you create delicious food that people will love, without using such a conventional ingredient? It's actually easier than you may think.

²In order to accommodate this type of special diet, you may not have to completely eliminate your favorite recipes. Look at the dish you want to prepare, and determine the egg's function in its overall composition. Is the egg the star of the culinary show, or is it a supporting cast member? In many cases, you may be able to substitute another ingredient that can serve the same purpose as an egg.

³For quick breads, pancakes, and waffles, pureed banana is often a good substitution, as approximately half of a pureed medium banana functions in a similar manner as one egg. Since banana is a dominant flavor, this substitution is only advisable when you want the banana flavor to be tangible or if you will be using additional ingredients with stronger flavors that will mask the banana flavor. Bananas will also typically make your baked goods moister, so you may need to slightly increase the proportion of dry ingredients in your recipe.

⁴For whole-grain muffins, cookies, cakes, and granola, consider using finely ground flaxseed, available at health-food stores and online. Both regular and golden flaxseed are suitable substitutions, though some bakers prefer golden flaxseed because the color is more subdued. A tablespoon of ground flaxseed mixed with three tablespoons of water is equal to one egg. The flavor of flaxseed is nutty, which works especially well with whole-grain foods, since the flavors complement each other nicely.

⁵Finally, don't overlook the power of chickpeas, which can be used in an uncommon way. The next time you open a can of this legume or boil a dried batch, don't discard the liquid from the can or the cooking water. Instead, use this liquid—called aquafaba—to whip up dessert toppings. Its chemical composition, though not fully understood, makes it the only egg substitute known to successfully create meringues.

21. Which of the following underlined words in the passage is used *incorrectly*?
- A. conventional
 - B. determine
 - C. tangible
 - D. subdued

Correct Response: C. The word "tangible" (C) means "able to be touched." While a taste can be identified, it cannot be touched. Therefore, "tangible" does not make sense in the context of the sentence. The word "conventional" (A) means "common or everyday," which fits with the first paragraph's main idea that eggs are a commonly-used ingredient. The word "determine" (B) means "ascertain or figure out," which makes sense in the context of the sentence explaining the importance of figuring out an egg's function in a recipe. Something that is "subdued" (D) is muted or subtle, and a subtle color would be beneficial when substituting an ingredient for an egg.

22. Which of the following is the best summary of Paragraph 4?
- A. For a lighter color, use golden flaxseed when baking rather than regular flaxseed.
 - B. Ground flaxseed is an excellent egg substitute when baking, especially with whole grains.
 - C. A good egg substitute is flaxseed because only a small amount is needed when baking.
 - D. Flaxseed should only be used when you want your finished product to have a strong nutty taste.

Correct Response: B. In Paragraph 4, the writer lists whole-grain muffins, cookies, cakes, and granola as recipes that would work well when flaxseed is used as an egg substitute. Therefore, the correct response (**B**) is an accurate summary of the paragraph's main idea that flaxseed works well in baking, especially with whole grains. The writer suggests golden flaxseed has the advantage of its color (**A**), but this is a supporting detail and does not fully summarize the paragraph. The small amount of flaxseed needed (**C**) and the nutty taste (**D**) are listed as additional benefits of flaxseed, but these are also supporting details that do not independently provide an accurate summary of the paragraph.

23. This passage is most likely written for:
- A. chefs or cooks in commercial kitchens.
 - B. food suppliers who sell goods to restaurants and caterers.
 - C. owners or managers of restaurants.
 - D. individuals who are allergic to eggs or need a special diet.

Correct Response: A. Because the passage tells readers which egg substitutes to use, where to find them, and how to use them effectively in recipes, it is most likely intended for people who prepare food. The introduction also mentions cooking in a restaurant or catering a meal, which further demonstrates that the intended audience is chefs or cooks in commercial kitchens (**A**). Although restaurant suppliers (**B**) might want to learn about egg substitutes, they would likely only want to know which substitutes to offer to their customers, not how to effectively use them in recipes. People who own or manage restaurants (**C**) would need to be aware of the use of egg substitutes, but they would not necessarily need to know how to use them in recipes at the level of detail provided in the passage. While the passage does mention individuals who need to avoid eggs in their diet (**D**), the writer provides this information as a reason for using substitutes in a restaurant rather than to suggest that the intended audience is those with food allergies or special diets.

24. Which sentence correctly identifies a cause-and-effect relationship described in the passage?
- A. It is not necessary to eliminate your favorite recipes to accommodate an egg-free diet.
 - B. Ground flaxseeds contain important vitamins and minerals that replace missing nutrients in a vegan diet.
 - C. The chemical properties of aquafaba are so unique that they are not yet completely understood.
 - D. Bananas have a relatively high moisture content, which can change the necessary ratio of ingredients in a recipe.

Correct Response: D. The writer explains in Paragraph 3 that "bananas will also typically make your baked goods moister, so you may need to slightly increase the proportion of dry ingredients in your recipe." Thus, a cause-and-effect relationship is established, with the banana's moisture content as the cause and the need for more dry ingredients as the effect (**D**). The writer emphasizes that it is possible to use your favorite recipes when accommodating a special diet, but there is no clear cause-and-effect relationship stated or implied based upon this information (**A**). Although there may be health benefits to flaxseeds, the passage discusses the benefits of flax in baking rather than for health purposes (**B**). The passage does say that aquafaba's chemical properties are unknown (**C**), but there is no cause and effect relationship related to this information.

25. Which of the following facts would be *least* effective in supporting the writer's argument?
- A. Many ingredients used as egg substitutes are no more expensive or difficult to find than eggs.
 - B. Egg substitutes are often free of other major allergens, like corn, gluten, dairy, soy, and tree nuts.
 - C. There are dozens of cookbooks for special diets, containing numerous recipes using egg substitutes.
 - D. Since substituting ingredients is challenging, you may first need to make a few trial batches of a recipe for the best results.

Correct Response: D. Because the writer argues that using egg substitutes is easy, suggesting to the need to practice in order to overcome the challenges of successfully substituting ingredients would not support the writer's argument effectively (**D**). Informing readers that substitutes are easy to find and are affordable would positively support the writer's argument by encouraging readers to feel optimistic about their potential success with egg substitutes (**A**). Since the introductory paragraph suggests the passage is for professionals who work in the food service industry, those individuals may be even more convinced to try egg substitutes if they knew there were benefits for people with food allergies (**B**). Suggesting that the reader look at the many cookbooks available for special diets would also support the writer's arguments by telling the reader where to find examples of recipes that may use the substitutions discussed in the passage (**C**).

Read the memorandum below; then answer the five questions that follow. This passage contains an error.

TO: All Staff Members
FROM: Isaac Jones, Zoo Director
DATE: July 14
SUBJECT: New Animal Enrichment Program

At Connary Zoo, we strive to educate people about the wonderful animals of our world and the many threats they face. Zoo animals play an important role in promoting wildlife conservation, and it's our responsibility to look after them. Part of this responsibility involves providing our animals with a comfortable, inviting habitat. Animals feel more at ease when they are stimulated by their environment and can engage in the same behaviors they would in the wild. Therefore, starting in August, we will be initiating a new animal enrichment program with the goal of improving the lives of the creatures in our care.

For the past three months, we have consulted with leading zoologists about the best ways to integrate enrichment activities into our zoo's daily schedule. Through those discussions, we've learned promising new approaches that will benefit both our animals and zoo guests. Our hope is that these strategies will stimulate the animals in meaningful ways while also providing educational opportunities for visitors. Our animals will feel more at home in their environments, especially those that require plenty of exercise in order to stay healthy.

Our big cats in particular need regular outlets for their energy and their hunting instincts. In the wild, these animals spend a large amount of their active time hunting prey. Therefore, one of the initiatives of the new enrichment program will be to arrange simulated hunts for our lions, tigers, and leopards. Each cat will be able to stalk movable cardboard targets shaped like deer and controlled by zookeepers outside it's enclosure.

Updating our zoo's animal enrichment program will take perseverance, ingenuity, and teamwork, but I know that you are more than equal to the task. In preparation, we will be upgrading several animal exhibits with equipment that will be needed for the new enrichment activities. After the upgrades are under way, we will begin hiring additional keepers for the exhibits in order to ensure that we have enough staff for the program to succeed. Once the new members of our team have undergone basic training, we will have weekly seminars for the full zoo staff regarding animal enrichment. Finally, we are planning an exciting public event at the end of October to officially kick off the new program.

Feel free to contact me with any questions, and thank you for your ongoing commitment to looking after this zoo and its many inhabitants.

26. Which of the following sentences from the memorandum contains a misused word?
- A. "Zoo animals play an important role in promoting wildlife conservation, and it's our responsibility to look after them."
 - B. "Animals feel more at ease when they are stimulated by their environment and can engage in the same behaviors they would in the wild."
 - C. "Our animals will feel more at home in their environments, especially those that require plenty of exercise in order to stay healthy."
 - D. "Each cat will be able to stalk movable cardboard targets shaped like deer and controlled by zookeepers outside it's enclosure."

Correct Response: D. In response **D**, the writer misuses the contraction "it's," which is an abbreviated form of *it is*, in place of the possessive pronoun *its*. Responses **A**, **B**, and **C** contain no misused words.

27. Which of the following sentences from the memorandum provides information that will help readers understand the benefits of animal enrichment?
- A. "At Connary Zoo, we strive to educate people about the wonderful animals of our world and the many threats they face."
 - B. "Animals feel more at ease when they are stimulated by their environment and can engage in the same behaviors they would in the wild."
 - C. "Therefore, starting in August, we will be initiating a new animal enrichment program with the goal of improving the lives of the creatures in our care."
 - D. "Through those discussions, we've learned promising new approaches that will benefit both our animals and zoo guests."

Correct Response: B. Response **B** identifies animals feeling at ease and the opportunity for them to engage in natural behaviors as the direct benefits of animal enrichment. Response **A** describes the main goal of the zoo, but it does not directly address the benefits of animal enrichment. In **C**, the writer states that the goal of the enrichment program is to improve the lives of the animals, but the sentence does not explain how the program will be beneficial in reaching that goal. In response **D**, the writer says that the new program will benefit the animals and guests, but there is no explanation of the specific program benefits.

28. Which of the following is the main purpose of this memorandum?
- A. to explain the motivation behind a new zoo program
 - B. to describe the challenges of keeping animals in captivity
 - C. to educate staff on the research behind animal enrichment
 - D. to invite staff to provide input on a new zoo program

Correct Response: A. The writer's main purpose is to inform the staff about the zoo's new animal enrichment program and to explain the reasoning behind its implementation (**A**). Although the writer explains the need for animals to have habitats that provide experiences that mirror the wild, there is no discussion of the challenges of keeping animals in captivity (**B**). The writer briefly mentions consulting with leading zoologists about the new animal enrichment program, but no research on enrichment programs is directly referenced (**C**). While the writer emphasizes the role of employees in implementing the program and undergoing training, and also encourages questions, there is no invitation in the memorandum to provide input regarding the program (**D**).

29. The memorandum describes the steps of implementing the new animal enrichment program in a particular order. According to the memorandum, which of the following steps occurs *after* the animal enrichment seminars?
- A. hiring additional zookeepers
 - B. hosting a public kick-off event
 - C. upgrading existing animal exhibits
 - D. conducting basic employee training

Correct Response: B. The writer describes the order of events involved in introducing a new enrichment program to Connary Zoo in the following order: upgrading existing animal exhibits (**C**), hiring additional zookeepers (**A**), conducting basic employee training for new staff (**D**), providing animal enrichment seminars for all zoo staff, and finally, hosting a public kick-off event. Therefore, the step that occurs after the animal enrichment seminars is the public kick-off event (**B**).

30. In which of the following sentences does the writer express an opinion rather than state a fact?
- A. "For the past three months, we have consulted with leading zoologists about the best ways to integrate enrichment activities into our zoo's daily schedule."
 - B. "Through those discussions, we've learned promising new approaches that will benefit both our animals and zoo guests."
 - C. "In the wild, these animals spend a large amount of their active time hunting prey."
 - D. "Therefore, one of the initiatives of the new enrichment program will be to arrange simulated hunts for our lions, tigers, and leopards."

Correct Response: B. Facts are pieces of information that can be verified and contain no personal bias or subjective opinion on the part of the writer. In **B**, the writer expresses two opinions: that the new approaches to animal enrichment seem promising, and that the program is likely to succeed. Characterizing the new approaches as "promising" may or may not be accurate, but either way is an expression of opinion. Similarly, the writer cannot objectively know whether the new strategies will be successful in benefiting their animals and guests, so this conjecture is also an opinion. In **A**, the writer refers to "leading zoologists," which simply means leaders in the profession, and the phrase "best way" is not used to suggest an opinion but rather to describe the quality of the information the zoo hoped to acquire from zoologists. Response **C** uses the word "large" to describe the amount of time animals spend hunting in the wild, but this is used to describe a verifiable fact based upon a quantity of time. In **D**, the writer explains one of the strategies the zoo will be using in the program, but does not share an opinion on this strategy.

Read the passage below; then answer the five questions that follow. This passage contains an error.

¹A dental care team includes several employees who support dentists and their practices. Unlike some members of the team who perform very specific tasks, the dental assistant has a broad and extensive role that ranges from preparing dental instruments for procedures to teaching patients about oral hygiene. An effective dental assistant should be a good communicator capable of managing a myriad of tasks, requiring both technical and interpersonal skills. The contributions of this essential member of the dental care team help improve the efficiency of not only the dentist, but the practice as a whole.

²Dental assistants require special training, which they can receive in many postsecondary institutions, such as colleges and universities, or vocational, technical, and dental schools. The technical skills required include, but are not limited to, taking and developing X-rays, recording patients' medical histories, checking vital signs, and sterilizing dental instruments. In addition, dental assistants must be knowledgeable about proper oral hygiene, methods for brushing and flossing, and specific oral care following any procedure the dentist has performed. A dental assistant's technical skill set is vital, as it is utilized in assisting the dentist before, during, and after treatments and procedures.

³No less important than the technical skills required for an effective dental assistant are the interpersonal skills needed to build productive relationships with patients and all other members of the dental care team. Because going to the dentist and having potentially painful dental work performed can be a source of anxiety, it is the dental assistant's responsibility to help put patients at ease by answering questions and then offering reassurance. Dental assistants may also be required to perform routine customer service, such as answering telephone calls, responding to e-mails, and scheduling appointments for patients—tasks for which effective communication, professionalism, and cordiality are always beneficial.

⁴As an integral member of the dental care team, dental assistants' flexibility and versatility are key elements to running an efficient dental office. There ability to master both the technical and interpersonal requirements of the role make them invaluable members of a strong dental care team.

31. Which of the following underlined words in the passage is used *incorrectly*?
- A. their
 - B. than
 - C. then
 - D. there

Correct Response: D. "There" (**D**) in Paragraph 4 indicates a location, and is used incorrectly. Since the sentence is referring to the dentists, the correct word would be the pronoun *their*. In Paragraph 1, "their" (**A**) is used correctly as a possessive pronoun. In Paragraph 3, "than" (**B**) is used correctly to indicate a comparison between technical and interpersonal skills, and "then" (**C**) is used correctly to indicate a subsequent step in a process.

32. Which of the following is the best summary of Paragraph 3?
- A. Today's dental assistants possess a wide variety of technical skills that make them capable of completing tasks that used to be performed by dentists.
 - B. Interpersonal skills are an important requirement for many of the roles that dental assistants are called on to perform.
 - C. Customer service is a routine function of dental assistants in modern dental offices.
 - D. Dental assistants are very important to the productivity of a dentist and the dental care team.

Correct Response: B. The writer provides information in Paragraph 3 that demonstrates the importance of interpersonal skills for the job of dental assistants and how these skills allow them to provide support to the dentist and his or her patients (**B**). These interpersonal responsibilities include building relationships, putting patients at ease, and providing good customer service. While it is true that dental assistants also possess a wide variety of technical skills (**A**), those skills make dental assistants capable of helping dentists rather than completing tasks that are typically the responsibility of the dentist. Also, this information is presented in Paragraph 2 rather than Paragraph 3. Although Paragraph 3 discusses the importance of customer service skills, the author never argues that these are the most critical skills needed for the job (**C**). The passage does demonstrate that dental assistants are very important to the productivity of a dentist and his or her dental care team (**D**), but that is not the focus of Paragraph 3.

33. This passage is most likely written for:
- A. dentists who want to hire a dental assistant.
 - B. dental assistants looking for employment.
 - C. people interested in a career in dentistry.
 - D. college faculty from dentistry programs.

Correct Response: C. The writer provides information throughout the passage about the skill sets and training needed for a dental assistant. The details provided are introductory in nature and intended for those who may be interested in jobs available in the field of dentistry (**C**). A dentist who wants to hire a dental assistant (**A**) and dental assistants looking for employment (**B**) would already have an understanding of what the job entails, so this passage would not be very informative. College faculty from dentistry programs (**D**) would also not find this passage helpful because they would already be knowledgeable on this topic.

34. According to the passage, one way that dental assistants differ from some other workers in dental offices is that dental assistants:
- A. are the ones best qualified to relieve patients' anxiety.
 - B. are clearly the most important members of the dental care team.
 - C. have the task of handling all communications with patients and scheduling office visits.
 - D. have a varied list of responsibilities that support many functions of a dental practice.

Correct Response: D. The writer provides information throughout the passage about the various aspects of the dental assistant's role and says in the first paragraph that, unlike other members of the dental team, their duties are broad and extensive (**D**). Although it is true that a dental assistant may be called upon to "relieve patients' anxiety" (**A**), there is no indication in the passage that they are the only ones qualified to do so. The passage does indicate that the dental assistant is "an integral member of the dental care team," but it does not state that dental assistants are the most important members of the team (**B**). Responsibilities such as communicating with patients and scheduling office visits (**C**) could be part of the dental assistant's responsibilities, but there is no indication that they are the only members of the team who perform this task.

35. Which of the following descriptions best summarizes how the writer advances the main argument in the passage?
- A. The writer describes the dental assistant's multiple roles, responsibilities, and skills to demonstrate the importance of dental assistants to a successful dental practice.
 - B. The writer lists the complex skills needed for a career as a dental assistant to help explain why it is often difficult for dentists to find qualified individuals for the job.
 - C. The writer compares the roles of dental assistants and other employees in a dental practice to argue why their role is more important than that of others on the dental team.
 - D. The writer explains the training required to become a dental assistant to help those interested in this career decide whether it is a good option for them.

Correct Response: A. The writer provides many examples throughout the passage of the roles dental assistants play in a dental office and concludes the passage by stating that the "ability to master both the technical and interpersonal requirements of the role make them invaluable members of a strong dental care team" (**A**). Although some of the skills for the job are complex, the writer never states that dentists have difficulty finding individuals who possess these skills (**B**). The writer does compare the role of dental assistants to other employees in a dental office by stating: "Unlike some members of the team who perform very specific tasks, the dental assistant has a broad and extensive role that ranges from preparing dental instruments for procedures to teaching patients about oral hygiene." However, the writer does not argue that the role of dental assistants is more important than that of other employees (**C**). While the passage provides some details about how training can be acquired for a career as a dental assistant (**D**), the training process is neither the main focus of the passage nor the writer's main argument.

Read the passage below; then answer the five questions that follow.

¹Long before calculators were common features on smartphones and other personal electronic devices, there were less sophisticated instruments to solve mathematical problems. For example, before the Middle Ages, merchants used sticks to make marks in sand or dirt as a method of counting. Later counting boards evolved into primitive portable calculators constructed of precious materials like bronze or marble, making them much more ostentatious than the ones used today.

²As calculation technology advanced over the centuries, the market for these instruments expanded beyond just merchants and into a variety of industries. In 1820, Charles Xavier Thomas patented the Arithmometer, a device that used levers and drums to perform basic arithmetic operations. Since Thomas worked in insurance, it is probable that he invented the device to handle the high volume of calculations required by his industry. The Arithmometer was so popular that it remained in use well into the twentieth century.

³After World War II, technological advances in calculating machines came at a quick pace. The 1954 IBM 608 was so large it was housed in several cabinets, and with a price tag of \$83,210, its market was limited to businesses with ample money to afford the machine's memory capabilities. Just seven years later, though, the desktop calculator ANITA MK-8 followed. With a cheaper price of \$1,000 and weight of 30.5 pounds, more businesses could afford it and find space for it in their offices. Then in 1971, the Busicom LE-120A handheld calculator was released, with a 12-digit red LED display and a substantially lower price of \$395. Because the price was a fraction of the cost of its predecessors, both individuals and businesses of all sizes could afford it.

⁴As a new era in technology was ushered in, calculators in the 1980s, 1990s, and early 2000s became more capable and complex, which appealed to even more markets, including education, in all levels of math and science. Students in middle schools could use basic arithmetic solar-powered calculators to help with pre-algebra, while high school and college students could use graphing calculators like the 1985 Casio fx-7000G or the Texas Instruments TI series for a wide variety of advanced math and science courses. By 2011, students had available to them full-color calculators from both companies to make their mathematics work both faster and more appealing to the eye.

⁵Calculators have evolved from the simplest of devices used primarily for commerce to more advanced technology with applications in all fields of business and education. Calculators are now incorporated into virtually every personal electronic device and are accessible instantly at the fingertips of any individual.

36. Which of the following words has the *opposite* meaning of the word ostentatious as used in Paragraph 1?
- A. elaborate
 - B. modest
 - C. pragmatic
 - D. spectacular

Correct Response: B. The word "ostentatious" means "showy" or "flashy." The opposite of "ostentatious," therefore, is "modest" (**B**), which means "unassuming" or "humble." The word "elaborate" (**A**) means "detailed and intricate," which is somewhat related to "ostentatious" in that something "intricate" could be "flashy." The word "pragmatic" (**C**) means "practical," which is neither a synonym nor an antonym for "ostentatious." Finally, "spectacular" (**D**) means "dramatic" or "eye-catching," which conveys a similar meaning as "ostentatious."

37. Which of the following best expresses the main idea of the passage?
- A. More people understand how to use calculators today than ever have before.
 - B. Calculators have decreased in cost over time in order to appeal to businesses.
 - C. The use and ownership of calculators has broadened as the technology has evolved.
 - D. The calculators of today are new technologies that are totally unlike previous versions.

Correct Response: C. According to the passage, "calculators have evolved from the simplest of devices used primarily for commerce to more advanced technology with applications in all fields of business and education," and "calculators are now incorporated into virtually every personal electronic device and are accessible instantly at the fingertips of any individual" (C). While it can be inferred from the passage that more people understand how to use calculators today than in the past, that is only part of the larger theme (A). Although Paragraph 3 explains that the cost of calculators has decreased (B), the evidence in the passage does not support the contention that this decrease was part of a focused effort to increase the appeal of calculators to businesses. While many modern calculators are new technologies (D), they are not totally unlike previous versions; rather, they are evolutions of a concept that began centuries ago.

38. The use of the phrase "more appealing to the eye" at the end of Paragraph 4 indicates that the writer:
- A. thinks that calculators with color displays are more desirable to most users.
 - B. believes that calculators with color displays are essential for today's students.
 - C. assumes that solving mathematical problems is inherently boring for most people.
 - D. wishes that more calculator manufacturers would make calculators with vivid displays.

Correct Response: A. When something is "appealing to the eye," people like the way it looks. Therefore, a calculator that the writer sees as more appealing would likely be more desirable to users (**A**). The phrase "appealing to the eye" does not convey the idea of being essential, just that it is more interesting or favorable (**B**). While a calculator that is "appealing to the eye" might make solving mathematical problems more interesting, this does not mean that the writer assumes mathematics is "boring" (**C**). The passage does not provide the reader with any information about how many color calculators are available, so it is not a reasonable conclusion that the writer thinks more should be produced (**D**).

39. Which of the following lists puts inventions described in the passage in the correct order in which they were invented?
- A. Arithmometer, Basicom LE-120A, IBM 608
 - B. Casio fx-7000G, IBM 608, Basicom LE-120A
 - C. IBM 608, Basicom LE-120A, Casio fx-7000G
 - D. Basicom LE-120A, Casio fx-7000G, Arithmometer

Correct Response: C. According to the passage, the order in which the inventions listed in the responses were created is: Arithmometer (1820), IBM 608 (1954), Basicom LE-120A (1971), and Casio fx-7000G (1985). Therefore, **C** is the only response that presents the inventions in the correct order. The sequences provided in **A**, **B**, and **D** are all incorrect.

40. By saying in Paragraph 2 that "it is probable that [Thomas] invented the device to handle the high volume of calculations required by his industry," the writer is suggesting that:
- A. there is documentation regarding the origins of Thomas's invention.
 - B. the purpose for which Thomas invented the Arithmometer is not known with certainty.
 - C. only a minimal connection can be made between Thomas's profession and his invention.
 - D. Thomas's colleagues in the insurance industry encouraged him to invent the device.

Correct Response: B. The word "probable" indicates likelihood but not complete certainty about the truthfulness or accuracy of a statement. Thus, while Thomas's invention was probably created to assist in his work in the insurance industry, that claim cannot be asserted with total certainty (**B**). Because the author is not certain, the reader can conclude there must be no "documentation" of the origin of Thomas's Arithmometer (**A**). However, since Thomas's work in the insurance industry almost certainly involved computation, more than a "minimal connection" can be made between the invention and his profession (**C**). Although Thomas's colleagues in the insurance industry may have also benefitted from the Arithmometer, the details in the passage do not support the conclusion that they encouraged him to invent the device (**D**).

Read the passage below; then answer the five questions that follow.

¹In a commercial kitchen, safe food handling and preparation can eliminate major risks to public health and safety. Restaurant managers and food service workers have a responsibility to ensure that the procedures for maintaining food safety are carefully and consistently followed without deviation from USDA (United States Department of Agriculture) and FDA (Food and Drug Administration) guidelines. Avoiding careless practices that could lead to cross-contamination and inadequately cooked meat can help safeguard against serving food that is unsafe for public consumption.

²Cross-contamination involves transferring harmful bacteria from raw food items such as meat, poultry, seafood, and eggs to other foods in the kitchen. For example, if a food service worker shapes raw ground beef into hamburger patties on a preparation surface and then uses that same uncleaned surface to assemble cheeseburgers once the meat is cooked, potentially harmful bacteria from the raw beef can be transferred to the cooked cheeseburgers. Because of the potential health danger to consumers, precautions must be taken to avoid cross-contamination in a commercial kitchen, including washing hands and disinfecting any surface or kitchen equipment that has come into contact with raw foods. The USDA also suggests separating raw meat products from raw fruits and vegetables, as well as cooked foods.

³It is equally important that foods are cooked to the appropriate temperature, as consuming raw or undercooked meats can lead to serious food-borne illness. Safe internal temperatures vary by meat type, so it is important to know the correct temperatures for the food being cooked. According to the USDA, beef and pork should be cooked to a minimum temperature of 145 degrees and poultry to a minimum of 165 degrees.

⁴Food service workers have a responsibility to meet or exceed established standards by virtue of the trust placed in them to safely prepare meals for consumers. Taking care to clean surfaces and hands, separate raw meat from produce, and cook all foods thoroughly will go a long way in the prevention of food-borne illnesses.

41. Which of the following best defines the word deviation as it is used in Paragraph 1 of the passage?
- A. unwillingness
 - B. consideration
 - C. hesitation
 - D. variation

Correct Response: D. The word "deviation" means "variation, change, or difference." Therefore, "variation" (**D**) is the best definition of "deviation" and could also be used in the paragraph as the phrase "consistently followed without variation." The word "unwillingness" (**A**) describes reluctance and would not make sense in the paragraph, as it would indicate regulations should not be followed with care. The word "consideration" (**B**) implies careful thought and would also change the meaning of the sentence to indicate that regulations should be followed without thought. The word "hesitation" (**C**), meaning "a pause or delay," might make sense in the context of the sentence, as it would indicate following regulations without delay; however, this does not accurately reflect the meaning of "deviation."

42. Which information in the passage best supports the writer's main argument?
- A. "Cross-contamination involves transferring harmful bacteria from raw food items such as meat, poultry, seafood, and eggs to other foods in the kitchen."
 - B. "It is equally important that foods are cooked to the appropriate temperature, as consuming raw or undercooked meats can lead to serious food-borne illness."
 - C. "Safe internal temperatures vary by meat type, so it is important to know the correct temperatures for the food being cooked."
 - D. "Food service workers have a responsibility to meet or exceed established standards by virtue of the trust placed in them to safely prepare meals for consumers."

Correct Response: D. In the passage, the author argues the importance of taking precautions in a commercial kitchen to minimize risks of food-borne illnesses, so **D** best supports this idea by explaining that food service workers, as professionals who are entrusted with the public health, have a responsibility to ensure safe food preparation. Response **A** explains the definition of cross-contamination, which is only one of many factors contributing to the main argument in the passage. In **B**, the author explains the significant risk of serving undercooked meat, which is also only one factor contributing to the main argument. The information in **C** is merely a supporting detail regarding safe food temperatures, so this does not fully support the main argument in the passage.

43. Which of the following best describes the writer's purpose in this passage?
- A. to provide the legal guidelines for food safety practices
 - B. to argue for stricter policies on commercial food preparation
 - C. to explain the importance of safe food-handling practices
 - D. to criticize the current approach to food safety in restaurants

Correct Response: C. The writer provides evidence throughout the passage about the importance of food safety practices, including how to avoid cross-contamination and how to achieve proper food temperatures. Therefore, option **C** best states the writer's purpose. Although the passage does mention the USDA and FDA guidelines for food safety, it does not explain the legal guidelines in detail (**A**) or argue for stricter policies (**B**). The writer explains health and safety risks that can result if food safety is not practiced carefully in a kitchen, such as cross-contamination and food-borne illness, but does not critique the current approach to food safety in restaurants (**D**).

44. The way in which information is presented in the passage most clearly suggests that the writer:
- A. understands the risks of poor food-handling practices.
 - B. has suffered from a food-borne illness in the past.
 - C. is affiliated with either the FDA or the USDA.
 - D. manages a restaurant or commercial kitchen.

Correct Response: A. The passage conveys a sense of urgency to "safeguard against serving food that is unsafe for public consumption," which indicates the author's concern and understanding of the risks of "poor food-handling practices" (A). While it is possible that the writer has knowledge of these risks as a result of personally suffering from a food-borne illness (B), there is no direct evidence in the passage to support that idea. Although the writer cites both the FDA and USDA as sources (C), the passage does not provide evidence of any affiliation with either agency. Based upon the information in the passage, it is clear that the writer is familiar with food preparation in commercial kitchens. However, there is insufficient evidence in the passage to support the inference that the writer "manages a restaurant or commercial kitchen" (D).

45. Which of the following descriptions best summarizes how the writer advances the main argument in the passage?
- A. The writer defines the illnesses that can be caused by poor food handling to argue that working in a commercial kitchen is a dangerous job that comes with risks.
 - B. The writer explains the established policies for food handling and preparation in a commercial kitchen to advise restaurant workers of their legal responsibilities.
 - C. The writer describes the risks to public health in a commercial kitchen and methods of prevention in order to demonstrate the importance of following safety procedures.
 - D. The writer lists the most popular practices for safe food handling to help restaurant managers and owners determine if they should establish policies for their kitchens.

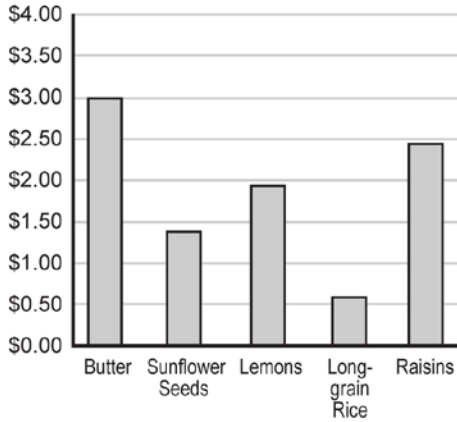
Correct Response: C. The writer provides examples of risks to public health, including cross-contamination and undercooked foods that "can lead to serious food-borne illness," and further explains how to prevent these illnesses by following safe food-handling procedures (C). Although the writer mentions illnesses related to unsafe food handling to explain the risks to public health, the passage does not focus on risks to workers in commercial kitchens (A). While the writer mentions USDA and FDA policies, there is no specific information provided in the passage about these policies or the legal responsibilities assigned to restaurant workers (B). The writer does provide information about common practices for safe food handling, but these are included in the passage to argue for what must occur in a commercial kitchen rather than to help restaurant managers and owners determine if they should establish policies for their kitchens (D).

46. Use the table below to answer the question that follows.

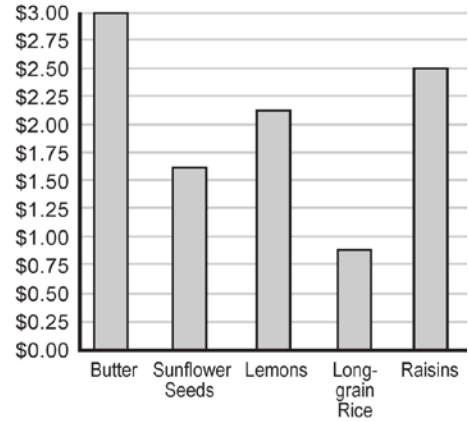
Ingredient	Price per Pound
Butter	\$3.06
Sunflower Seeds	\$1.88
Lemons	\$2.03
Long-grain Rice	\$0.72
Raisins	\$2.31

The table shows the price of five different ingredients that could be used to make a dish. Which of the following graphs most accurately represents these data?

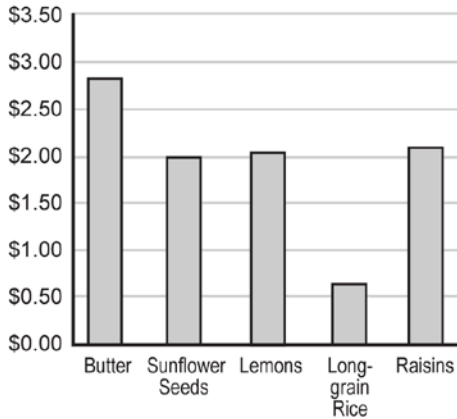
A.



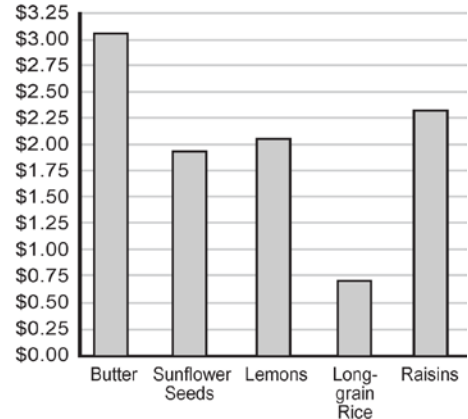
B.



C.

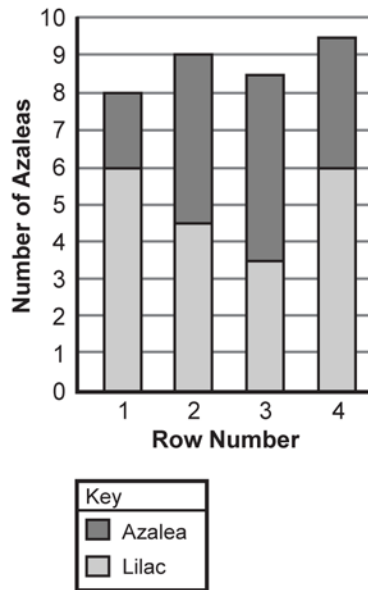


D.



Correct Response: D. Response option D most accurately represents the data in the table because the bars in the graph most accurately represent the price per pound of each ingredient with the prices on the left side of the graph. The other graphs do not accurately represent the price per pound of the ingredients.

47. Use the graph below to answer the question that follows.



How many azaleas are in row number 4?

- A. 3.5
- B. 4
- C. 4.5
- D. 5

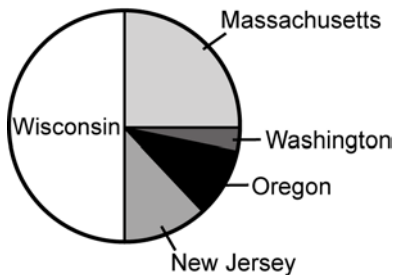
Correct Response: A. The graph's key indicates that azaleas are represented by the darkly shaded portion of each bar. According to the numbers on the left side of the graph, the darkly shaded portion of the bar in row number 4 spans from 6 to 9.5, for a total of 3.5 azaleas (**A**). The other response options are not 3.5 and are therefore incorrect.

48. Use the table below to answer the question that follows.

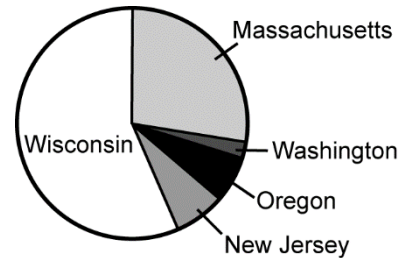
Cranberry Production in the United States	
State	Production (in thousands of barrels)
Massachusetts	2352
Washington	198
Oregon	562
New Jersey	595
Wisconsin	4856

The table shows data regarding cranberry production in the United States. Which of the following pie charts most accurately represents these data?

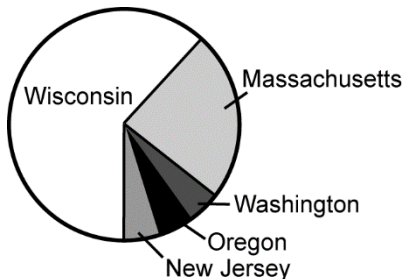
A.



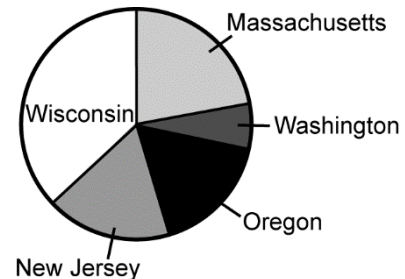
B.



C.



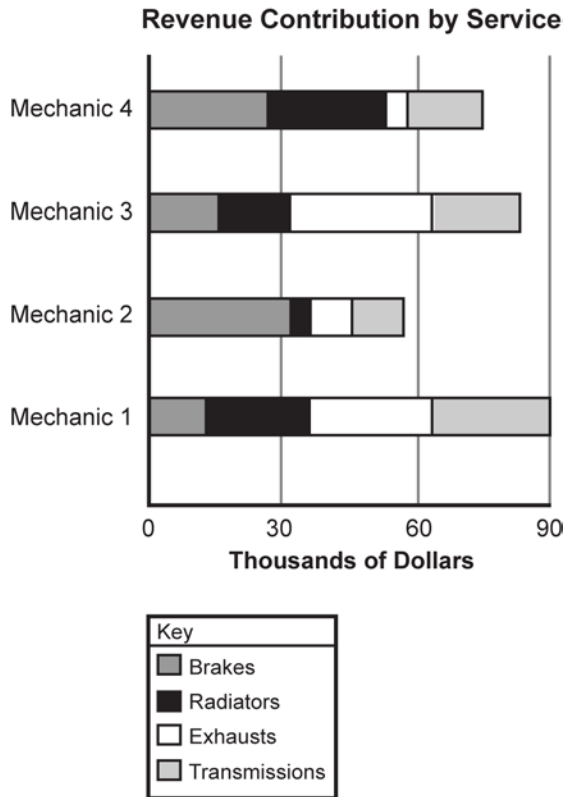
D.



Correct Response: B. Pie charts are circular graphics that show the proportions of various data categories relative to one another. Each section represents a percentage of the whole pie. The table provides data for the cranberry production (in thousands of barrels) of five U.S. states. Total cranberry production (in thousands of barrels) across the five states is 8563. To figure the percentage of each state’s production, the state’s production is divided by the total of 8563. Therefore, Massachusetts’s percentage of the whole is 2352 divided by 8563, which equals roughly 27%. Washington’s production (198/8563) is roughly 2%. Oregon’s production (562/8563) is roughly 7%. New Jersey’s production (595/8563) is roughly 7%. Wisconsin’s production (4856/8563) is roughly 57%. Response option **B** most accurately represents the data because the sections roughly correspond to the percentages. Responses **A** and **D** each show Wisconsin as having less than 50% of the total production, so they

are not accurate. Response C shows New Jersey, Oregon, and Washington as having roughly the same percentages, so it is not accurate.

49. Use the graph below to answer the question that follows.

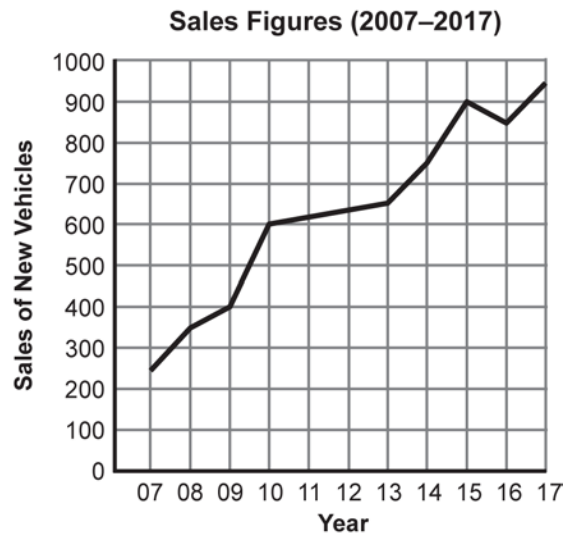


The graph shows the amount of money that repairs to brakes, radiators, exhausts, and transmissions contribute to the annual revenues of four local auto mechanics. The greatest amount of money contributed to any mechanic's revenue is provided by:

- A. radiator services of Mechanic 4.
- B. brake services of Mechanic 2.
- C. exhaust services of Mechanic 3.
- D. transmission services of Mechanic 1.

Correct Response: B. Vertical lines in the graph indicate revenue in thousands of dollars at 0, 30, 60, and 90. Brake services of Mechanic 2 (B) account for more than \$30,000 of revenue, as indicated by the bar that starts at 0 and ends past the line indicating \$30,000. No other type of service is represented by a bar that spans \$30,000 (A, C, D).

Use the graph below to answer the two questions that follow.



The line graph shows sales figures for a car dealership between 2007 and 2017.

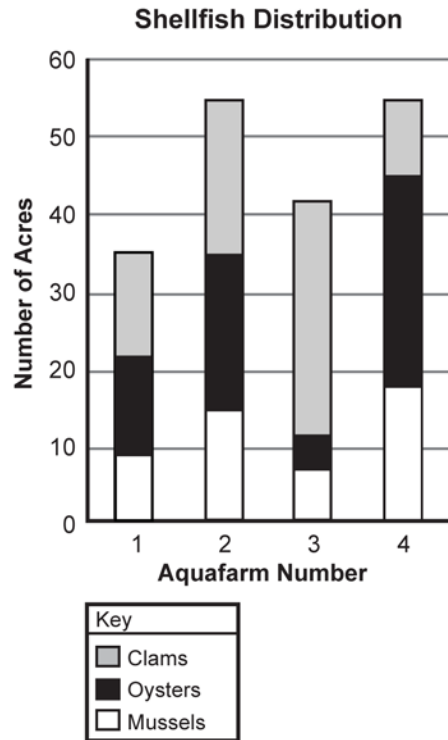
50. Between which of the following years was the increase in sales most rapid?
- A. 2007 and 2008
 - B. 2008 and 2009
 - C. 2009 and 2010
 - D. 2010 and 2011

Correct Response: C. The line graph charts the sales of new vehicles per year from 2007 to 2017. From 2009 to 2010 (C), sales increased from 400 to 600, a 200-unit increase, which is a greater increase than from 2007 to 2008 (A), from 2008 to 2009 (B), or from 2010 to 2011 (D).

51. From 2015 to 2016 sales figures decreased by approximately how many vehicles?
- A. 30
 - B. 50
 - C. 80
 - D. 100

Correct Response: B. From 2015 to 2016, sales decreased from 900 units to approximately 850 units, for a total decrease of 50 units (**B**). The other response options are all considerably higher or lower than 50 units.

Use the graph below to answer the two questions that follow.



Four different aquafarms each grow mussels, oysters, and clams. The graph shows the number of acres per shellfish type for each aquafarm.

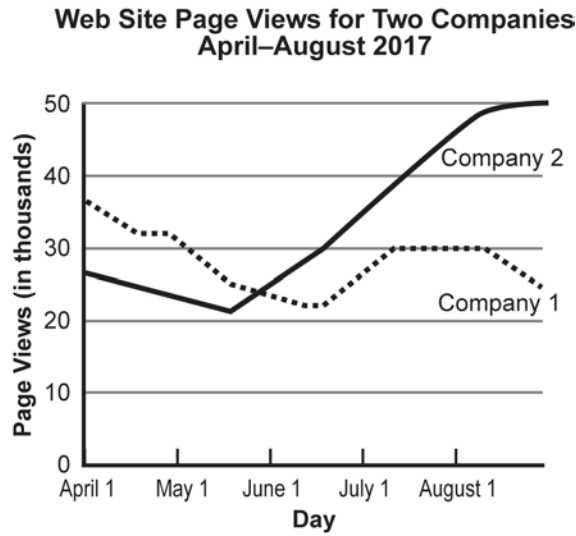
52. Which of the four aquafarms had the most acres used for clams?
- A. Aquafarm 1
 - B. Aquafarm 2
 - C. Aquafarm 3
 - D. Aquafarm 4

Correct Response: C. A bar graph charts variables using a horizontal axis, a vertical axis, and bars. In this bar graph, each bar consists of three variables: mussels, oysters, and clams. The clam section of the bar for Aquafarm 3 (C) starts at around 12 and ends at around 42, for a total of 30, which is more acres of clams than in the bars representing the other farms.

53. Approximately how many acres were used for oysters on Aquafarm 4?
- A. 23
 - B. 27
 - C. 31
 - D. 35

Correct Response: B. The oyster section of the bar for Aquafarm 4 starts at around 18 and ends at around 45, for a total of 27 acres of oysters (**B**). The other response options are all lower or higher than 27.

Use the graph below to answer the three questions that follow.



The graph shows the number of Web site page views for two companies.

54. The companies' page views were closest at the beginning of which month?
- A. May
 - B. June
 - C. July
 - D. August

Correct Response: B. This line graph charts number of page views per day for two companies. The point where the lines of the two companies cross indicates a day where the number of the two companies' page views was the same. The lines cross roughly at the beginning of June (**B**). The other response options indicate months other than June and are therefore incorrect.

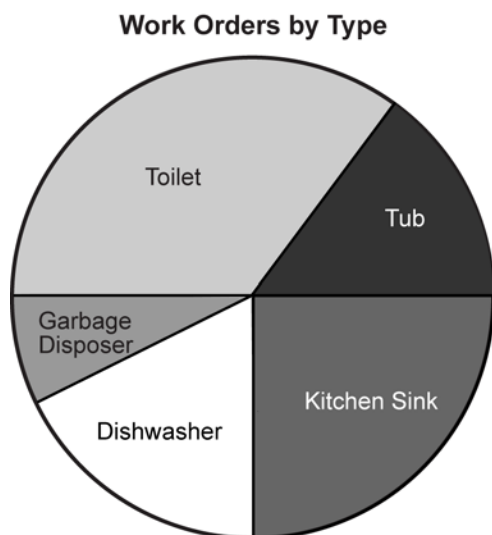
55. According to the graph, page views for both companies grew at about the same rate from:
- A. mid-April to mid-May.
 - B. mid-May to mid-June.
 - C. mid-June to mid-July.
 - D. mid-July to mid-August.

Correct Response: C. An indication that the two companies' page views grew at about the same rate would be represented in the graph by the lines of the two companies both moving upward and roughly parallel to each other during the same time span. That span happens from around mid-June to mid-July (C). All other response options indicate a different time span.

56. When the page views for Company 1 fell to approximately 30,000, the page views for Company 2 were approximately:
- A. 20,000.
 - B. 23,000.
 - C. 27,000.
 - D. 30,000.

Correct Response: B. The number of page views of Company 1 fell to approximately 30,000 in early May, as represented in the graph. The number of page views of Company 2 at that time was around 23,000, as represented in the graph (**B**). The other response options provide lower or higher estimates.

Use the pie chart below to answer the two questions that follow.



The pie chart shows the distribution of work orders for a plumber in one year.

57. Approximately what percentage of the plumber's work orders are for dishwasher work?
- A. 3%
 - B. 8%
 - C. 13%
 - D. 18%

Correct Response: D. Pie charts are circular graphics that show the proportions of various data categories relative to one another. This question calls for the best estimate of the percentage of the plumber's dishwasher work orders, which means the answer lies in determining the rough percentage that the Dishwasher section of the chart takes up. One way to make a rough estimation is to notice that the chart has a horizontal line running through its center. That piece of visual information indicates that the Toilet and Tub sections comprise 50% of the pie chart, with the other three types comprising the other half. There is also a line running from the center line to the bottom of the circle that forms one side of the dishwasher section. This line and the horizontal line leading from the left side of the circle to the center indicate that the two sections in that space—Dishwasher and Garbage Disposer—comprise 25% of the overall pie. From there, one can see that the Dishwasher section is significantly larger than the Garbage Disposer section, and therefore, of the four response options, 18% (**D**) is the best estimate for the size of the dishwasher section. All the other response options are too small.

58. Which of the following statements is true?
- A. Toilet work orders and kitchen sink work orders together account for more than half of the total work orders.
 - B. Garbage disposer work orders and tub work orders together account for more work orders than dishwasher work orders and toilet work orders together.
 - C. Dishwasher work orders and toilet work orders together account for less than half of the total work orders.
 - D. Toilet work orders and kitchen sink work orders together account for approximately half of the total work orders.

Correct Response: A. The Toilet and the Tub sections of the pie chart comprise 50% of the chart. One way to visually estimate the Toilet and Kitchen Sink sections combined is to note that the Kitchen Sink section is bigger than the Tub section. Therefore, if the Kitchen Sink section was placed where the Tub sections is, the combination of the Toilet and Kitchen Sink sections would be greater than 50% (**A**). Response **B** is not correct because the Dishwasher and Toilet sections are clearly larger combined than the Garbage Disposal and Tub sections. Response **C** is not correct because the Dishwasher section and Toilet section comprise more than 50% of the total work orders. Response **D** is not correct because the Toilet and Kitchen Sink sections of the pie chart comprise significantly more than 50% of the total work orders.

Use the table below to answer the two questions that follow.

Number of Smartphones Sold Worldwide (2007–2016)	
Year	Number (in millions)
2007	122
2008	139
2009	172
2010	296
2011	472
2012	680
2013	969
2014	1244
2015	1423
2016	1495

The table shows the number of smartphones sold worldwide over a ten-year period.

59. Between what two years was the increase in the number of smartphone sales greatest?
- A. 2011 and 2012
 - B. 2012 and 2013
 - C. 2013 and 2014
 - D. 2014 and 2015

Correct Response: B. Between 2012 and 2013 (**B**), the increase in the number of smartphone sales was 289 million (969 minus 680). The other year-to-year increases are all less than 289.

60. Which of the following statements about the data in the table is true?
- A. Smartphone sales more than doubled from 2008 to 2010.
 - B. Smartphone sales reached a peak in 2013.
 - C. Smartphone sales began decreasing in 2016.
 - D. Smartphone sales increased the least between 2014 and 2015.

Correct Response: A. From 2008 to 2010, smartphone sales more than doubled, from 139 million to 296 million. Sales reached a peak in 2016, not 2013 (**B**). Smartphone sales actually *increased* in 2016 (**C**). Between 2014 and 2015, sales increased by 179 million phones, which is far higher than the increase of only 17 million that occurred from 2007 to 2008 (**D**).