

# **Florida's Postsecondary Education Readiness Test And Diagnostic Assessment**

## **P.E.R.T.**

**December 12, 2011**

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## Introduction to the P.E.R.T

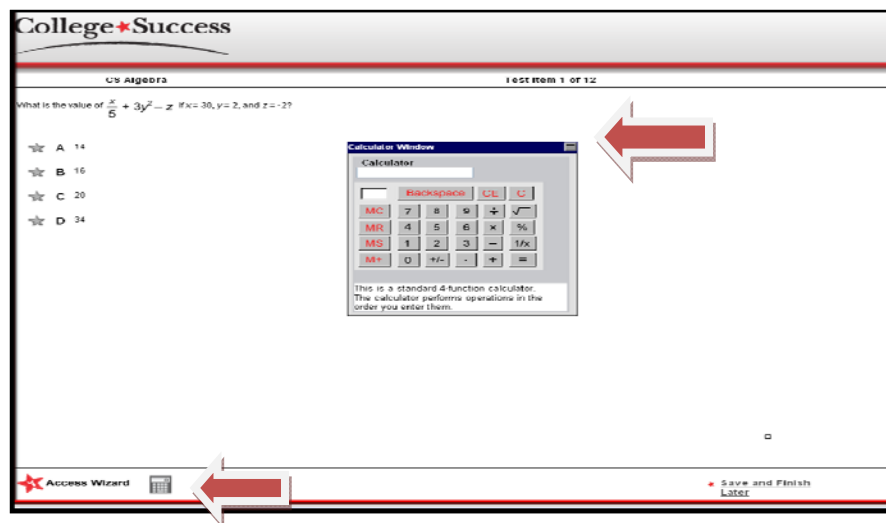
The purpose of Florida's Postsecondary Education Readiness Test (P.E.R.T.) is to adequately assess your academic skills in mathematics, reading and writing through the delivery of three tests, one for each of these areas. The results of these tests are used to determine your placement into appropriate courses at your college.

You cannot pass or fail the P.E.R.T. – it is only used to determine which courses are best for you. While it doesn't impact your grades, we encourage you to take the P.E.R.T. seriously so that your course placement is accurate.

## How the P.E.R.T. Works

The P.E.R.T. assessments are computer-adaptive, which means the questions are chosen based on your answers to previous questions. You will not be permitted to change your answer once you have moved on to the next question or leave a question unanswered. However, all of the P.E.R.T. assessments are untimed so you have as much time as you need to consider each question before submitting your answer. If you do not know the answer to a specific question, you are encouraged to try and answer the question by eliminating one or more of the answer options and then select from the remaining choices.

You will not be allowed to bring a calculator with you; however, for certain questions, a calculator icon will be available in the bottom left corner of the test for your use. Once the calculator icon has been clicked on, the electronic calculator will appear as a pop-up in the middle of your screen. You must use the electronic calculator keyboard to input numbers. It is a standard 4-function calculator and performs operations in the order you enter them.



Check with your college testing center for what to bring or not to bring with you on test day.

Your scores on each assessment will be available immediately after you submit and your college will provide you with the results.

## **P.E.R.T Test-Taking Tips**

- **Prepare**  
Take practice exams and study areas of weakness.
- **Read the directions carefully**  
When you take the tests, make sure to take your time and carefully follow the instructions for each question.
- **Use reasoning when answering**
  1. Identify the key phrase in the question.
  2. Try to find the correct answer before you read all the choices.
  3. Eliminate the choices that you know are not correct.
  4. Read all the choices and pick the best answer.
- **Review**  
Be sure to review each answer carefully before submitting. You will not be able to go back to any questions.

## **P.E.R.T. Subject Area Tests**

There are three P.E.R.T. tests, each with 30 questions. The content that is covered is listed below by subject:

### **Mathematics:**

- Equations—solving linear equations, linear inequalities, quadratic equations and literal equations
- Evaluating algebraic expressions
- Polynomials—factoring, simplifying, adding, subtracting, multiplying, and dividing
- Dividing by monomials and binomials
- Applying standard algorithms or concepts
- Coordinate planes—translate between lines and inspect equations
- Focusing on pairs of simultaneous linear equations in two variables

### **Reading:**

- Discerning and summarizing the most important ideas, events, or information
- Supporting or challenging assertions about the text
- Determining the meaning of words and phrases in context
- Analyzing the meaning, word choices, tone, and organizational structure of the text

- Determining the author's purpose, and the relation of events in the text to one another
- Recognizing relationships within and between sentences
- Analyzing the traits, motivations, and thoughts of individuals in fiction and nonfiction
- Analyzing how two or more texts with different styles, points of view, or arguments address similar topics or themes
- Distinguishing between facts and opinions
- Evaluating reasoning and rhetoric of an argument or explanation

**Writing:**

- Sustaining focus on a specific topic or argument
- Establishing a topic or thesis
- Demonstrating use of the conventions of standard written English, including grammar, usage, and mechanics
- Supporting and illustrating arguments and explanations
- Developing and maintaining a style and tone
- Synthesizing information from multiple relevant sources
- Conveying complex information clearly and coherently
- Representing and accurately citing data, conclusions, and opinions of others
- Establishing a substantive claim and acknowledging competing arguments or information
- Conceptual and Organizational Skills - recognizing effective transitional devices within the context of a passage
- Word Choice Skills - recognizing commonly confused or misused words and phrases
- Sentence Structure Skills - using modifiers correctly, using coordination and subordination effectively, recognizing parallel structure
- Grammar, Spelling, Capitalization, Punctuation Skills - avoiding inappropriate shifts in verb tense and pronouns; maintaining agreement between pronoun and antecedent; and using proper case forms, adjectives, and adverbs

**What should you expect?**

The following section provides an overview of the type of information you will need to know to perform well on the subject area tests but it is not intended to be a comprehensive listing of all content to be covered.

**Mathematics:**

You should review your basic math rules such as, the order of operations, exponents, prime numbers and percents. Here are a few of the rules to review:

***Order of Operations***

- work within parentheses
- simplify exponents
- multiplication and division
- addition and subtraction

***Exponents***

The mathematical notation that notates a variable is multiplied by itself the number of times indicated by the exponent.

- $x^3 = x \times x \times x$
- $x^5 = x \times x \times x \times x \times x$

***Prime Numbers***

A prime number is defined as an integer that is greater than 1, and has only two positive factors, 1 and itself. The first ten prime numbers are 2, 3, 5, 7, 11, 13, 17, 19, 23, and 29.

***Percents***

The word percent means “hundredths” or a number which is divided by 100.

Converting a number into a percentage involves multiplying the number by 100.

A percent can be determined by performing the division of the part by the total and multiplying it by 100:

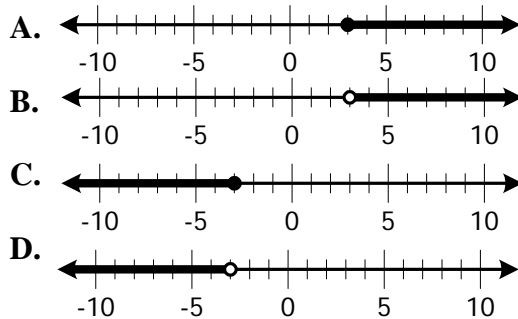
$$\text{Percent} = \frac{\text{Part}}{\text{Total}} \times 100$$

**Math Sample Questions:**

1. Which of the following is a solution to the equation  $c + (4 - 3c) - 2 = 0$ ?

- A. -1
- B. 0
- C. 1
- D. 2

2. Graph the solution of  $y - 2 > 1$  on a number line.



3. Which of the following is a solution to the equation  $x^2 - 6x + 5 = 0$ ?

- A.  $x = -5$
- B.  $x = -1$
- C.  $x = \frac{1}{5}$
- D.  $x = 5$

4. What is the value of the algebraic expression if  $x = \frac{1}{2}$ ,  $y = -1$ , and  $z = 2$ ?

$$6x(y^2z)$$

- A. -12
- B. -6
- C. 1
- D. 6

5. Which of the following is equivalent to  $(8 - 5) \div 2^3$ ?

- A.  $\frac{3}{8}$
- B.  $\frac{19}{8}$
- C.  $\frac{27}{8}$
- D.  $\frac{1}{125}$

6. Factor completely:

$$x^2 - x - 6?$$

- A.  $(x - 2)(x + 3)$
- B.  $(x - 1)(x - 6)$
- C.  $(x + 2)(x - 3)$
- D.  $(x + 1)(x - 6)$

7. Simplify the following expression:

$$\frac{3x^4y^2}{xy^2}$$

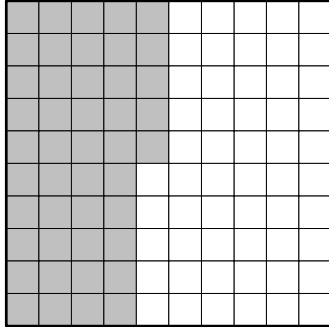
- A.  $3x^3$
- B.  $3x^2y$
- C.  $3x^4y$
- D.  $\frac{3x^3y}{xy}$

8. Which of the following is equivalent to the expression  $(3ab)(-5ab)$ ?

- A.  $-2ab$
- B.  $-2a^2b^2$
- C.  $-15ab$
- D.  $-15a^2b^2$



9. What percent of the grid is shaded?



- A. 35%
- B. 40%
- C. 45%
- D. 55%

10. Which of the following is the equation of a line that passes through  $(-2, -1)$  and  $(-4, -3)$ ?

- A.  $y = \frac{1}{2}x + 1$
- B.  $y = x + 1$
- C.  $y = \frac{1}{2}x - 1$
- D.  $y = x - 1$

## Reading:

Read each passage carefully. Since the test is not timed, take as much time as you need to read each passage. Each passage may have one or more than questions associated with it. It is also important to focus on the opening and ending sentences of each paragraph to help with capturing the main idea of each paragraph. Another strategy is to look for keywords or key phrases within the passage to help find the answer to questions regarding the author's feelings or meaning of the passage.

## Reading Sample Questions:

Read the selection and answer the questions that follow.

### A Born Artist

Benjamin West was born in a small town near Philadelphia, Pennsylvania, in 1738. Soon after Benjamin's birth, the family minister paid a visit. "This boy will do great

things someday," the minister said. The minister's words left the Wests wondering what might be in store for their son. Then, when Benjamin was seven years old, he drew a picture of his baby niece. Benjamin's parents were stunned to see how skilled his drawing was. Perhaps it is a sign, they thought.

As he grew up, Benjamin drew whenever he could. He especially liked drawing animals he saw in the fields and woods near his house. One day, as Benjamin was drawing a robin, three Lenape Indians passed by. They looked at the drawing and, in their own language, discussed what was wrong with it. Finally, one of the Lenape told Benjamin in English that the robin's breast should be red. When Benjamin explained that he didn't have any paint, the Lenapes dug some red and yellow clay from the riverbank and showed him how to make paint from the clay.

Benjamin ran home with his red and yellow paints. When his mother saw how excited he was, she gave him some blue indigo, which she used to dye wool. Now Benjamin had the three primary colors, which he could mix to make other paint colors. But Benjamin still needed a brush. There was no place around to buy one, so Benjamin decided to make his own. When his parents weren't looking, he snipped some hair from his cat's tail. Then he pressed the hairs to the tip of a goose quill and wound yarn around the tip to secure the hairs.

The brush worked, but not for long. After it fell apart, Benjamin made more. Soon Mr. and Mrs. West saw that the family cat was missing great patches of fur. At first they were furious, but then they softened. They knew that a boy who would go to such lengths to paint must be special. So they bought Benjamin paints, brushes, and some canvas.

From these beginnings, Benjamin West became a great and famous painter. In 1763 he moved to England and never returned to America. Although he taught himself to paint, he was happy to teach younger artists, especially ones who traveled from the United States to study with him. For this reason, West is often called the father of American art.

1. Which of the following statements is the best summary of this selection?
  - A. Benjamin West drew pictures of his niece and a robin. Then he became interested in painting instead.
  - B. As a young child, Benjamin West loved to draw and paint. He grew up to become a great and famous painter.
  - C. Benjamin West taught himself to draw. Then some Indian friends and his parents gave him painting supplies.
  - D. A minister predicted that Benjamin West would do great things someday. His parents soon discovered that Benjamin was special.

2. How is the information in this selection organized?
  - A. In chronological order
  - B. As a list of problems and solutions
  - C. In a series of questions and answers
  - D. From least important to most important
  
3. As it is used in this selection, the word secure means —
  - A. free from danger.
  - B. to take or get.
  - C. sure or certain.
  - D. to fasten or hold tight.
  
4. The author's main purpose in writing this selection was to —
  - A. persuade young artists to keep drawing.
  - B. show that art supplies can be made from everyday things.
  - C. entertain with a story about a young artist.
  - D. inform readers about art long ago.

Read the selection and answer the questions that follow.

### **King of the Sea**

Thor Heyerdahl, a famous adventurer from Norway, could not swim. He nearly drowned more than once when he was a teenager. For a long time he was afraid of water. It's surprising, then, to learn that he spent much of his life sailing delicate boats on the world's oceans.

In 1947, Heyerdahl set off on his first great adventure. He hoped to cross the Pacific Ocean from South America to Polynesia. Heyerdahl thought that early people might have migrated to Polynesia thousands of years ago by sea. He reasoned that if he could follow this route in a simple raft, he would show it was possible.

Heyerdahl constructed a raft of balsa wood and set out to cross the Pacific Ocean. This wood is so light that today it is used for model airplanes. Critics thought the raft would get waterlogged and sink, but they were wrong. The raft, called the Kon-Tiki, landed in Polynesia after about 100 days at sea.

On another trip, in 1969, Heyerdahl tried to sail across the Atlantic Ocean from North Africa to the Caribbean. His first boat for this trip was the Ra; it was made of reeds. The design was based on ancient drawings found on a wall in Egypt. After the

Ra broke apart, Heyerdahl did not give up. A year later, he set off in a new boat, called the Ra II, and made the 3200-mile trip successfully.

The Norwegian explorer became well known through the books he wrote about his adventures at sea. His book about the voyage in the Kon-Tiki sold 25 million copies.

Heyerdahl believed that his voyages proved his theory that peoples of long ago sailed to distant places. This could explain why similar cultures have shown up in places that were far removed from each other. For example, it could explain why pyramids are found both in Egypt and in Mexico, even though these countries are on opposite sides of the world.

Today, experts don't generally accept Heyerdahl's voyages as proof of his theories. Still, he is viewed as a remarkable sea-going explorer, and that's not bad for a boy who was once afraid of the water.

5. Which evidence in this selection best supports the theory that people migrated across the Atlantic Ocean thousands of years ago?
  - A. Heyerdahl made a raft of balsa wood found in South America.
  - B. The Ra was based on a design from a drawing found in Egypt.
  - C. Heyerdahl made a boat of reeds, but it broke apart.
  - D. Ancient pyramids have been found in both Mexico and Egypt.
  
6. In what way were the two voyages described in this selection alike?
  - A. Heyerdahl used the same boat for both voyages.
  - B. Heyerdahl was trying to prove the same theory on both voyages.
  - C. Both voyages followed the same route.
  - D. Both voyages succeeded on the first attempt.
  
7. According to this passage, the purpose of Heyerdahl's first voyage in 1947 was to —
  - A. sail across the Atlantic Ocean in a reed boat.
  - B. prove you can become famous by sailing long distances.
  - C. learn how to build a simple raft of balsa wood.
  - D. show that the Polynesians could have crossed the Pacific Ocean.

Read the selection and answer the questions that follow.

### Sacajawea Saves the Day

The baby squirmed in his basket, and Sacajawea hummed quietly to soothe him. At three months old, he was a strong, healthy child and was already used to life in the wilderness. The young mother knew the little boy would soon fall into a peaceful sleep, lulled by the rocking motion of the river. Sacajawea closed her eyes and rested. She carried little Pompy on her back night and day, yet she never failed to keep up with her companions. Under the leadership of Lewis and Clark, she and a large band of men were on a great journey to explore the western wilderness.

For now, things were going well. Just that morning Sacajawea had found an abundant supply of edible roots—enough to satisfy the hunger of all the men in the group. Captain Clark had praised her warmly and recorded the event in his journal. The men, at first suspicious of the Shoshone woman with the child, now welcomed her as an important member of the group.

Sacajawea dozed quietly until a sudden clap of thunder awakened her. Rain began to fall, and a sudden strong wind nearly knocked her over. The boat tipped. Bundles of supplies slid toward the water. Suddenly the boat overturned, and Sacajawea fell into the river. She struggled to keep Pompy's head above the rushing water. Captain Clark shouted; another man screamed. Sacajawea reached for her son, strapped in the basket on her back. A wail told her that he was fine, though cold and wet.

The water was not deep, but the current was strong. The men worked frantically to right the overturned boat. No one but Sacajawea noticed the bundles bobbing in the water. As they spun farther away from the boat, Sacajawea grabbed an overhanging branch, and quickly lowered the branch to trap the bundles. When the boat was finally right-side up, Sacajawea quietly placed the precious bundles inside.

8. Where does this story take place?
- A. In Sacajawea's village
  - B. On a river in the wilderness
  - C. In a mountain pass
  - D. At a fort on the frontier
9. The writer of this selection seems to view Sacajawea with a feeling of —
- A. admiration.
  - B. amusement.
  - C. dislike.
  - D. confusion.

10. Which of the following is the best description of the theme of this selection?

- A. Only the strong survive.
- B. A penny saved is a penny earned.
- C. One person can make a difference.
- D. Practice makes perfect.

## Writing:

Review basic writing rules such as errors in word choice, punctuation and capitalization. You may want to look over materials on when and how apostrophes and commas should be used as well as reviewing common sentence structure errors.

## Writing Sample Questions:

Read the selection about American astronaut Sally Ride and answer the question.

(1) Some of the greatest success stories in American history began with failure. (2) Take the case of Sally Ride. (3) When Ride was a young girl in Encino, California, her goal was to become a professional tennis player. (4) She dropped out of college and practiced hard to become a tennis pro. (5) In time, she realized that she would never be good enough to compete with the best tennis players. (6) She returned to college and studied astrophysics.

(7) One day in 1977, while working on her Ph.D. at Stanford University, Ride read that NASA was looking for astronauts. (8) She applied and was one of six women accepted into the space program. (9) Ride trained to be an astronaut longer and harder than she had ever done anything in her life. (10) By the early 1980s, she was part of the space shuttle program. (11) In 1983, as a member of the crew of the space shuttle *Challenger*, Sally Ride became the first American woman to journey into space.

(12) Ride was getting ready for another mission when the *Challenger* exploded in 1986, killing the whole crew. (13) One of them was a New Hampshire high school teacher named Christa McAuliffe. (14) Ride was appointed to a special commission that investigated the tragic accident. (15) A year later she retired from NASA and returned to California, where she taught college. (16) Since then, she has been involved in several organizations that encourage girls who are interested in science and math.

1. Which sentence does NOT belong in the selection?

- A. Sentence 4
- B. Sentence 6
- C. Sentence 13
- D. Sentence 15

2. Choose the word that best completes the sentence.

Harold's grandmother entertained the families with stories \_\_\_\_\_ growing up in Africa, explaining the many differences between her life now and her life back then.

- A. about
- B. within
- C. between
- D. throughout

3. Choose the sentences that best support the following topic sentence:

*Hay fever is the common name for an allergic reaction to pollen.*

- A. In my father's family, allergies are quite common. His sister Jane is allergic to dust, pollen, and mold, as well as foods such as tomatoes and eggplant.
- B. It seems that allergic reactions to peanuts and tree nuts are becoming more and more common, too. Many schools have recently banned peanuts and peanut butter altogether.
- C. People who suffer from allergies can check the weather report in our newspaper for the allergen counts. The weather page also includes interesting information about the phases of the moon and the times of sunrise and sunset.
- D. The worst offender is ragweed pollen, which causes many people to suffer from sneezing, runny nose, and itchy eyes from late summer to late fall. Dust and animal dander may also bring on the symptoms of hay fever.

4. Choose the best order of the sentences in the paragraph.

- A. Before long, the storm moved on, and all was quiet again. From my window, I watched bright lightning bolts streak across the sky. After each lightning flash, the thunder boomed loudly. Last night a powerful thunderstorm rolled through our town.
- B. From my window, I watched bright lightning bolts streak across the sky. Last night a powerful thunderstorm rolled through our town. Before long, the storm moved on, and all was quiet again. After each lightning flash, the thunder boomed loudly.
- C. Last night a powerful thunderstorm rolled through our town. From my window, I watched bright lightning bolts streak across the sky. After each lightning flash, the thunder boomed loudly. Before long, the storm moved on, and all was quiet again.
- D. After each lightning flash, the thunder boomed loudly. Before long, the storm moved on, and all was quiet again. Last night a powerful thunderstorm rolled through our town. From my window, I watched bright lightning bolts streak across the sky.

5. Choose the sentence that is written correctly.

- A. Roasted with garlic, Abby decided to order the potatoes with dinner.
- B. Abby decided to order the roasted garlic potatoes with dinner.
- C. Deciding to order with dinner, the roasted garlic potatoes were what Abby decided on.
- D. Ordered with dinner, Abby decided on the roasted garlic potatoes.

6. In researching granite, a research paper is located that includes the following information:

Granite is a hard, coarse rock. It is formed by the slow cooling of magma under the earth's surface. The main minerals in granite are quartz and feldspar. It contains smaller amounts of mica and hornblende.

Granite's hardness makes it a popular building stone. It can be polished to a shiny finish and will stand up to centuries of weathering.

Which of the following notes should be taken to reference what granite is made of?

- A. Granite is hard and coarse.
- B. Granite forms under the surface of the earth.
- C. Granite can be polished and is a popular building stone.
- D. Granite contains quartz, feldspar, mica, and hornblende.



7. Choose the word or words that best complete the sentence.

Until it was actually mapped, only a few people \_\_\_\_\_ the true location of the tunnel.

- A. knew
- B. had known
- C. have known
- D. will know

8. Choose the word that best completes the sentence.

Janine claims that Gary and \_\_\_\_\_ saw the meteorite while camping in the mountains last night.

- A. she
- B. he
- C. her
- D. him

9. Which of the following sentences is written correctly?

- A. Each member of the jury is permitted to talk about the case, but it must do so only in the company of the other jurors.
- B. Each member of the jury is permitted to talk about the case, but they must do so only in the company of the other jurors.
- C. Each member of the jury is permitted to talk about the case, but we must do so only in the company of the other jurors.
- D. Each member of the jury is permitted to talk about the case, but he or she must do so only in the company of the other jurors.

10. Choose the word or words that best complete the sentence.

Due to library policy, patrons must set cell phones to vibrate and speak \_\_\_\_\_ in conversation.

- A. quieter
- B. more quiet
- C. quietly
- D. more quieter

## Answer keys:

### Math:

Sequence	Competency Description	Key
1	Solve linear equations in one variable using manipulations guided by the rules of arithmetic and the properties of equality.	C
2	Solve linear inequalities in one variable and graph the solution set on a number line.	B
3	Solve quadratic equations in one variable by factoring.	D
4	Evaluates algebraic expressions.	D
5	Applies the order-of-operations to evaluate algebraic expressions, including those with parentheses and exponents.	A
6	Factor polynomial expressions.	C
7	Simplifies an expression with integer exponents.	A
8	Add, subtract, multiply, and divide polynomials. Division by monomials and binomials.	D
9	Know when and how to apply standard algorithms or concepts, and perform them flexibly, accurately and efficiently.	C
10	Translate fluently between lines in the coordinate plane and their equations. Include predicting visual features of lines by inspection of their equations, determining the equation of the line through two given points, and determining the equation of the line with a given slope passing through a given point.	B

## Reading:

Sequence	Competency Description	Key
1	Discern the most important ideas, events, or information, and summarize them accurately and concisely.	B
2	Analyze how the text's organizational structure presents the argument, explanation, or narrative.	A
3	Determine what is meant by words and phrases in context, including connotative meanings and figurative language.	D
4	Determines the author's purpose.	C
5	Support or challenge assertions about the text by citing evidence in the text explicitly and determine what can be inferred logically from the text.	D
6	Analyze how specific details and larger portions of the text contribute to the meaning of the text.	B
7	Determine what the text says explicitly.	D
8	Determine when, where, and why events unfold in the text, and explain how they relate to one another.	B
9	Recognizes tone.	A
10	Delineate the main ideas or themes in the text and the details that elaborate and support them.	C

## Writing:

Sequence	Competency Description	Key
1	Sustain focus on a specific topic or argument.	C
2	Demonstrate command of the conventions of standard written English, including grammar, usage, and mechanics.	A
3	Support and illustrate arguments and explanations with relevant details, examples, and evidence.	D
4	Create a logical progression of ideas or events, and convey the relationships among them.	C
5	Sentence Structure Skills: Places modifiers correctly.	B
6	Use varied sentence structures to engage the reader and achieve cohesion between sentences.	D
7	Grammar, Spelling, Capitalization, Punctuation Skills: Avoids inappropriate shifts in verb tense.	B
8	Grammar, Spelling, Capitalization, Punctuation Skills: Maintains agreement between pronoun and antecedent.	A
9	Grammar, Spelling, Capitalization, Punctuation Skills: Avoids inappropriate pronoun shifts.	D
10	Grammar, Spelling, Capitalization, Punctuation Skills: Uses adjectives and adverbs correctly.	C

## Introduction to the Diagnostic Assessment

This booklet has been prepared for faculty and administrators to gain a full understanding of the diagnostic component of the Postsecondary Education Readiness Test (P.E.R.T.). The purpose of the P.E.R.T. Diagnostic is to adequately assess students' academic abilities in mathematics, reading, and writing while determining areas of improvement on an individualized basis.

The P.E.R.T. Placement was launched in October 2010 and the diagnostics were designed as complements. The diagnostic blueprints were derived with developmental education courses in mind, and the competencies included are required for student proficiency.

## P.E.R.T. Diagnostic Assessment

### Test Session

The chart below displays the average length of time a student will need to complete each subtest. The length of time to complete the test is comparable for both lower and upper versions of the tests.

Test Name	Average Duration
PERT Diagnostic Lower or Upper Math	1 hour
PERT Diagnostic Lower or Upper Writing	1 hour
PERT Diagnostic Lower or Upper Reading	1 hour 45 minutes

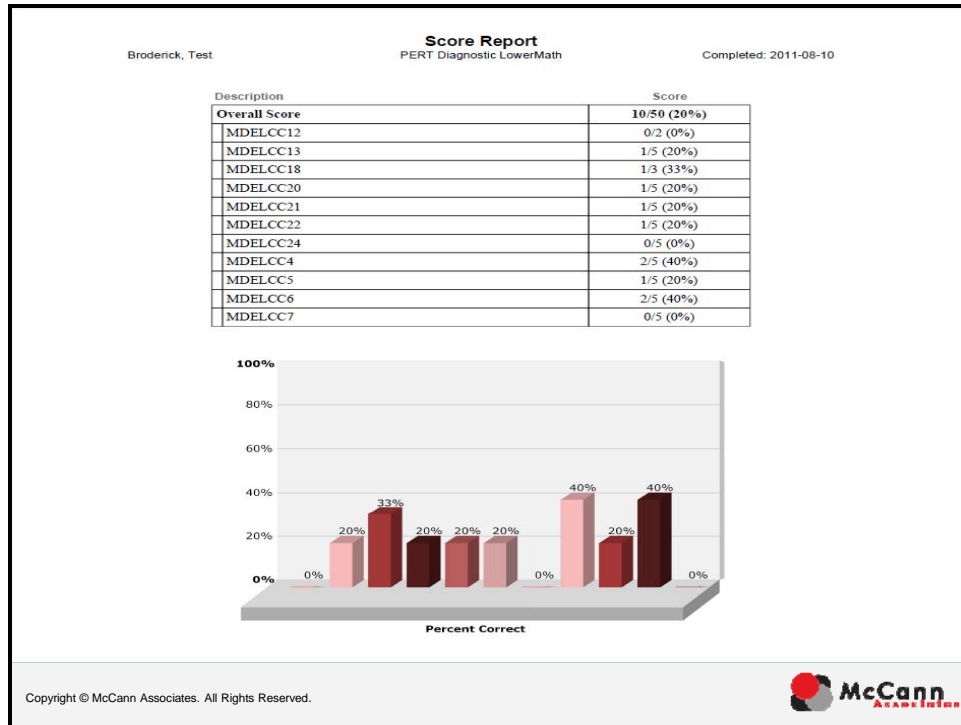
### Testing Format

The P.E.R.T. Diagnostic is delivered through a web based application called College Success™. Students must take the test in a proctored environment.

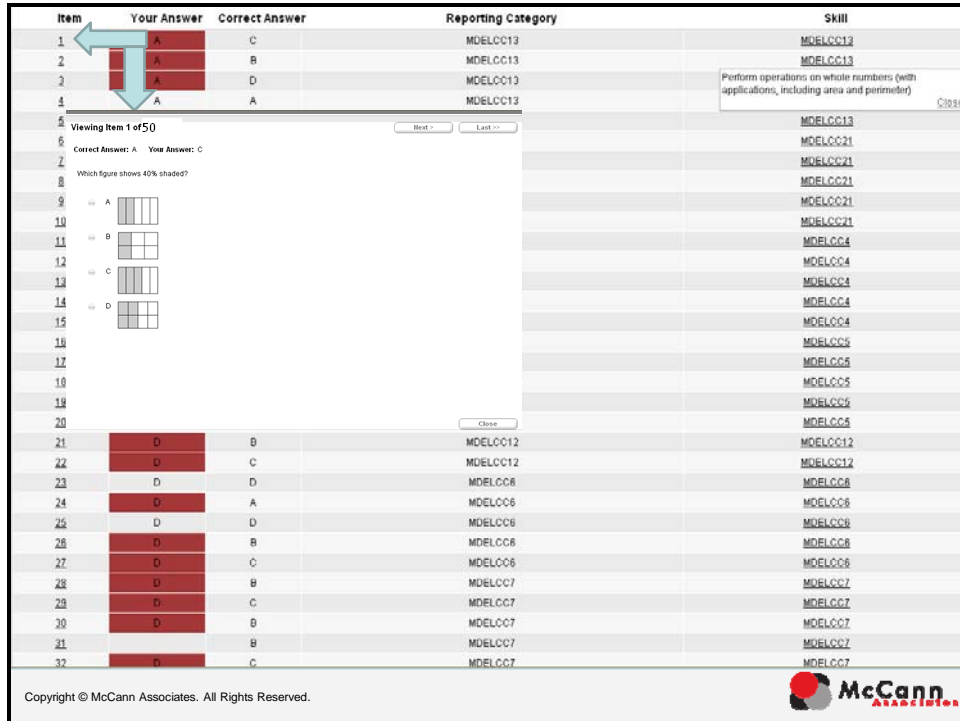
### Diagnostic Score Report

In the diagnostic reports, students will receive detailed information regarding which competencies they are proficient or below proficient in. Faculty will utilize the reports to identify where a student needs additional preparation and will target instruction accordingly.

Below is an example of how a diagnostic score report appears. A percentage score is provided for each competency tested.



Students are able to click on an item number and review the item, the correct answer, and the answer that they chose. By clicking on the skill or competency ID, the competency is displayed.



Item	Your Answer	Correct Answer	Reporting Category	Skill
1	A	C	MDELOC13	MDELOC13
2	A	B	MDELOC13	MDELOC13
3	A	D	MDELOC13	Perform operations on whole numbers (with applications, including area and perimeter)
4	A	A	MDELOC13	MDELOC13
5				MDELOC13
6				MDELOC21
7				MDELOC21
8				MDELOC21
9				MDELOC21
10				MDELOC21
11				MDELOC4
12				MDELOC4
13				MDELOC4
14				MDELOC4
15				MDELOC4
16				MDELOC5
17				MDELOC5
18				MDELOC5
19				MDELOC5
20				MDELOC5
21	D	B	MDELOC12	MDELOC12
22	D	C	MDELOC12	MDELOC12
23	D	D	MDELOC6	MDELOC6
24	D	A	MDELOC6	MDELOC6
25	D	D	MDELOC6	MDELOC6
26	D	B	MDELOC6	MDELOC6
27	D	C	MDELOC6	MDELOC6
28	D	B	MDELOC7	MDELOC7
29	D	C	MDELOC7	MDELOC7
30	D	B	MDELOC7	MDELOC7
31		B	MDELOC7	MDELOC7
32	D	C	MDELOC7	MDELOC7

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## Question Formats

All test questions are in a multiple choice format. The Reading Diagnostic includes passages that students will need to read in order to answer questions. The Mathematics Diagnostic does not include a built-in calculator as with the Mathematics Placement assessment.

## Test Forms

There is one test form for each subject area and for each level. For example, the Lower Level Diagnostic has one test form, and the Upper Level Writing Diagnostic has one test form. Each test contains 50 items. Test forms will be replaced periodically in order to decrease item exposure as well as pilot new test items.

## P.E.R.T. Diagnostic Assessment Content

### Lower Level Reading Diagnostic Competencies:

Competency ID	Competency Description	Number of Items
RDELCC1	Distinguish between facts and opinions	5
RDELCC2	Identify the author's primary purpose as persuade, inform, or entertain	5
RDELCC3	Identify specific information in a paragraph	5
RDELCC4	Distinguish between major and minor details in a paragraph	5
RDELCC5	Identify the topic and stated/implied main idea in a paragraph in print and online	5
RDELCC6	Identify and use context clues to determine the meaning of words in simple sentences	5
RDELCC7	Identify logical inferences and conclusions based on the evidence provided in a paragraph	5
RDELCC8	Identify the following primary patterns of organization in a paragraph such as time order, simple listing, and generalization/definition and example	5
RDELCC9	Identify the transition words that are associated with each pattern	5
RDELCC11	Recognize relationships within/between sentences	5
		<b>50</b>



## Upper Level Reading Diagnostic Competencies:

Competency ID	Competency Description	Number of Items
RDEUCC1	Evaluate the author's use of facts and opinions	5
RDEUCC2	Analyze the author's primary purpose	5
RDEUCC3	Identify the topic and stated/implied main idea in a multi-paragraph selection in print and online	5
RDEUCC4	Use contextual clues and structural analysis to clarify meanings and broaden academic vocabulary	5
RDEUCC7	Distinguish between major and minor details in a multi-paragraph selection	5
RDEUCC8	Identify relationships between and/or within sentences	5
RDEUCC9	Determine the primary and secondary patterns of organization for a paragraph and multi-paragraph selection	5
RDEUCC11	Analyze the author's tone and support with examples, including denotative, connotative meaning, and figurative language	5
RDEUCC12	Detect bias	5
RDEUCC14	Analyze the details to infer what the author is implying and draw logical conclusions in a paragraph and multi-paragraph selection	5
		<b>50</b>

## Lower Level Mathematics Diagnostic Competencies:

Competency ID	Competency Description	Number of Items
MDELCC4	Perform operations with integers (with applications)	5
MDELCC5	Perform operations with fractions (with applications)	5
MDELCC6	Perform operations with decimals (with applications)	5
MDELCC7	Convert among percents, fractions, and decimals	5
MDELCC12	Simplify fractions	2
MDELCC13	Perform operations on whole numbers (with applications, including area and perimeter)	5
MDELCC18	Define variables and write an expression to represent a quantity in a problem	3
MDELCC20	Simplify algebraic expressions involving one variable ( $2x + 5x$ )	5
MDELCC21	Perform order of operations	5
MDELCC22	Solve linear equations involving the addition and multiplication property of equalities	5
MDELCC24	Evaluate exponents with integers	5
		<b>50</b>

## Upper Level Mathematics Diagnostic Competencies:

Competency ID	Competency Description	Number of Items
MDEUCC3	Apply the order of operations to evaluate algebraic expressions, including those with parentheses and exponents	5
MDEUCC8	Solve literal equations for a given variable with applications (geometry, motion [ $d=rt$ ], simple interest [ $i=prt$ ])	3
MDEUCC9	Solve linear inequalities in one variable and graph the solution set on a number line	3
MDEUCC10	Graph linear equations using table of values, intercepts, slope intercept form	5
MDEUCC11	Solve linear equations in one variable using manipulations guided by the rules of arithmetic and the properties of equality	6
MDEUCC12	Simplify an expression with integer exponents	5
MDEUCC15	Add, subtract, multiply, and divide polynomials. Division by monomials only. <i>(Does not include division by binomials)</i>	6
MDEUCC16	Simplify radical expressions - square roots only	3
MDEUCC17	Add, subtract, and multiply square roots of monomials	3
MDEUCC18	Factor polynomial expressions (GCF, grouping, trinomials, difference of squares)	6
MDEUCC19	Solve quadratic equations in one variable by factoring	5
		<b>50</b>

## Lower Level Writing Diagnostic Competencies:

Competency ID	Competency Description	Number of Items
WDELCC1	Sustain focus on a specific main idea for a single paragraph	5
WDELCC2	Demonstrate a basic command of grammar (verb tense, verb forms, verb shifts)	6
WDELCC3	Demonstrate a basic command of usage (pronoun, syntax, appropriate words and phrases, commonly confused words)	8
WDELCC4	Demonstrate a basic command of mechanics (punctuation, spelling, caps)	6
WDELCC5	Provide supporting details for main idea with relevant explanations and examples, in a single paragraph	5
WDELCC6	Select and narrow a topic that addresses the specific purpose	4
WDELCC7	When writing use complete sentences / recognize fragments	6
WDELCC8	Recognize run-ons (comma splices and fused sentences)	5
WDELCC9	Maintain agreement between subjects and verbs	5
		<b>50</b>

## Upper Level Writing Diagnostic Competencies:

<b>Competency ID</b>	<b>Competency Description</b>	<b>Number of Items</b>
WDEUCC1	Demonstrate a command of grammar (verb tense, verb forms, verb shifts)	8
WDEUCC2	Demonstrate a command of usage (syntax, appropriate words and phrases, commonly confused words)	5
WDEUCC3	Demonstrate a command of mechanics (punctuation, spelling, capitalization)	6
WDEUCC4	Identify effective transitional devices within the context of a passage	4
WDEUCC5	Use coordination and subordination effectively	5
WDEUCC6	Use pronouns correctly (case, agreement, shifts, reference)	5
WDEUCC7	Use adjectives and adverbs correctly, including degree forms	5
WDEUCC8	Identify fragments, comma splices, and fused sentences	6
WDEUCC9	Maintain agreement between subject and verb	6
		<b>50</b>

## Sample P.E.R.T. Diagnostic Questions

### PERT Diagnostic Sample Mathematics Items

#### PERT Diagnostic Standard MDELCC7

*Convert among percents, fractions, and decimals*

Convert to percent notation:

$$\frac{2}{5}$$

- A. 0.4%
- B. 4%
- C. 40%
- D. 400%

#### PERT Diagnostic Standard MDELCC13

*Perform operations on whole numbers (with applications, including area and perimeter)*

Jon has \$442 in his bank account. He spends \$29 on gas and \$68 on dinner. How much money is left in Jon's bank account after these purchases are made?

- A. \$345
- B. \$355
- C. \$365
- D. \$403

#### PERT Diagnostic Standard MDELCC21

*Perform order of operations*

Simplify:

$$2(2 + 1) + (7 - 2)^2$$

- A. 8
- B. 9
- C. 30
- D. 31

#### PERT Diagnostic Standard MDELCC22

*Solve linear equations involving the addition and multiplication property of equalities*

Solve for  $x$ :

$$8x = -32$$

- A. -40
- B. -24
- C. -4
- D. 4

### **PERT Diagnostic Standard MDELCC24**

*Evaluate exponents with integers*

Evaluate the following:

$$(-8)^2$$

- A. -64
- B. -16
- C. 16
- D. 64

## **PERT Diagnostic Sample Reading Items**

### **PERT Diagnostic Standard RDELCC4**

*Distinguish between major and minor details in a paragraph*

Read the selection and answer the question.

(1) In Cologne, Germany, on April 21, 2006, Frank "Anti Terror" Stoldt stepped into the ring with Zoran "The Priest" Mijatovic. (2) The two men traded barbs for several rounds, but after the 5<sup>th</sup> round, Mijatovic unleashed his full fury on Stoldt with a flurry of body punches, haymakers, and jabs. (3) One could scarcely make out Mijatovic's hands in the blur of punches; Mijatovic was looking for a knockout. (4) Stoldt withstood the bevy of blows and staggered to his corner after the round. (5) Mijatovic had missed his opportunity to end the match and after losing his rook, realized he was three moves away from checkmate and resigned the match. (6) Battered and bloodied, Frank Stoldt's arms were raised in victory in the 7<sup>th</sup> round; he had withstood Mijatovic's fury and now qualified for the Chessboxing world title fight to be held the following year.

(7) Chessboxing is a relatively new sport, holding its first European championship bout in 2005. (8) The match consists of up to 11 alternating rounds of boxing and speed chess with one-minute breaks between rounds. (9) Combatants must be at least a Class-

A-level chess player and an experienced boxer. (10) Competitors can win via knockout, checkmate, or judges' decision. (11) During chess rounds, combatants are given a warning if they do not make a move and may be disqualified if warned too often and must wear headphones during the chess portions so as to ignore any assistance offered by the crowd. (12) A rather unusual but oddly egalitarian entry into the eternal struggle of Brains vs. Brawn.

According to this selection, sentence (1) is a —

- A. major detail.
- B. topic statement.
- C. minor detail.
- D. thesis statement.

### **PERT Diagnostic Standard RDELCC5**

*Identify the topic and stated/implied main idea in a paragraph in print and online*

Read the selections and answer the question.

#### **Pro**

(1) For this upcoming school year, I think all the students of Alexander Hamilton High School should be able to choose their classes. (2) If the goal of high school is to get good grades and qualify for a good college, then why should we be denied the right to maximize our strengths? (3) I don't like the idea of some big central authority influencing and determining the grade market; I have known myself for more than a decade, so I'm certain I know my own strengths and weaknesses, and it's high time that some college gets a full view of those strengths. (4) Not that I would horde good grades in areas where I excel, such as math and science, but I think I have the right to determine my educational future rather than some all-powerful central educational authority that may not have my best interests in mind.

#### **Con**

(5) The purpose of a high school is to offer a well-rounded education; college is an advanced institution where you can build on your strengths. (6) If you shine in mathematics and maintain respectable grades in your other subjects, you will attract the attention of colleges offering degrees in those programs. (7) However, your central claim that the aim of high school is to vet potential college students is off the mark, as the percentage of students who go on to college in this school and across the country is significantly lower than 100%. (8) Likewise you used the word "horde" when you meant "hoard," and if you were to do some research into our school's namesake and his battle to create a national bank (i.e., "some big central authority influencing and determining the market") you might reconsider reframing your argument or at least



look into some historical counterarguments. (9) The aim of high school is to impart knowledge. (10) Think of how much improved your claim would look had you more experience in debate, English, and history, which you no doubt will have during your time at Alexander Hamilton High.

The best title for both of the arguments in the selection would be —

- A. Education: Whose Choice Should It Be?
- B. Alexander Hamilton: Pro Business or Pro Government?
- C. High School Confidential: Your Educators Know Best, And You Will Too!
- D. Building On Strength: Maximize Education By Concentrating On What You Do Best

### **PERT Diagnostic Standard RDELCC6**

*Identify and use context clues to determine the meaning of words in simple sentences*

Read the selection and answer the question.

(1) In March 2002, Gavin Menzies, an amateur British historian, made a surprising announcement to the Royal Geographical Society in England. (2) He claimed that a Chinese sailor named Zheng He (pronounced "jung huh") reached America and sailed around the world at least 70 years before Columbus!

(3) During his research, Menzies reportedly found an old map dated 1459 that showed the tip of southern Africa and the Cape of Good Hope; however, those parts of the world were supposedly unknown in Europe until Vasco da Gama's voyage in 1497, and Menzies believes that map came originally from China. (4) In the 1400s, the Chinese had the largest navy in the world and were undoubtedly the masters of the sea, having built ships much larger than European ships with rudders and watertight compartments and compasses for navigation. (5) According to Chinese historians, an emperor of the Ming dynasty ordered Zheng He to travel to countries beyond the horizon and to the end of the earth. (6) From 1405 to 1433, historians agree that Zheng He sailed throughout Southeast Asia to India, to parts of Africa, and to the land now called Australia. (7) According to Gavin Menzies, Zheng He then sailed around the southern tip of Africa on that voyage and across the Atlantic Ocean to some islands in the Caribbean where, Menzies reports, evidence of nine Chinese shipwrecks in the Caribbean that date back to the 1400s have been discovered. (8) Then, according to Menzies, Zheng He sailed south around the tip of South America, up the coast as far as the land that is now Mexico, and across the Pacific Ocean back to China. (9) If so, then Zheng He was the first person to sail around the world and the first explorer to reach the Americas. (10) It may turn out that the European explorers were actually rediscovering places that Admiral Zheng He had already visited many years before.

Which of the following is the best definition of the word "rudders" as used in Sentence 4?

- A. Guiding forces
- B. Underwater blades that help steer vessels
- C. Trembling nervously, quivering, or shaking
- D. Ancient ships that were larger than any others

**PERT Diagnostic Standard RDELCC7**

*Identify logical inferences and conclusions based on the evidence provided in a paragraph*

Read the selection and answer the question.

Hello, Imran:

(1) And how does this miserable, sticky, and hopelessly stinking evening find you? (2) Please do not gloat in your reply, as I can already imagine you at home with your videogames in the full air-conditioned glory that is the modern world—though I guess that would eventually bore me as well. (3) Sadly, I remain at summer camp for a third excruciating week. (4) How are the bugs over there? (5) Nonexistent you say? (6) Well, here I beg for flies, as they rarely get a chance to bite me, for they are eaten by cicadas, which, in turn, are consumed by massive bees that live in the ground, and those bees are what make it to my cabin and bite or sting me (often both). (7) Here at what I'll call Camp Cretaceous we're treated to bugs larger than those that harassed the dinosaurs, would that I were just to experience some bugs lower on the food chain instead of these flying monsters the size of tennis balls that I swear I once saw attack and carry off a squirrel. (8) The counselors, the activities, and the food are alike in that they are bland, sticky, and not nourishing on any level. (9) Please, Imran, write back that the power has been off for days, or that our beloved hometown has been under martial law, or some other malady has befallen our neighborhood so that you may share in my misery. (10) Did I mention that everything here, even the water, is unnaturally sticky?

Send Help,  
Toby

The reader can infer that Toby —

- A. is attending a camp about dinosaurs.
- B. complains a lot and is difficult to please.
- C. wishes that Imran could join him at the camp.
- D. is trying to stay positive and make the best of things this summer.

**PERT Diagnostic Standard RDELCC9**

*Identify the transition words that are associated with each pattern*

Read the selection and answer the question.

(1) Long ago, ancient peoples would visit the Oracle of Delphi. (2) The city of Delphi was thought to be the center of the world. (3) In Greek mythology, this place belonged to the god Apollo. (4) His words were supposedly spoken through the oracle. (5) The oracle was a mysterious woman who sat on a three-legged stool and answered people's questions after taking deep breaths from a hole in the ground. (6) The Greeks explained that special gases from the ground helped the woman see through mysteries of the universe.

(7) The oracle itself was a great mystery, and for many years, scientists considered the idea of the oracle and the gases foolish. (8) Recently, however, scientists have made some interesting discoveries. (9) When building a road over present-day Delphi, workers uncovered several fault lines around the temple complex extending deep into the ground that emitted ethylene, a sweet-smelling gas that can make people feel oddly joyful and see things that are not there. (10) Now scientists know that the oracle at Delphi was more than just hot air.

Which of the following is the pattern of organization demonstrated by the use of the word "however" in Sentence 8?

- A. Classification and example
- B. Chronological order
- C. Cause and effect
- D. Comparison and contrast

**PERT Diagnostic Sample Writing Items****PERT Diagnostic Standard WDELCC2**

*Demonstrate a basic command of grammar (verb tense, verb forms, verb shifts)*

Which of the following choices correctly completes the sentence?

Once the planetarium closed for the day, Allen and Diane \_\_\_\_\_ to a diner and ate dinner.

- A. go
- B. had gone
- C. went
- D. would go

**PERT Diagnostic Standard WDELCC3**

*Demonstrate a basic command of usage (pronoun, syntax, appropriate words and phrases, commonly confused words)*

Choose the sentence in which the underlined word is used correctly.

- A. Johnny's ruined desk bore the scars of all those delinquent students who preceded him at the academy.
- B. The second president of the United States, John Adams, preceded our nation's first commander-in-chief, George Washington.
- C. During low tide, the headwaters finally preceded back into the ocean, leaving the beach dry and the morning's sand castle destroyed.
- D. Despite the technical gaffe that interrupted the play for a full seven minutes, the performers preceded with the second act, acquitting themselves quite well.

**PERT Diagnostic Standard WDELCC8**

*Recognize run-ons (comma splices and fused sentences)*

Choose the sentence that is correct.

- A. Some dinosaurs, like the *Tyrannosaurus*, are terrifying; however, other dinosaurs, like the feathered *Caudipteryx*, are downright adorable.
- B. Some dinosaurs, like the *Tyrannosaurus* are terrifying however other dinosaurs, like the feathered *Caudipteryx*, are downright adorable.
- C. Some dinosaurs, like the *Tyrannosaurus* are terrifying; and other dinosaurs, like the feathered *Caudipteryx*, are downright adorable.
- D. Some dinosaurs, like the *Tyrannosaurus* are terrifying, however other dinosaurs, like the feathered *Caudipteryx*, are downright adorable.

**PERT Diagnostic Standard WDELCC5**

*Provide supporting details for main idea with relevant explanations and examples, in a single paragraph*

Read the selection and answer the question.

(1) Although African and Asian elephants have dissimilar features, their differences serve similar functions and are better suited to the environments of each species. (2) Elephants are famous for their big front teeth called tusks. (3) Among Asian elephants, only the males have tusks. (4) Both male and female African elephants have tusks, and their tusks are larger than the Asian elephants' tusks. (5) \_\_\_\_\_. (6) African elephants also have larger ears and more body mass, and these large ears act as a fan to keep the elephant cool. (7) These differences are likely related to the different environments of the animals. (8) African elephants must have large ears to keep the

animal cool in the hot savanna sun, while the Asian elephant must be smaller to better navigate the dense forests of India and surrounding countries. (9) Imagine what an elephant would look like in a totally different environment; it would be a mammoth accomplishment to picture an elephant that could roam around in the cold, for example.

Which of the following sentences could the writer insert after sentence 4 in order to provide the best support for the main idea expressed in sentence 1?

- A. Elephants are famous for their big front teeth called tusks.
- B. If you look carefully, you can tell the difference between an Asian and an African elephant.
- C. African elephants have bigger ears than Asian elephants; also these ears are shaped differently with the Asian elephant having ears around three times smaller than their African counterparts.
- D. Scientists theorize that the smaller tusks on Asian elephants are an environmental response to over poaching in the area where larger-tusked elephants were more often killed for ivory.

**PERT Diagnostic Standard WDELCC7**

*When writing use complete sentences / recognize fragments*

Read the selection and answer the question.

(1) In America, it is illegal to create any independent currency. (2) However, I find the dollar intolerable and am concerned that its value keeps moving around. (3) Furthermore, the idea that the dollar is not tied to any fixed asset like gold or silver makes me cringe. (4) We need to adopt a currency that more suits my needs. (5) Alternative currencies such as gold or silver coins, trading goods and services, the guilder, checks drawn from bank accounts, or even trading manual labor or some similar service. (6) While nations and currencies rise and fall over the centuries, everything gold can stay.

Which of the following sentences is NOT correct?

- A. Sentence 2
- B. Sentence 3
- C. Sentence 4
- D. Sentence 5