RAINING TRUST FUND

Study Guide – Electrical and Plumbing

How the written exam works:

As the first step of the application process for any of ABC NorCal's apprenticeship programs, you will be scheduled to take a written exam. This exam consists of three parts (Reading, Math, and Language) and it is timed. You will need to pass each section of the exam with a score of 70% or better to move on to the next step of the application process.

Instructions for this study guide:

There are only a couple of questions in each section for this study guide. These questions are like what will be on the exam. The answers are at the end of exam.

Exam Guidelines:

Below is the outline of the test is going to go. Total time for test day is going to be approximately 4 hours and 55 minutes. Please make sure that you plan accordingly on the day of the test.

- Reading
 - Part 1 is 50 minutes long
 - Part 2 is 80 minutes long
- Math you can have scratch paper, a protractor, and a calculator
 - Part 1 is 60 minutes long
 - Part 2 is 15 minutes long
- Language
 - 85 minutes long



Reading Practice Test

Read the passage. Then answer questions 1 through 7.

Whale Watching

Across the blue, rolling waves, a dark hump rises from the sea. It slides out of sight as an enormous tail lifts and falls. As it does, another hump rises beside it and begins the same dance. Several people cheer from the pontoon boat. Some raise their cameras, while others lift binoculars to get a closer view. These whale watchers are getting what they hoped for—a view of gray whales migrating south.

For thousands of years, whales have fascinated humans. However, until recent times, the average person did not have the chance to see these amazing creatures up close. The first opportunity arose in San Diego, California. There, in 1950, the Cabrillo National Monument was declared a public place to watch whales. Soon after, the first whale watching boats sailed from San Diego harbors. For \$1, people could ride out into the ocean in hopes of seeing whale's close-up.

The whale-watching boats became very popular. Soon similar boat trips were available from other seaports. Today millions of people around the world go whale-watching every year.

Interestingly, some whales are just as curious about humans as humans are about them. They may swim near a boat for hours, watching the passengers. Of course, this is a very exciting experience for those on board!

"I was looking through the side of a glass-bottomed whale boat," says one whale watcher. "Suddenly, a blue whale was right next to me! Its eye looked straight at me as it swam by. Its body seemed to keep going and going. It was the most amazing experience of my life!"

At up to 100 feet long, it is no wonder that the blue whale's body kept going. The bluewhale is the largest mammal ever on Earth. Its body is the size of a passenger jet. Its tongue can weigh as much as an elephant.

Depending on where a person whale watches, different types of whales may be seen. From the West Coast, people may see gray whales, blue whales, minke whales, fin whales, or killer whales. East Coast whales include humpbacks, finbacks, and minkes. On both coasts, dolphins are a common sight. They enjoy eating the same shrimp-like krill as whales.

Whale watchers also may catch sight of sea lions, seals, seabirds, and fish. Whale watching gives people a unique chance to see whales in their natural surroundings. Formost, it is an experience they will never forget.



- 1) What type of whale can be seen by whale watchers on both the East Coast and the West Coast?
 - A. gray whales
 - B. blue whales
 - C. minke whales
 - D. humpback whales
- 2) Why do whales swim near whale-watching boats for hours?
 - A. They are very interested in humans.
 - B. They want passengers to take a lot of photos of them.
 - C. They are hoping passengers will feed them some shrimp.
 - D. They see their reflection in the boat and think it is another whale.
- 3) Read these two paragraphs from the article.
 - For thousands of years, whales have fascinated humans. However, until recent times, the
 average person did not have the chance to see these amazing creatures upclose. The first
 opportunity arose in San Diego, California. There, in 1950, the Cabrillo National Monument
 was declared a public place to watch whales. Soon after, the first whale-watching boats
 sailed from San Diego harbors. For \$1, people could ride out into the ocean in hopes of
 seeing whales close-up.
 - 2. The whale-watching boats became very popular. Soon similar boat trips were available from other seaports. Today millions of people around the world go whale watching every year.

Which of these best describes the structure that is used in the two paragraphs?

- A. These paragraphs compare and contrast several different ideas.
- B. These paragraphs relate events in the order in which they occurred.
- C. These paragraphs present a problem and then a solution to solve it.
- D. These paragraphs identify a cause and show the effect it has on the subject.



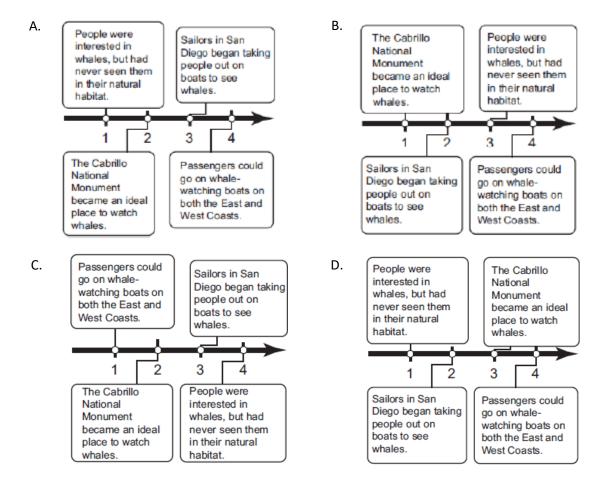
4) Read this sentence from the article. Which word means the same as *migrating* as it is used in the sentence?

These whale watchers are getting what they hoped for—a view of gray whales migrating south.

- A. comparing
- B. pointing
- C. rising
- D. traveling
- 5) Which of these is the best summary of the article?
 - A. Whale watching, popular since the 1950s, allows tourists to enjoy seeing whales in their native habitat.
 - B. Whale-watching trips give tourists the chance to see different kinds of whales and also many different kinds of wildlife.
 - C. Blue whales are very popular whales to see on whale-watching trips, while tourists occasionally get to see gray whales.
 - D. Many times whales may only be seen by the use of binoculars during whale-watching trips, but sometimes the whales are curious and come close to the boats.



6) Which of these timelines shows the correct history of whale watching based on thearticle?



- 7) Part A Which of these is the main idea of the article?
 - A. People have been fascinated by whales for a long time.
 - B. Whale watchers are also happy to see other sea life such as seals and seabirds.
 - C. Whale watching is a popular activity that gives people the chance to see whales in the wild.
 - D. For just a few dollars, families can take a whale-watching boat into the ocean to see whales.

Part B – Which sentence from the article best supports the answer to Part A?

- A. "For thousands of years, whales have fascinated humans."
- B. "For \$1, people could ride out into the ocean in hopes of seeing whale's close-up."
- C. "Suddenly, a blue whale was right next to me!"
- D. "Whale watchers also may catch a sight of sea lions, seals, seabirds, and fish."
- E. "Whale watching gives people a unique chance to see whales in their natural surroundings."



Read the story. Then answer questions 8 through 10.

The Race

Samantha's feet thudded softly on the packed dirt. She shifted quickly to avoid a tree root. The runners behind her were too far away to be within earshot. She felt as if she were all alone beneath the leafy canopy. It was just like always. She wished she had someone to train with. Running could be lonely sometimes.

Only one runner – Burg – was running somewhere ahead of Samantha. Samantha was tired of seeing the same "Burg" on the back of a jersey. For the last two cross-country races, only Burg had come between Samantha and the winner's medal. Coming in second place all the time was really frustrating. This time, Samantha vowed that Burg would end a race staring at the back of her jersey instead.

The patch turned up on rock-studded hill. Samantha focused on the ground, moving as quickly as she could. She swept her wristband across her forehead, flicking off salty sweat.

At the top of the hill, the patch curved into the woods again. Samantha picked up her pace. Now was the time to catch up with Burg.

Just then, something yellow flickered on the side of the trail. Samantha glanced over curiously. Her eyes widened. Burg was lying there, both hands grasping an ankle. His face was creased with pain.

The final orange marker was just ahead, a clear shot to the finish line – only a quarter of a mile to go. She could almost feel that medal in her hand. She shook her head, trying to erase Burg from her mind. It wasn't working. This wouldn't really be a win if Burg couldn't race anyways. Her stomach burned at the thought of leaving someone in pain. No medal's glory could overcome that.

Samantha grimaced, then she turned and jogged back to Burg.

"Hey, what happened?" she asked gently, kneeling.

"I twisted my ankle," Burg exhaled painfully. "I don't think it is broken, but I sure can't walk."

"Here, take my shoulder," Samantha said. "I'm Samantha, by the way."

"I'm Judy Burg," she replied, reaching up gratefully. Samantha helped Judy up, and they began hobbling beside the path. Suddenly another runner ran swiftly past. Judy and Samantha sighed at the same time, and then they glanced at each other and laughed.

"You're a tough rival!" Judy said, "I'm looking for a training partner: Interested?"

Samantha's eyebrows rose, and then she grinned. "Sure! That would be fun!"



- 8. Which of these pairs of sentences would be most important to include in a summary of the story?
 - A. Samantha was the only competitor on the trail. She knew she could win the race.
 - B. Samantha was willing to aid her fallen competitor. She gained a new friend because she did so.
 - C. Judy was disappointed that she fell and twisted her ankle. Now she would lose the race.
 - D. Judy was happy that Samantha stopped to help her. She was afraid of being alone in the woods.
- 9. Which of these best supports the idea the Samantha cares about others?
 - A. "The runners behind her were too far away to be within earshot."
 - B. "Judy focused on the ground, moving as quickly as she could."
 - C. "She could almost feel that medal in her hand."
 - D. "Samantha grimaced, then she turned and jogged back to Burg."
- 10. which of these gives the central idea of the story?
 - A. Winning is everything
 - B. Competition builds good character.
 - C. Running in the woods can be dangerous.
 - D. Sportsmanship can have unexpected rewards.

Mathematics Practice Test

| Part A | - Evaluate the expression for $x = 4$. |
|--------|---|
| A. | 16 |
| В. | 12 |

1) Look at the expression. 10 + x/2

C. 28D. 10

Part B - Evaluate the expression for x = 32.

A. 44 B. 28

C. 36D. 26

2) Which pair of numbers has the greatest common factor (GCF) of 32?

A. 8 and 32

B. 16 and 32

C. 24 and 64

D. 64 and 96

3) The price of apples at three different stores is shown below.

Store R sells apples for \$1.20 per pound. Store S sells 4 pounds of apples for \$5.00. Store T sells 3 pounds of apples for \$3.48.

Which of these is a true statement?

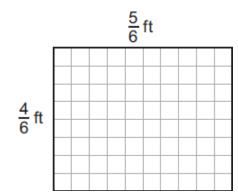
- A. Store R sells apples at the lowest rate.
- B. Store T sells apples at the lowest rate.
- C. Store S charges a lower rate for apples than Store T.
- D. Store T charges the same rate for apples as Store R

4) Look at the rectangle. What is the area of the rectangle, written in simplest form?



B.
$$\frac{3}{4}$$
ft²

D.
$$3\frac{1}{3}$$
ft²



5) Two boys earn money mowing lawns. Jacob mowed 12 lawns this week. He mowed 3 times as many lawns as Kevin mowed.

In which equation does the box represent the number of lawns Kevin mowed?

C.
$$12 + 3 = \square$$

D.
$$12 \times 3 = \Box$$

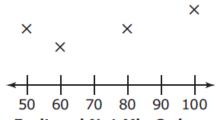
6) Jason sells trail mix online. The table below lists the number of boxes in the orders on one day for his most popular fruit and nut mix.

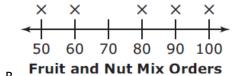
Fruit and Nut Mix Orders

| 100 | 60 | 90 | 90 | 100 |
|-----|----|----|-----|-----|
| 80 | 50 | 50 | 100 | 50 |
| 90 | 90 | 60 | 80 | 90 |
| 80 | 90 | 90 | 100 | 90 |

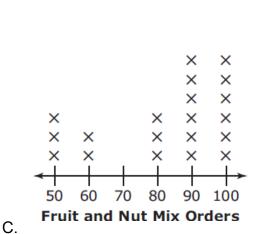
Which dot plot represents the data in the table?

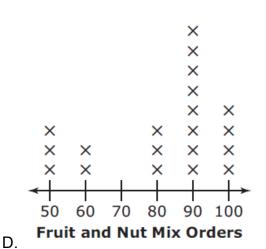
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a Fruit and Nut Mix Orders





7) Which attributes do all squares and all rhombuses have in common? Select all that apply.

- A. right angles
- B. acute and obtuse angles
- C. four angles of equal size
- D. four sides of equal length
- E. two pairs of parallel sides
- F. exactly one pair of parallel sides



| 8) | LOC | ok at the pattern: 73, 68, 63, 58 |
|-----|-----|---|
| Wh | ich | of these is the rule for the pattern? |
| | A. | Subtract 5 |
| | В. | Add 5 |
| | C. | Subtract 9 |
| | D. | Add 9 |
| 9) | Wh | nich of these shows the phrase "x multiplied by 5" written as an algebraic expression? |
| | A. | 5 <i>x</i> |
| | В. | 5+x |
| | C. | 4-x |
| | D. | 5 ÷ <i>x</i> |
| 10) | Sal | ly wrote the following expression: 5 + (7 x 3) What is the value of Sally's expression? |
| | A. | 5 |
| | В. | 26 |
| | C. | 35 |
| | D. | 15 |



Language Practice Test

- 1) Which sentence is written correctly?
 - A. The teacher is a well-known biologist with many years of experience.
 - B. The woman thought the wildlife conservation course would be interest.
 - C. Students have a chance to visit an animal rescue center as part of their final project.
 - D. The wildlife conservation course is popularly enough that some students take it a second time.
- 2) Look at the list of book titles on a reading list. Which titles are written in the correct style and format?
 - A. Basic Federal Income Tax by Gwendolyn Griffith Lieuallen
 - B. Income Tax Fundamentals 2013 by Gerald E. Whittenburg, Steve Gill, and Martha Altus-Buller
 - C. Jacks on Tax: Your Do-It-Yourself Guide to Filing Taxes Online by Evelyn Jacks
 - D. Turbo Tax 2013 Income Tax Handbook: *The Complete Guide to Tax Breaks, Deductions, and Money-Saving Tax Tips by* The Tax Professionals of Weiser LLP
 - E. Your Income Tax 2013: For Preparing Your 2012 Tax Return by J.K. Lasser
- 3) Read the paragraph.
- (1) While watching a baseball game at the ballpark is a great experience, it is expensive. (2) Depending on where you want to sit, ticket prices can be hundreds of dollars per person. (3) Lastly, most ballparks do not allow outside food, and ballpark food is very expensive. (4) A bottle of water could be as much as \$6.00. (5) That is why I prefer to watch the game from my own living room.

Read the sentence. Even the cost to park your car can be as much as \$50.00 at some parks.

Where should the sentence be placed in the paragraph?

- A. after Sentence 1
- B. after Sentence 2
- C. after Sentence 3
- D. after Sentence 4



4) Read the paragraph.

First of all, the light that shines from a cell phone is distracting to other people watching the movie. Secondly, when someone is talking on the phone, it makes it harder to hear what the actors are saying.

The paragraph is missing an introduction. Which of these would <u>best</u> introduce the topic?

- E. Cell phone users are often rude in movie theaters.
- F. Movie theaters should ask people who use cell phones to leave.
- G. Cell phone use in restaurants and movie theaters should be banned.
- H. People should be courteous to others and turn off their cell phones in movietheaters.
- 5) Casper is writing a paragraph about how to play a type of flute called a recorder. He has written the sentences below.

Follow these steps to play the recorder. Put the mouthpiece in your mouth like a straw. The line of finger holes should be on top. One hole will be on the underside. With your left hand, cover the hole on the underside with your thumb and the first three holes on top with your first three fingers. With your right hand, cover the lower four holes on top with four fingers. Use your right thumb to support the recorder. Blow very gently into the mouthpiece.

Now Casper needs to write a conclusion. Identify three of the sentences from the list below that <u>best</u> finish Casper's paragraph.

- A. The recorder is one of the easiest instruments to learn.
- B. Now you are ready to play a song on the recorder.
- C. Would you like to learn to play the recorder quickly and easily?
- D. By following these steps, you will be playing the recorder in no time at all!
- E. To play "Mary Had a Little Lamb," just cover the first hole with your left hand, then the second, and third, and then go back in reverse.
- 6) Which sentence is written correctly?
 - A. They're is only one day left until my anniversary
 - B. She put the mail over their next to the fridge.
 - C. The herd of sheep returned to they're barn at night.
 - D. Their only mistake was leaving the presents at grandma's house.



7) Read the sentence: She <u>choose</u> to complete her degree later. Which of these is the correct way to write

| | the | underlined verb in the sentence? | |
|--|--|---|--|
| | A. | has chosen | |
| | В. | has choosed | |
| | C. | have chosen | |
| | D. | have choosed | |
| | | | |
| ٥١ | D | | |
| 8) Read the sentence. <i>He might have gone to the gas station. He might have gone to a restaurar</i> of these <u>best</u> combines the two sentences? | | | |
| | | | |
| | В. | | |
| | | Either he went to the gas station or he went to the restaurant. | |
| | D. | He went neither to the gas station, or he went to the restaurant. | |
| | | | |
| ۵۱ | Rea | ad the sentence. <i>The plant that we planted has very tall.</i> Which word <u>best</u> completes the | |
| ٦) | 9) Read the sentence. <i>The plant that we planted has very tall.</i> Which word <u>best</u> completes sentence? | | |
| | | grew | |
| | | | |
| | | growed | |
| | | grown | |
| | υ. | grows | |
| | | | |
| 10) | Rea | ad the sentence. A cough is not a normal side effect. A runny nose is not a normal side effect. Which | |
| , | | these best combines the two sentences into one sentence? | |
| | | Either a cough or a runny nose is a normal side effect. | |
| | В. | Neither a cough or a runny nose is a normal side effect | |
| | C. | Either a cough nor a runny nose is a normal side effect. | |
| | _ | Neither a cough nor a runny nose is a normal side effect. | |
| | υ. | Weither a cough not a rainly hose is a normal side effect. | |
| | | | |



Answer Key:

| レヘつべ | 10000 |
|------|--------|
| Read | . עווו |
| | |

- 1. C
- 2. A
- 3. B
- 4. D
- 5. A
- 6. A
- 7. Part A C Part B – E
- 8. B
- 9. D
- 10.D

Math:

- 1. Part A 12 Part B – 26
- 2. D
- 3. B
- 4. A
- 5. B
- 6. D
- 7. D, E
- 8. A
- 9. A
- 10. B

Language:

- 1. A
- 2. C, E
- 3. B
- 4. D
- 5. B, D, E
- 6. D
- 7. A
- 8. C
- 9. C
- 10.D