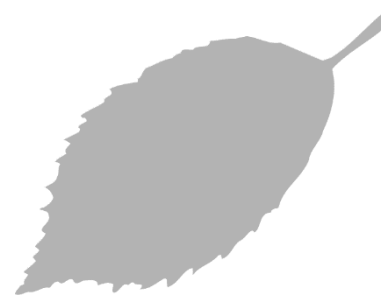


**Massachusetts  
Tests for Educator Licensure® (MTEL®)**



**Vocational Technical  
Literacy Skills Test–  
Reading (191)**

**PRACTICE TEST**



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## INTRODUCTION

This practice test is a sample test consisting of 60 multiple-choice questions.

To assist you in recording and evaluating your responses on the practice test, a [Multiple-Choice Answer Sheet](#), an [Answer Key Worksheet](#), and an [Evaluation Chart](#) by test objective are included for the multiple-choice questions. Lastly, there is a [Practice Test Score Calculation](#) worksheet.

## PURPOSE OF THE PRACTICE TEST

The practice test is designed to provide an additional resource to help you effectively prepare for the MTEL Vocational Technical Literacy Skills Test–Reading Subtest (191). The primary purpose of the practice test is to help you become familiar with the structure and content of the test. It is also intended to help you identify areas in which to focus your studies. Education faculty and administrators of teacher preparation programs may also find this practice test useful as they help students prepare for the official test.

## TAKING THE PRACTICE TEST

In order to maximize the benefits of the practice test, it is recommended that you take this test under conditions similar to the conditions under which the official MTEL tests are administered. Try to take the practice test in a quiet atmosphere with few interruptions and limit yourself to the four-hour time period\* allotted for the official test administration. You will find your results to be more useful if you refer to the answer key only after you have completed the practice test.

## INCORPORATING THE PRACTICE TEST IN YOUR STUDY PLAN

Although the primary means of preparing for the MTEL is your college education, adequate preparation prior to taking or retaking the MTEL test is strongly recommended. How much preparation and study you need depends on how comfortable and knowledgeable you are with the content of the test.

The first step in preparing to take the MTEL is to identify what information the test will address by reviewing the objectives for your field. A complete, up-to-date list of the Test Objectives is included in the Test Information Guide for each test field. The test objectives are the core of the testing program and a helpful study tool. Before taking or retaking the official test, focus your study time on those objectives for which you wish to strengthen your knowledge.

This practice test may be used as one indicator of potential strengths and weaknesses in your knowledge of the content on the official test. However, because of potential differences in format and difficulty between the practice test and an official MTEL Vocational Technical Literacy Skills Test–Reading Subtest (191), it is not possible to predict precisely how you might score on an official MTEL Vocational Technical Literacy Skills Test–Reading Subtest (191). Keep in mind that the subareas for which the test weighting is greatest will receive emphasis on this test. Refer to the Test Information Guide for additional information about how to prepare for the test.

\* For tests that have subtests, candidates may take one or both subtests during the four-hour session.

**VOCATIONAL TECHNICAL LITERACY SKILLS TEST–  
READING SUBTEST (191)  
PRACTICE TEST**

**MULTIPLE-CHOICE ANSWER SHEET**

<b>Question Number</b>	<b>Your Response</b>
1	
2	
3	
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<b>Question Number</b>	<b>Your Response</b>
21	
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23	
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40	

<b>Question Number</b>	<b>Your Response</b>
41	
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## **DIRECTIONS FOR THE READING SUBTEST**

The reading subtest consists of reading selections, graphs, tables, and charts. Each selection is followed by several multiple-choice questions related to the selection. Read each question and answer choice carefully and choose the ONE best answer based on the information contained in the selection you have just read. You may refer back to the selection to answer the questions.

The order of information requested by the questions does not necessarily correspond to the order of information in a given selection.

Try to answer all questions. In general, if you have some knowledge about a question, it is better to try to answer it. You will NOT be penalized for guessing.

Be sure to allocate your time carefully so that you are able to complete the entire subtest within the testing session.

## MULTIPLE-CHOICE QUESTIONS

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

<sup>1</sup>Hydroponics 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.

<sup>2</sup>Hydroponics 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.

<sup>3</sup>Because 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.

<sup>4</sup>The 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.

<sup>5</sup>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. 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

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



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

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

<sup>5</sup>A number of factors create conditions for mold growth, including humidity and temperature. <sup>6</sup>Mold 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. <sup>7</sup>To lessen the possibility of mold growth, homeowners should adjust their thermostats to 74°F–78°F in the summer. <sup>8</sup>If 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. <sup>9</sup>Alternatively, using a dehumidifier can ensure that moisture levels remain within sufficient parameters to prevent mold growth.

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

<sup>13</sup>Mold thrives when it has a food source, which is typically dead, organic material. <sup>14</sup>Homeowners 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. <sup>15</sup>Mold 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.

<sup>16</sup>Although these preventive measures may not entirely eliminate the risk of mold, they will significantly reduce its growth and spread. <sup>17</sup>Should 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."
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.
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.
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
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

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

<sup>1</sup>Starting 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.

<sup>2</sup>Thanks 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.

<sup>3</sup>We 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
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.
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.
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.
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

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

<sup>1</sup>The 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.

<sup>2</sup>Experts 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.

<sup>3</sup>Monarch 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.

<sup>4</sup>Each 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
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

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
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
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."

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

<sup>1</sup>Perhaps 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.

<sup>2</sup>In 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.

<sup>3</sup>For 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.

<sup>4</sup>For 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.

<sup>5</sup>Finally, 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

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.

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.
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.
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.



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."
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."
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
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

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."

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

<sup>1</sup>A 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.

<sup>2</sup>Dental 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.

<sup>3</sup>No 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.

<sup>4</sup>As 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
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.

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.
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.
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.

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

<sup>1</sup>Long 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.

<sup>2</sup>As 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.

<sup>3</sup>After 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.

<sup>4</sup>As 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.

<sup>5</sup>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. 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
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.

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

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

<sup>1</sup>In 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.

<sup>2</sup>Cross-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.

<sup>3</sup>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. 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.

<sup>4</sup>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. 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



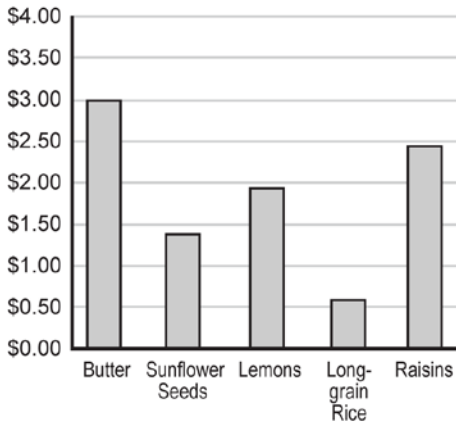
42. Which information in the passage best supports the writer's main argument?
- A. "Cross-contamination involves transferring harmful bacteria from raw food items such as meat, poultry, seafood, and eggs to other foods in the kitchen."
  - B. "It is equally important that foods are cooked to the appropriate 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."
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
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.
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.

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

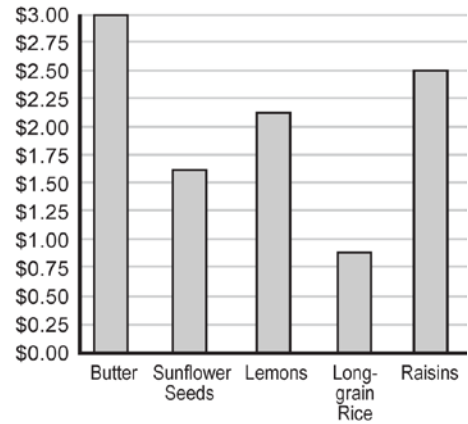
Ingredient	Price per Pound
Butter	\$3.06
Sunflower Seeds	\$1.88
Lemons	\$2.03
Long-grain Rice	\$0.72
Raisins	\$2.31

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?

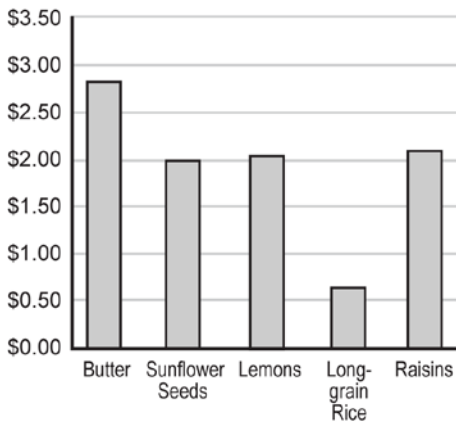
A.



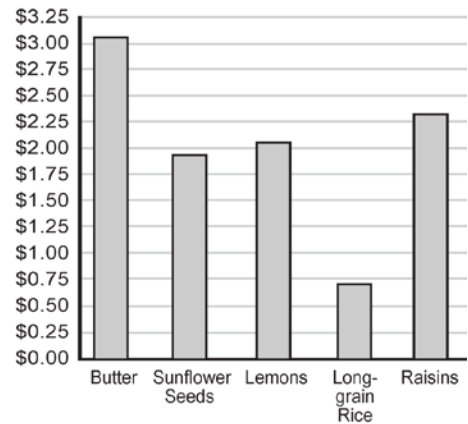
B.



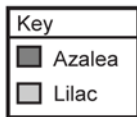
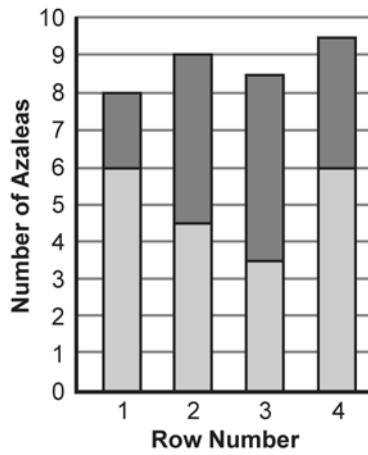
C.



D.



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



How many azaleas are in row number 4?

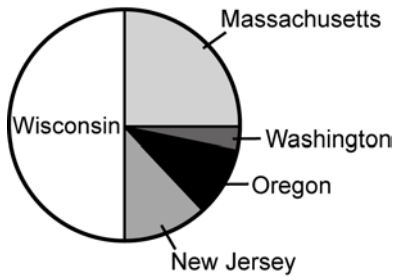
- A. 3.5
- B. 4
- C. 4.5
- D. 5

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

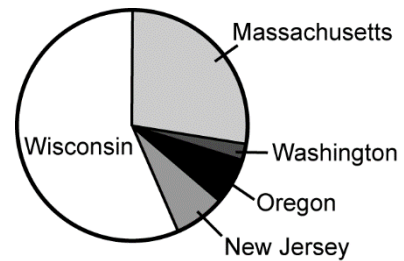
Cranberry Production in the United States	
State	Production (in thousands of barrels)
Massachusetts	2352
Washington	198
Oregon	562
New Jersey	595
Wisconsin	4856

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

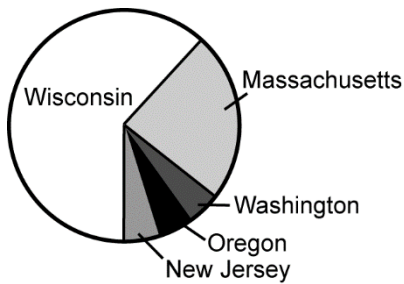
A.



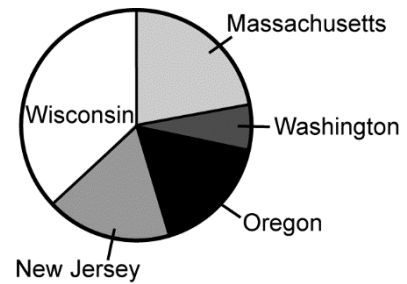
B.



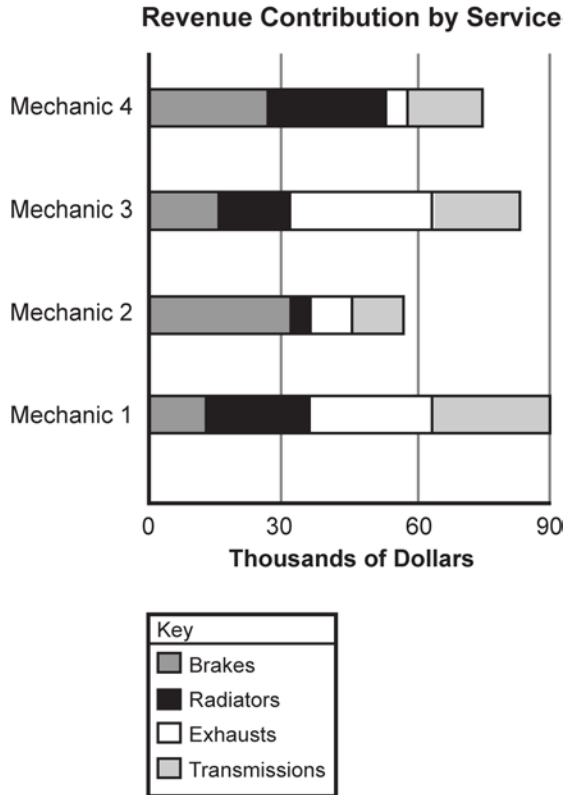
C.



D.



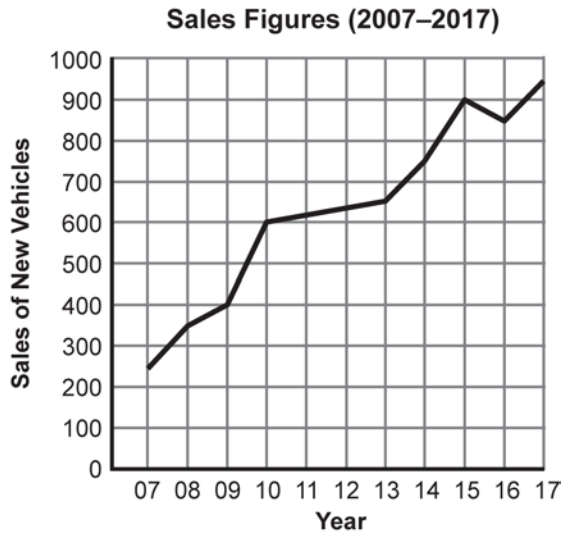
49. Use the graph below to answer the question that follows.



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.

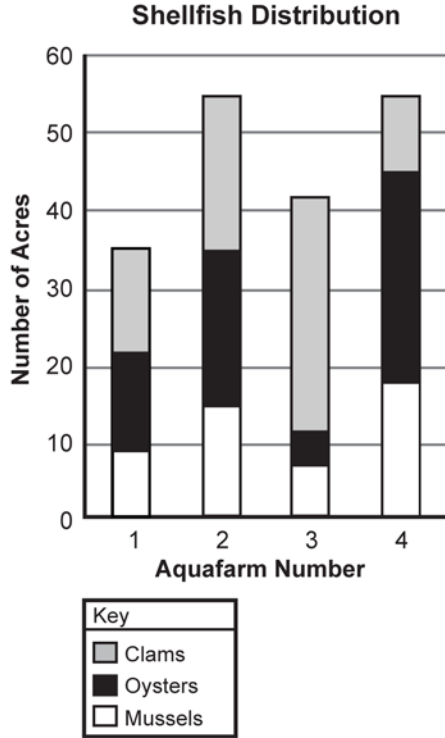
Use the graph below to answer the two questions that follow.



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

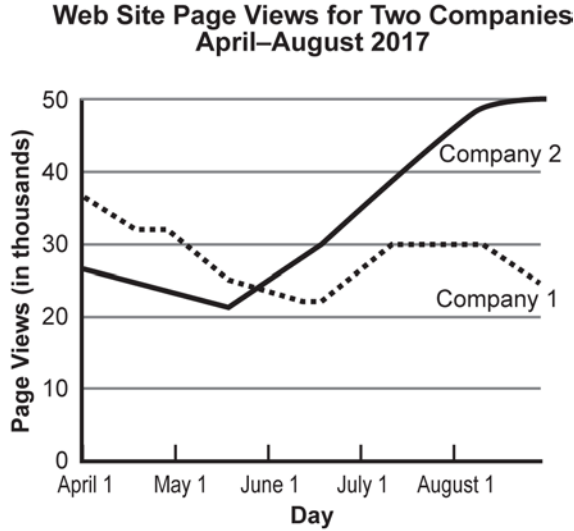
Use the graph below to answer the two questions that follow.



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

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

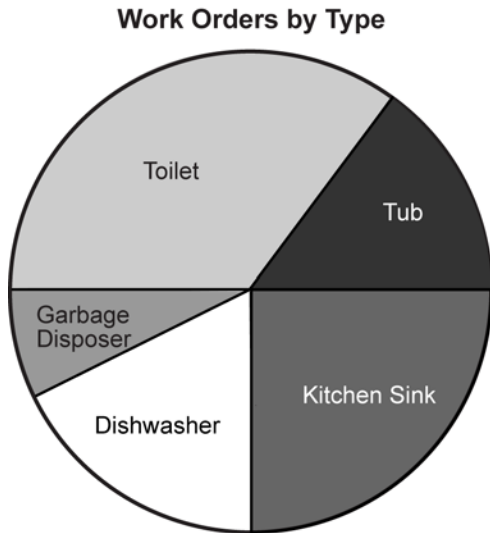


The graph shows the number of Web site page views for two companies.

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



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%
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.

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
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.

## **PRACTICE TEST RESULTS**

## PRACTICE TEST RESULTS OVERVIEW

The practice test provides valuable information regarding your preparedness for the MTEL Vocational Technical Literacy Skills Test–Reading Subtest (191). In this section, you will find information and tools to help you determine your preparedness on the various sections of the test.

### Multiple-Choice Questions

A Multiple-Choice Question Answer Key Worksheet is provided to assist you in evaluating your multiple-choice responses. The worksheet contains five columns. The first column indicates the multiple-choice question number, the second column indicates the objective to which the test question was written, and the third column indicates the correct response. The remaining columns are for your use in calculating the number of multiple-choice questions you answered correctly or incorrectly.

An Evaluation Chart for the multiple-choice questions is also provided to help you assess which content covered by the test objectives may require additional study.

### Total Test

Practice Test Score Calculation information is provided to help you estimate your score on the practice test. Although you cannot use this practice test to precisely predict how you might score on an official MTEL Vocational Technical Literacy Skills Test–Reading Subtest (191), you may be able to determine your degree of readiness to take an MTEL test at an operational administration. No passing score has been determined for the practice test.

**MULTIPLE-CHOICE QUESTION  
ANSWER KEY WORKSHEET**

Question Number	Objective Number	Correct Response	Your Response	
			Correct?	Incorrect?
1	0001	C		
2	0002	A		
3	0003	D		
4	0004	A		
5	0005	C		
6	0001	A		
7	0002	C		
8	0003	A		
9	0004	D		
10	0005	B		
11	0001	C		
12	0002	B		
13	0003	C		
14	0004	A		
15	0005	A		
16	0001	D		
17	0002	C		
18	0003	B		
19	0004	A		
20	0005	A		
21	0001	C		
22	0002	B		
23	0003	A		
24	0004	D		
25	0005	D		
26	0001	D		
27	0002	B		
28	0003	A		
29	0004	B		
30	0005	B		

**MULTIPLE-CHOICE QUESTION  
ANSWER KEY WORKSHEET (continued)**

Question Number	Objective Number	Correct Response	Your Response	
			Correct?	Incorrect?
31	0001	D		
32	0002	B		
33	0003	C		
34	0004	D		
35	0005	A		
36	0001	B		
37	0002	C		
38	0003	A		
39	0004	C		
40	0005	B		
41	0001	D		
42	0002	D		
43	0003	C		
44	0004	A		
45	0005	C		
46	0006	D		
47	0006	A		
48	0006	B		
49	0006	B		
50	0006	C		
51	0006	B		
52	0006	C		
53	0006	B		
54	0006	B		
55	0006	C		
56	0006	B		
57	0006	D		
58	0006	A		
59	0006	B		
60	0006	A		

**Count the number of multiple-choice questions you answered correctly:**  
 \_\_\_\_\_ of 60 multiple-choice questions

**MULTIPLE-CHOICE QUESTION  
PRACTICE TEST EVALUATION CHART**

In the evaluation chart that follows, the multiple-choice questions are arranged in numerical order and by test objective. Check your responses against the correct responses provided to determine how many questions within each objective you answered correctly.

<b>Reading Subtest</b>	
<b>Objective 0001: Determine the meaning of words and phrases in written material.</b>	
1C___ 6A___ 11C___ 16D___ 21C___ 26D___ 31D___ 36B___ 41D___	____/9
<b>Objective 0002: Recognize the main idea and supporting details in written material.</b>	
2A___ 7C___ 12B___ 17C___ 22B___ 27B___ 32B___ 37C___ 42D___	____/9
<b>Objective 0003: Identify a writer's purpose, audience, point of view, and intended meaning.</b>	
3D___ 8A___ 13C___ 18B___ 23A___ 28A___ 33C___ 38A___ 43C___	____/9
<b>Objective 0004: Recognize the relationship among ideas in written material.</b>	
4A___ 9D___ 14A___ 19A___ 24D___ 29B___ 34D___ 39C___ 44A___	____/9
<b>Objective 0005: Use critical reasoning skills to evaluate written material.</b>	
5C___ 10B___ 15A___ 20A___ 25D___ 30B___ 35A___ 40B___ 45C___	____/9
<b>Objective 0006: Understand information presented in graphs, tables, and charts.</b>	
46D___ 47A___ 48B___ 49B___ 50C___ 51B___ 52C___ 53B___ 54B___ 55C___ 56B___ 57D___ 58A___ 59B___ 60A___	____/15
<b>Subarea I: Reading (Objectives 0001–0006) Total ____/60</b>	

## PRACTICE TEST SCORE CALCULATION

The practice test score calculation is provided so that you may better gauge your performance and degree of readiness to take an MTEL test at an operational administration. Although the results of this practice test may be used as one indicator of potential strengths and weaknesses in your knowledge of the content on the official test, it is not possible to predict precisely how you might score on an official MTEL test.

### How to Calculate Your Practice Test Score

Review the directions in the sample below and then use the blank practice test score calculation worksheet below to calculate your estimated score.

#### SAMPLE

<b>Total Practice Test Score (Estimated MTEL Score)</b>	
Enter the total number of multiple-choice questions you answered correctly:	<u>51</u>
Use Table 1 below to convert that number to the score and write your score in <b>Box A</b> to estimate your MTEL score:	A: <span style="border: 1px solid black; padding: 2px 10px;">253</span>

#### Practice Test Score Calculation Worksheet: Vocational Technical Literacy Skills Test–Reading Subtest

Table 1:

Number of Multiple-Choice Questions Correct	Estimated MTEL Score	Number of Multiple-Choice Questions Correct	Estimated MTEL Score	Number of Multiple-Choice Questions Correct	Estimated MTEL Score
0 to 20	100	33 to 36	173	49 to 52	253
21 to 24	113	37 to 40	193	53 to 56	273
25 to 28	133	41 to 44	213	57 to 60	293
29 to 32	153	45 to 48	233		

### YOUR SCORE

Use the form below to calculate your estimated practice test score.

<b>Total Practice Test Score (Estimated MTEL Score)</b>	
Enter the total number of multiple-choice questions you answered correctly:	_____
Use Table 1 above to convert that number to the score and write your score in <b>Box A</b> to estimate your MTEL score:	A: <span style="border: 1px solid black; display: inline-block; width: 60px; height: 20px; vertical-align: middle;"></span>