

**Practice Test #12**  
*For the TOEFL®*  
*Reading Section*

**The TOEFL Reading Section:**  
***Directions***

In this section, you will be able to demonstrate your ability to understand academic passages in English.

There are two passages in this section. You have 36 minutes to complete the entire section. You may read the passages and answer the questions in any order you choose but plan to spend about 18 minutes on each passage and the accompanying questions.

Most questions are worth one point, but the last question for each passage is worth more than one point. The directions for the last question indicate how many points you may receive.

At the end of this practice test, you will find an answer key, information to help determine your score and explanations of the answers.

Turn the page to begin the reading section.

## Altruistic Behavior

Behaviors that lower the fitness of the individual but increase the fitness of another individual are termed altruistic. Examples of such behaviors are seen widely across the animal kingdom. Social insects such as worker bees have no ability to reproduce, yet they maintain the queen so she can populate the hive with her offspring. Meerkats keep a member of the group standing guard to warn the rest of the colony about intruders, even though the guarding meerkat is putting itself at risk. Wolves and wild dogs bring meat to pack members not present during a hunt. Although, on the surface, these behaviors appear to be altruistic, it may not be so simple.

There has been much discussion over why altruistic behaviors exist. Do these behaviors lead to overall evolutionary advantages for their species? Do they help the altruistic individual pass on its own genes? One explanation for altruistic-type behaviors is found in the genetics of natural selection. In the 1976 book, *The Selfish Gene*, scientist Richard Dawkins attempted to explain many seemingly altruistic behaviors from the viewpoint of the gene itself. Although a gene obviously cannot be selfish in the human sense, it may appear that way if the sacrifice of an individual benefits related individuals that share genes that are identical by descent (present in relatives because of common ancestors). Mammal parents make this sacrifice to take care of their offspring. Emperor penguins migrate miles in harsh conditions to bring food back for their young. Selfish gene theory has been controversial over the years and is still discussed among scientists in related fields.

Even less-related individuals with less genetic identity than those shared by parent and offspring benefit from seemingly altruistic behavior. The activities of social insects such as bees, wasps, ants, and termites are good examples. Sterile workers in these societies take care of the queen because they are closely related to it, and as the queen has offspring, she is passing on genes from the workers indirectly. Thus, it is of fitness benefit for the worker to maintain the queen without having any direct chance of passing on its genes due to its sterility. This phenomenon can explain many superficially altruistic behaviors seen in animals. However, these behaviors may not be truly defined as altruism in these cases because the actor is actually increasing its own fitness either directly (through its own offspring) or indirectly (through the inclusive fitness it gains through relatives that share genes with it).

Unrelated individuals may also act altruistically to each other, and this seems to defy the “selfish gene” explanation. An example of this has been observed in many monkey species where a monkey will present its back to an unrelated monkey to have that individual pick the parasites from its fur. After a certain amount of time, the roles are reversed, and the first monkey now grooms the second monkey. Thus, there is reciprocity in the behavior. Both benefit from the interaction, and their fitness is raised more than if neither cooperated nor if one cooperated and the other did not cooperate. This behavior is still not necessarily altruistic, as the “giving” behavior of the actor is based on the expectation that it will be the “receiver” of the behavior in the future, termed reciprocal altruism. Reciprocal altruism requires that individuals repeatedly encounter each other, often the result of living in the same social group, and that cheaters (those that never “give back”) are punished.

Evolutionary game theory, a modification of classical game theory in mathematics, has shown that many of these so-called “altruistic behaviors” are not altruistic at all. The definition of “pure” altruism, based on human behavior, is an action that benefits another without any direct benefit to oneself. Most of the behaviors previously described do not seem to satisfy this definition, and game theorists are good at finding “selfish” components in them. Others have argued that the terms “selfish” and “altruistic” should be dropped completely when discussing animal behavior, as they describe human behavior and may not be directly applicable to instinctual animal activity. What is clear, though, is that heritable behaviors that improve the chances of passing on one’s genes or a portion of one’s genes are favored by natural selection and will be retained in future generations as long as those behaviors convey a fitness advantage.

Source: OpenStax (2019). *Behavioral biology: Proximate and ultimate causes of behavior*.

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### Reading Paragraph 1

Behaviors that lower the fitness of the individual but increase the fitness of another individual are termed altruistic. Examples of such behaviors are seen widely across the animal kingdom. Social insects such as worker bees have no ability to reproduce, yet they maintain the queen so she can populate the hive with her offspring. Meerkats keep a member of the group standing guard to warn the rest of the colony about intruders, even though the guarding meerkat is putting itself at risk. Wolves and wild dogs bring meat to pack members not present during a hunt. Although, on the surface, these behaviors appear to be altruistic, it may not be so simple.

#### 1. According to paragraph 1, which of the following is true?

- a. Altruistic actions in nature decrease one’s ability to survive while improving the fitness of others
- b. Worker bees are social insects that guard the colony and produce offspring with their queen
- c. Meerkats work in groups to defend and warn their community against intruders
- d. Wild dogs bringing meat back from a hunt is a well-understood altruistic behavior

## Reading Paragraph 2

There has been much discussion over why altruistic behaviors exist. Do these behaviors lead to overall evolutionary advantages for their species? Do they help the altruistic individual pass on its own genes? One explanation for altruistic-type behaviors is found in the genetics of natural selection. In the 1976 book, *The Selfish Gene*, scientist Richard Dawkins attempted to explain many seemingly altruistic behaviors from the viewpoint of the gene itself. Although a gene obviously cannot be selfish in the human sense, it may appear that way if the sacrifice of an individual benefits related individuals that share genes that are identical by descent (present in relatives because of common ancestors). Mammal parents make this sacrifice to take care of their offspring. Emperor penguins migrate miles in harsh conditions to bring food back for their young. Selfish gene theory has been controversial over the years and is still discussed among scientists in related fields.

### 2. The book *The Selfish Gene* deals with

- a. The debate about why organisms behave altruistically
- b. The popular theories scientists have on altruistic behaviors
- c. The author's explanation of altruistic behaviors
- d. Altruistic behaviors in humans with genes of identical descent

### 3. Why does the author say, "Emperor penguins migrate miles in harsh conditions to bring food back for their young"?

- a. To explain why emperor penguins travel so far for food
- b. To show that emperor penguins are birds that sacrifice the most for their young
- c. To provide an example of altruistic behavior
- d. To highlight how some altruistic behaviors fit the model of selfish gene theory

### Reading Paragraph 3

Even less-related individuals with less genetic identity than those shared by parent and offspring benefit from seemingly altruistic behavior. The activities of social insects such as bees, wasps, ants, and termites are good examples. Sterile workers in these societies take care of the queen because they are closely related to it, and as the queen has offspring, she is passing on genes from the workers indirectly. Thus, it is of fitness benefit for the worker to maintain the queen without having any direct chance of passing on its genes due to its sterility. This phenomenon can explain many **superficially** altruistic behaviors seen in animals. However, these behaviors may not be truly defined as altruism in these cases because the actor is actually increasing its own fitness either directly (through its own offspring) or indirectly (through the inclusive fitness it gains through relatives that share genes with it).

4. The word **superficially** in paragraph 3 is closest in meaning to

- a. Apparent
- b. Artificially
- c. Creatively
- d. Beneficial

### Reading Paragraph 4

Unrelated individuals may also act altruistically to each other, and this seems to defy the “selfish gene” explanation. An example of this has been observed in many monkey species where a monkey will present its back to an unrelated monkey to have that individual pick the parasites from its fur. After a certain amount of time, the roles are reversed, and the first monkey now grooms the second monkey. Thus, there is reciprocity in the behavior. Both benefit from the interaction, and their fitness is raised more than if neither cooperated nor if one cooperated and the other did not cooperate. This behavior is still not necessarily altruistic, as the “giving” behavior of the actor is based on the expectation that it will be the “receiver” of the behavior in the future, termed reciprocal altruism. Reciprocal altruism requires that individuals repeatedly encounter each other, often the result of living in the same social group, and that cheaters (those that never “give back”) are punished.

5. All of the following are true EXCEPT

- a. Some species of monkeys behave altruistically to others they are not related to
- b. When monkeys practice reciprocal altruism both participants gain
- c. Reciprocal altruism cannot really be considered altruism
- d. Reciprocal altruism occurs mostly in monkeys of the same species

## Reading Paragraph 5

Evolutionary game theory, a modification of classical game theory in mathematics, has shown that many of these so-called “altruistic behaviors” are not altruistic at all. The definition of “pure” altruism, based on human behavior, is an action that benefits another without any direct benefit to oneself. Most of the behaviors previously described do not seem to satisfy this definition, and game theorists are good at finding “selfish” components in them. Others have argued that the terms “selfish” and “altruistic” should be dropped completely when discussing animal behavior, as they describe human behavior and may not be directly applicable to instinctual animal activity. **What is clear, though, is that heritable behaviors that improve the chances of passing on one’s genes or a portion of one’s genes are favored by natural selection and will be retained in future generations as long as those behaviors convey a fitness advantage.**

### 6. What have game theorists discovered about altruistic behavior in animals?

- a. Most do not qualify as truly altruistic because they involve selfish aspects
- b. The majority of animals engage in altruistic behavior
- c. Evolutionary game theory contradicts classic game theory in math
- d. The true definition of altruism is an action that does not benefit oneself in any way

### 7. What can be inferred from the information in paragraph five?

- a. Most animals are selfish beings by nature
- b. There is more than one definition of altruism in the animal kingdom
- c. People argue about selfish and altruistic behaviors in animals frequently
- d. It is instinctual for animals to behave in ways that preserve their genes

### 8. Which of the following best expresses the essential information in the highlighted sentence in paragraph 5? Incorrect choices change the meaning in important ways or leave out essential information.

- a. Animals will always continue to engage in behaviors that preserve their genetics
- b. Actions that preserve one’s genes and remain advantageous to its fitness will continue in future generations
- c. Natural selection is marked by animals who act in ways that increase the chance of passing on their genes
- d. Behaviors that are advantageous to one generation will be passed on to the next

9. Look at the four squares (A, B, C, D) that indicate where the following sentence could be added to the passage.

***Altruistic behaviors are not exclusively witnessed in humans.***

Where would the sentence best fit?

**A** Behaviors that lower the fitness of the individual but increase the fitness of another individual are termed altruistic. **B** Examples of such behaviors are seen widely across the animal kingdom. **C** Social insects such as worker bees have no ability to reproduce, yet they maintain the queen so she can populate the hive with her offspring. **D** Meerkats keep a member of the group standing guard to warn the rest of the colony about intruders, even though the guarding meerkat is putting itself at risk.

10. **DIRECTIONS:** An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

***Some animals behave in ways that seem altruistic, and while there are several explanations for this, there is also an argument that animal behavior is not and cannot be deemed altruistic.***

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- a. There are a variety of examples of altruistic behavior in the animal kingdom
- b. Richard Dawkins was a genetics scientist who wrote a book in 1976 called *The Selfish Gene*
- c. A strong explanation for altruistic behaviors is the instinctual desire to pass on one's genes
- d. All species of monkeys engage in what is called reciprocal altruism
- e. Some argue that it is best not to apply the terms that describe human behavior to animal behavior
- f. Emperor penguins travel great distances just to get food for their offspring



## Spanish Exploration of the Americas

The Spanish established the first European settlements in the Americas, beginning in the Caribbean and, by 1600, extending throughout Central and South America. Thousands of Spaniards **flocked to the Americas**, seeking wealth and status. The most famous of these Spanish adventurers is also the most controversial, Christopher Columbus, who, though Italian himself, explored on behalf of the Spanish monarchs.

The history of Spanish exploration begins with the history of Spain itself. During the fifteenth century, Spain hoped to gain an advantage over its rival, Portugal. The marriage of Ferdinand of Aragon and Isabella of Castile in 1469 unified Catholic Spain and began the process of building a nation that could compete for worldwide power. Since the 700s, much of Spain had been under Islamic rule, and King Ferdinand II and Queen Isabella I were determined to defeat the Muslims in Granada, the last Islamic stronghold in Spain. In 1492, they completed the centuries-long Christian conquest of the Spanish territory. This marked another step forward in the process of making Spain a European power, and Ferdinand and Isabella were now ready to look further afield.

Their goals were to expand Catholicism and to gain a commercial advantage over Portugal. To those ends, Ferdinand and Isabella sponsored extensive Atlantic exploration. Spain's most famous explorer, Christopher Columbus, was actually from Italy. **He believed that using calculations based on other mariners' journeys, he could chart a westward route to India, which could be used to expand European trade and spread Christianity.** Starting in 1485, he approached Portuguese, English, and Spanish monarchs, asking for ships and funding to explore this westward route. All those he petitioned—including Ferdinand and Isabella at first—rebuffed him; their nautical experts all concurred that Columbus' estimates of the width of the Atlantic Ocean were far too low. However, after three years of pleas and, more importantly, the completion of the war with the Muslims, Ferdinand and Isabella agreed to finance Columbus' expedition in 1492, supplying him with three ships. The Spanish monarchs knew that Portuguese mariners had reached the southern tip of Africa and sailed the Indian Ocean. They understood that the Portuguese would soon reach Asia, and in this competitive race to reach the Far East, the Spanish rulers decided to act.

Columbus held **erroneous views** that shaped his thinking about what he would encounter as he sailed west. He believed the earth to be much smaller than its actual size, and since he did not know of the existence of the Americas, he fully expected to land in Asia. On October 12, 1492, however, he made landfall on an island in the Bahamas, south of the present-day state of Florida. He then sailed to an island he named Hispaniola (present-day Dominican Republic and Haiti). Believing he had landed in the East Indies, Columbus called the native Taínos people he found there "Indios", **giving rise to the term "Indian" for any native people of the New World.** Upon Columbus' return to Spain, the Spanish crown bestowed on him the title of Admiral of the Ocean Sea and named him governor of the lands he had discovered. Up until the end of his life, Columbus held to his claim that the lands he had traveled to were part of the Asian continent, even though there was a mounting amount of evidence that contradicted his belief.

Many other Europeans followed in Columbus' footsteps, drawn by dreams of winning wealth by sailing west. Another Italian, Amerigo Vespucci, sailing for the Portuguese crown, explored the South American coastline between 1499 and 1502. Unlike Columbus, he realized that the Americas were not part of Asia but lands unknown to Europeans. Vespucci's widely published accounts of his voyages fueled speculation and intense interest in the New World among Europeans. Among those who read Vespucci's reports was the German mapmaker Martin Waldseemuller. Using the explorer's first name as a label for the new landmass, Waldseemuller attached "America" to his map of the New World in 1507, and the name stuck.

Source: Corbett *et al.*, (2014).

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### Reading Paragraph 1

The Spanish established the first European settlements in the Americas, beginning in the Caribbean and, by 1600, extending throughout Central and South America. Thousands of Spaniards **flocked to** the Americas, seeking wealth and status. The most famous of these Spanish adventurers is also the most controversial, Christopher Columbus, who, though Italian himself, explored on behalf of the Spanish monarchs.

**1. The phrase **flocked to** in paragraph 1 is closest in meaning to**

- a. Moved to
- b. Searched for
- c. Managed to
- d. Desired to

## Reading Paragraph 2

The history of Spanish exploration begins with the history of Spain itself. During the fifteenth century, Spain hoped to gain an advantage over its rival, Portugal. The marriage of Ferdinand of Aragon and Isabella of Castile in 1469 unified Catholic Spain and began the process of building a nation that could compete for worldwide power. Since the 700s, much of Spain had been under Islamic rule, and King Ferdinand II and Queen Isabella I were determined to defeat the Muslims in Granada, the last Islamic stronghold in Spain. In 1492, they completed the centuries-long Christian conquest of the Spanish territory. This marked another step forward in the process of making Spain a European power, and Ferdinand and Isabella were now ready to look further afield.

### 2. Which of the following is true?

- a. Spain was looking to defeat its rival, Portugal, during the 1500s
- b. Ferdinand of Aragon and Isabella of Castile united Spain through marriage
- c. In 1492, the Spanish territory had been defeated by Muslim conquest
- d. Spain became a major European power once it took over Portugal

### Reading Paragraph 3

Their goals were to expand Catholicism and to gain a commercial advantage over Portugal. To those ends, Ferdinand and Isabella sponsored extensive Atlantic exploration. Spain's most famous explorer, Christopher Columbus, was actually from Italy. He believed that using calculations based on other mariners' journeys, he could chart a westward route to India, which could be used to expand European trade and spread Christianity. Starting in 1485, he approached Portuguese, English, and Spanish monarchs, asking for ships and funding to explore this westward route. All those he petitioned—including Ferdinand and Isabella at first—rebuffed him; their nautical experts all concurred that Columbus' estimates of the width of the Atlantic Ocean were far too low. However, after three years of pleas, and, more importantly, the completion of the war with the Muslims, Ferdinand and Isabella agreed to finance Columbus' expedition in 1492, supplying him with three ships. The Spanish monarchs knew that Portuguese mariners had reached the southern tip of Africa and sailed the Indian Ocean. They understood that the Portuguese would soon reach Asia, and in this competitive race to reach the Far East, the Spanish rulers decided to act.

**3. Which of the following best expresses the essential information in the highlighted sentence in paragraph 3? Incorrect choices change the meaning in important ways or leave out essential information.**

- a. Columbus thought he could sail to India to increase European trade and spread Christianity
- b. After landing in India, Columbus planned on exploring India using other explorers' charts
- c. Columbus had calculated a route to India based on other mariners' calculations
- d. Columbus felt his expedition would open new trade routes

**4. According to paragraph 3, why did the Spanish monarchs decide to fund Christopher Columbus' expedition?**

- a. They were certain that the calculations for his expedition were correct
- b. So they could be credited with discovering India and sailing the Indian Ocean
- c. They wanted to reach India and the Far East before Portugal
- d. They realized the trade routes they could open up

### Reading Paragraph 4

Columbus held **erroneous views** that shaped his thinking about what he would encounter as he sailed west. He believed the earth to be much smaller than its actual size, and since he did not know of the existence of the Americas, he fully expected to land in Asia. On October 12, 1492, however, he made landfall on an island in the Bahamas, south of the present-day state of Florida. He then sailed to an island he named Hispaniola (present-day Dominican Republic and Haiti). Believing he had landed in the East Indies, Columbus called the native Taínos people he found there “Indios”, **giving rise to the term “Indian” for any native people of the New World**. Upon Columbus’ return to Spain, the Spanish crown bestowed on him the title of Admiral of the Ocean Sea and named him governor of the lands he had discovered. Up until the end of his life, Columbus held to his claim that the lands he had traveled to were part of the Asian continent, even though there was a mounting amount of evidence that contradicted his belief.

**5. The phrase **erroneous views** in paragraph 4 is closest in meaning to**

- a. Unclear visions
- b. False conceptions
- c. Exciting possibilities
- d. Proven ideas

**6. Why does the author say, “*giving rise to the term ‘Indian’ for any native people of the New World*”?**

- a. To explain how and why people from the Americas came to be called Indians
- b. Because Columbus called the native Taínos people Indios, which means Indian
- c. To show that Columbus had thought he found India
- d. To explain why he was given the title of Admiral of the Ocean Sea when he went back to Spain

**7. What can be inferred about Columbus based on the information from the paragraph?**

- a. He was an amateur sailor who needed more experience
- b. He likely betrayed the monarchs of Spain because he was bribed by Portugal
- c. He ignored or denied the evidence suggesting he did not make it to Asia
- d. He lied about his discoveries because he sought glory and fame

### Reading Paragraph 5

Many other Europeans followed in Columbus' footsteps, drawn by dreams of winning wealth by sailing west. Another Italian, Amerigo Vespucci, sailing for the Portuguese crown, explored the South American coastline between 1499 and 1502. Unlike Columbus, he realized that the Americas were not part of Asia but lands unknown to Europeans. Vespucci's widely published accounts of his voyages fueled speculation and intense interest in the New World among Europeans. Among those who read Vespucci's reports was the German mapmaker Martin Waldseemuller. Using the explorer's first name as a label for the new landmass, Waldseemuller attached "America" to his map of the New World in 1507, and the name stuck.

**8. According to the paragraph, which of the following is true?**

- a. Few tried to accomplish what Christopher Columbus had done
- b. Another Spanish explorer, Amerigo Vespucci, sailed the South American coastline
- c. Vespucci made the same mistake as Columbus and believed the Americas were part of Asia
- d. The Americas landmass was named after Amerigo Vespucci

**9. Look at the four squares (A, B, C, D) that indicate where the following sentence could be added to the passage.**

***Though it was not Asia, he still recognized the opportunities and wanted to share what he had learned about this new land.***

Where would the sentence best fit?

Many other Europeans followed in Columbus' footsteps, drawn by dreams of winning wealth by sailing west. **A** Another Italian, Amerigo Vespucci, sailing for the Portuguese crown, explored the South American coastline between 1499 and 1502. **B** Unlike Columbus, he realized that the Americas were not part of Asia but lands unknown to Europeans. **C** Vespucci's widely published accounts of his voyages fueled speculation and intense interest in the New World among Europeans. **D**

**10. DIRECTIONS:** An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the **THREE** answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. **This question is worth 2 points.**

*Though unbeknownst to him, Christopher Columbus discovered the Americas after being funded by the Spanish monarchs to sail to India, spread Christianity, and increase trade.*

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- a. Christopher Columbus was commissioned by Spain but was actually of Italian origin
- b. Neighboring Portugal had already sailed the Indian Ocean but had not reached India
- c. Spain was under Islamic rule for hundreds of years until the monarchs Isabella and Ferdinand defeated the Muslims in Granada
- d. After initially being turned down, Columbus was supported by the Spanish to sail to India
- e. Columbus made landfall first in the Caribbean, but he believed he had reached India
- f. After Columbus, Europeans flocked to the Americas in search of opportunity