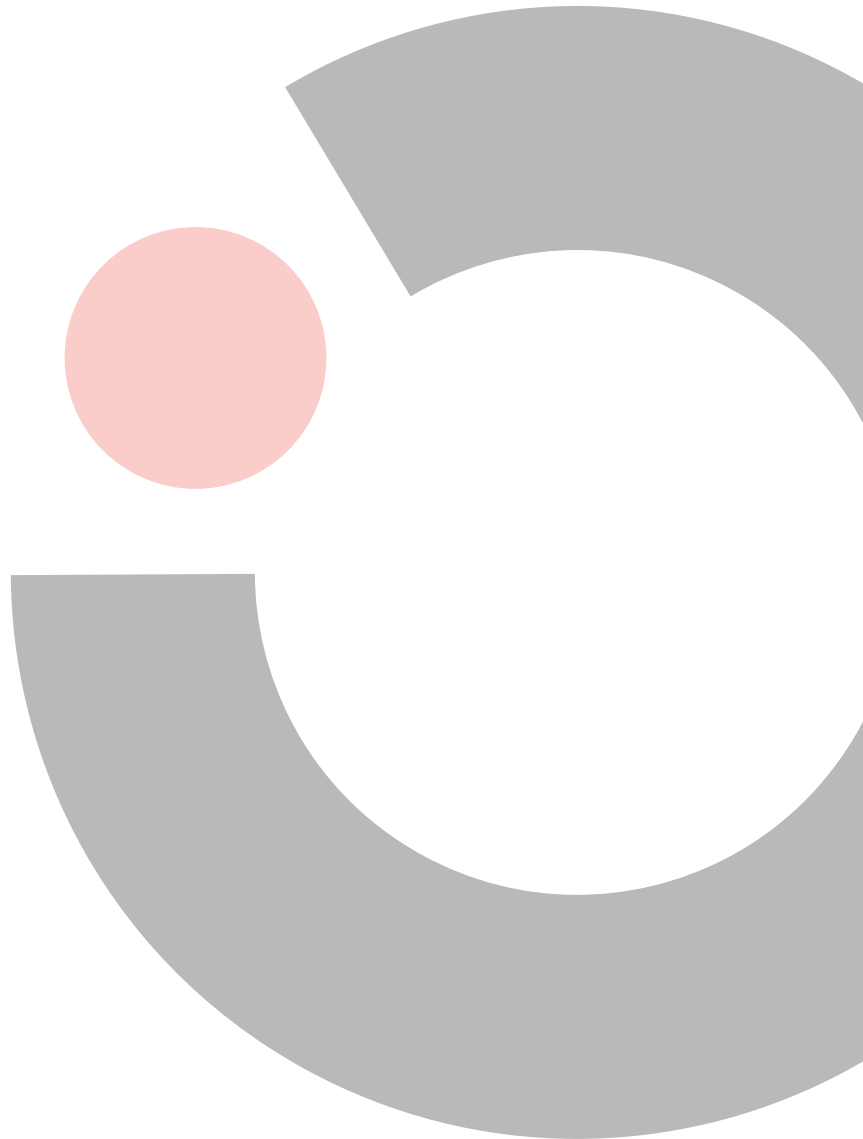




Item Sampler

Grade 4

**Cognia
Interim
Assessments**



Item Development Overview

Cognia™ uses Evidence-Centered Design (ECD), a principled design approach, to develop test and item specifications. ECD provides a conceptual framework for the design, development, and implementation of assessments that elicit evidence to support valid inferences about what students know and can do.

Item, Task, and Stimulus Specifications

Cognia item and task specifications describe in detail how each standard or cluster of standards is measured. Item and task specifications:

- Identify a targeted cluster of standards
- Define the content limits of the cluster of standards (what can and cannot be included in items assessing that cluster)
- Detail allowable vocabulary to be used in items measuring the standards
- Provide item or task models to outline item types that are appropriate for the targeted standards
- Include sample items

Stimulus specifications provide guidelines for:

- Passage selection
- Development of graphic stimuli to support passages and items

Further, for mathematics, Cognia content experts created detailed item specifications and “focus points” for each practice, breaking each practice into two or three discrete focus points. Cognia Interim Assessments mathematics items address a range of practice focus points.

Item Development Process

Approximately 8800 new items have been developed for these assessments. Drafted items are internally reviewed by content specialists and professional editors for:

- Alignment to standards and item specifications
- Technical quality (accuracy of right answers, usefulness of wrong answer choices, and accuracy and alignment of rubrics to the demands of the items)
- Consistency with universal design (UD) principles
- Avoidance of bias or sensitivity issues; including consideration of global use
- Appropriateness of vocabulary level, item contexts, and reading level

Reviews for Content, Bias, and Sensitivity

All new items are reviewed by educator committees before being selected for field testing. Educators and other expert stakeholders from around the world participate in the review committees. Close to 130 professionals took part in more than 20 content reviews, and more than 85 participated in bias and sensitivity reviews. The international review committee included members from China, Colombia, Egypt, India, Saudi Arabia, and the United States.

For more information, see the [Cognia Interim Assessments Overview](#)

Directions

Today you will take a test in mathematics. For this test, you will answer selected-response questions. Some of the questions may look different from test questions you have seen before, and some may ask about material that is new to you, but it is important to do your best. If you are not sure of the answer to a question, you should still try to answer it.

You may NOT use a calculator to answer the questions in this section.

Alignment

Concepts and Procedures Standard: **04.NF.03.07**

Mathematical Processes Standard: **4**

Key: **D**

1. This table shows the distance Kim jumped on each of six jumps.

Kim's Jump Distances

Jump	Distance (meters)
1	1.61
2	1.86
3	1.53
4	1.84
5	1.59
6	1.72

What is the shortest distance Kim jumped?

- A** 1.59 meters
- B** 1.61 meters
- C** 1.86 meters
- D** 1.53 meters

Alignment

Concepts and Procedures Standard: **04.OA.02.04**

Mathematical Processes Standard: **3**

Key: **D**

2. Gary claims that he has listed all of the factors of 28 and 66, as shown.

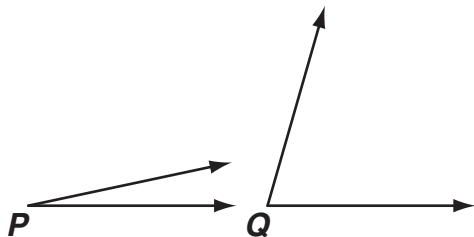
- factors of 28: 1, 2, 3, 4, 14, 28
- factors of 66: 1, 2, 3, 4, 11, 22, 66

Which of the following describes the changes Gary needs to make to his lists to make his claim correct?

- A** add 7 to the list of the factors of 28 and add 33 to the list of the factors of 66
- B** remove 3 from the list of the factors of 28 and remove 4 from the list of the factors of 66
- C** add 7 and 21 and remove 4 from the list of the factors of 28; add 33 and remove 3 from the list of the factors of 66
- D** add 7 and remove 3 from the list of factors of 28; add 6 and 33 and remove 4 from the list of factors of 66

AlignmentConcepts and Procedures Standard: **04.MD.03.06**Mathematical Processes Standard: **4**Key: **C**

3. The measure of $\angle P$ is 12° .



Which of these is the **best** estimate of the measure of $\angle Q$?

- A 48°
- B 60°
- C 74°
- D 106°

Directions

Today you will take a test in mathematics. For this test, you will answer selected-response questions. Some of the questions may look different from test questions you have seen before, and some may ask about material that is new to you, but it is important to do your best. If you are not sure of the answer to a question, you should still try to answer it.

You MAY use a calculator to answer the questions in this section.

Alignment

Concepts and Procedures Standard: **04.G.01.02**

Mathematical Processes Standard: **7**

Key: **A**

4. Which sentence is true about all rhombuses?

- A Opposite sides must be parallel.
- B Opposite sides must be perpendicular.
- C All angles must be 90° .
- D All sides must be different lengths.

Alignment

Concepts and Procedures Standard: **04.NBT.01.03**

Mathematical Processes Standard: **N/A**

Key: **A, D**

5. Which numbers, when rounded to the nearest thousand, become 38,000? Select the **two** correct answers.

- A 38,029
- B 37,099
- C 38,501
- D 37,551
- E 37,490

AlignmentConcepts and Procedures Standard: **04.NBT.01.02**Mathematical Processes Standard: **N/A**Key: **A**

6. A zoo has four giraffes. Their weights are given in this table.

Giraffe Weights

Name	Weight (pounds)
Henry	2,298
Ida	2,423
Masi	2,407
Suzette	2,361

The zoo gets a new giraffe that weighs two thousand, three hundred eight pounds. Which giraffe has a weight closest to the weight of the new giraffe?

- A** Henry
- B** Ida
- C** Masi
- D** Suzette

AlignmentConcepts and Procedures Standard: **04.NF.02.03**Mathematical Processes Standard: **1**Key: **A**

7. There are 32 Dorset sheep and 18 Southdown sheep on a farm. Each sheep has 2 baby sheep.
- Which question **cannot** be answered with this information?
- A** What fraction of the baby sheep are black?
 - B** How many baby sheep are Southdown sheep?
 - C** What fraction of the baby sheep are Dorset sheep?
 - D** How many Dorset sheep and Southdown sheep are on the farm before the baby sheep are born?

AlignmentConcepts and Procedures Standard: **04.MD.01.01**Mathematical Processes Standard: **2**Key: **B**

8. Chin stood on one foot for $3\frac{1}{2}$ minutes.
- For how many seconds did he stand on one foot?
- A** 180
 - B** 210
 - C** 230
 - D** 350

Directions

Today you will take a test in reading. For this test, you will read passages and then answer questions about the passages. Some of the questions may look different from test questions you have seen before, and some may ask about material that is new to you, but it is important to do your best. If you are not sure of the answer to a question, you should still try to answer it.

You will now read two passages and answer the questions that follow. Some of the questions may ask you to compare the two passages.

Passage 1

What About Rain Forests?

by Joy Palmer

What Are Rain Forests?

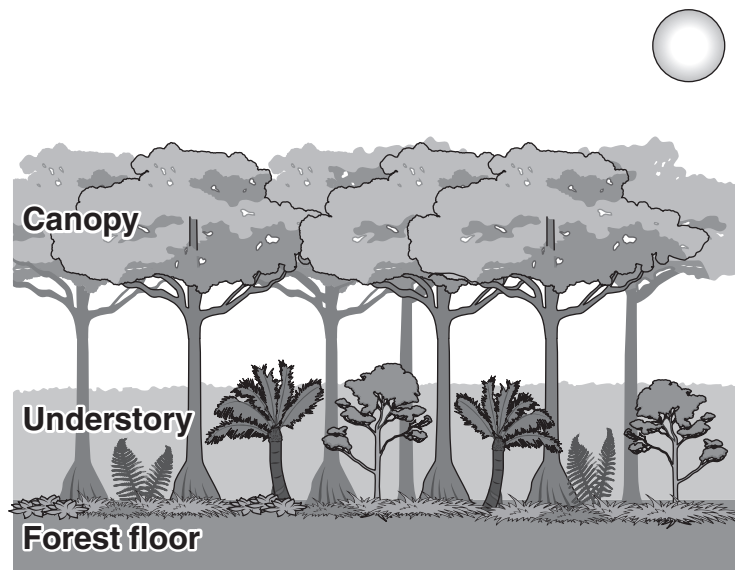
- 1 Rain forests are made up of tall trees and many other plants, all growing closely together. They cover huge areas of land. It is always hot and damp inside a rain forest, so plants keep growing all year round. Rain forests are home to the greatest variety of plants and animals in the world. People live there, too. The Amazon rain forest is the largest in the world.

Where Are Rain Forests?

- 2 Most rain forests grow in hot, wet parts of the world called the tropics. The tropics are near the equator. The equator is an imaginary line around the middle of the Earth, where the weather is warmest. Tropical rain forests are only found in countries near the equator.

What Are Rain Forests Like?

- 3 It is hot and dark, and often wet, inside a rain forest. Many forest trees are very tall and grow close together. Their leaves and branches act like an umbrella, blocking out the strong sunlight. This thick top layer of leaves and branches is called the forest canopy. The canopy is the top layer of the forest. It gets almost all the sunlight and rainfall. Shorter trees and other plants grow under the canopy between the taller trees. The understory is a place of shade. Very little sunlight reaches the plants that grow there. Very little grows on the dark forest floor. It is always covered with fallen leaves, flowers, and twigs.



© Measured Progress

What Is the Weather Like?

- 4 Rain forests are hot and wet all year around. The air inside a rain forest feels warm and damp. The trees help to make the rain. Big roots soak up water from the ground. The water is sucked up through the trunk into the leaves. The heat makes the water in the leaves evaporate into the air. This water vapor condenses to make clouds. Rain clouds release the rain onto the forest again.

Plants

- 5 Trees are the largest rain forest plants. Many rain forest trees have huge roots that show above the ground. These are called buttress roots. Many other plants grow underneath the trees. Some plants hang like thick ropes around the trunks and branches. Others live on the bark of the tree trunks. Many rare and unusual flowering plants grow in rain forests. The climbing pepper vine grows over other plants in sunlit clearings. The spiky leaves of a bromeliad let water flow easily into its center. A pitcher plant feeds on insects. It traps them inside its hollow leaves.

Birds

- 6 Brightly colored birds, like the macaw, nest in the trees. They fly from branch to branch in search of food. Some birds are fruit eaters, and some birds are seed eaters. Many smaller birds feed on insects or nectar. The hummingbird's long, thick beak can reach the nectar inside the flowers. Some birds, like the nightjar, live on the ground. They peck for food on the forest floor.

Insects and Spiders

- 7 Millions of tiny creatures such as insects and spiders live on the trees and in the undergrowth. Beetles, ants, and termites crawl among the dead leaves on the forest floor. They help to break up this forest litter. Leaf-cutter ants take leaves to their nests. They use them to make food. Termites help to clean the forest floor. They feed on dead wood. Butterflies and moths fly between the flowering plants, searching for nectar. They help to spread pollen from flower to flower.

People

- 8 People have lived in tropical rain forests for thousands of years. The forest provides them with food, shelter, clothes, tools, and medicines. Today there are millions of people living in rain forests around the world. They belong to different groups or tribes, each with its own customs. The Baka Pygmies live in the rain forests of West Africa. The Uru Eu Wau Wau, like many rain forest people, paint their bodies. The Kayapo hunt and grow crops in the forests of Brazil.

"What About Rain Forests?" by Joy Palmer, from *What About Rain Forests*. Copyright © 1995 by Joy Palmer. Republished by permission of the author.

Passage 2

What Is a Desert?

by Barbara Gowan

- 1 A desert can be hot or cold, rocky or sandy, barren or covered in cactus. It can have seas of sand or rivers of ice, towering mountains or valleys below sea level, sand dunes or rocky plains. But all deserts share one characteristic: They are arid, or very dry.
- 2 A desert [often] receives less than 10 inches of rain a year, and most of it comes in severe storms. Rain falls so hard and so fast that the ground cannot soak up all the water. Because the air is dry and the sun's rays are intense, the water evaporates quickly.
- 3 In the desert, there are extreme temperature differences from day to night. The blazing sun heats the desert during the day. At night, temperatures fall rapidly. It can drop from 100°F to 60°F in just a few hours.
- 4 Did you know that [more than] one third of the land surface of our planet is desert? North American deserts are called rain shadow deserts. This means they form in the shadow of the rain clouds. On one side of mountains in the west, warm, moist air from the Pacific Ocean rises and forms clouds. As the clouds move east across the mountains, rain falls. But when the clouds reach the other side, they no longer carry [much] moisture. So the rainy side is wet and covered with trees, while the rain shadow side is dry and bare.
- 5 It seems surprising, but some deserts are right next to water. Ocean currents chill the air, creating a thick fog blanket that traps moisture within it. So the land is arid—a desert.
- 6 Other, cold deserts form because they are too far away from the ocean. By the time the air mass moves inland, there is no moisture left to form clouds. That means no rain falls.
- 7 However they are formed and wherever they are, the world's deserts are fascinating places. So grab some water, and get ready to take a hike in the desert!

"What Is a Desert?" by Barbara Gowan, from *Appleseeds Magazine*, June 2014. Copyright © 2014 by Carus Publishing Company d/b/a Cricket Media.

Grade 4 | Reading

Alignment

Standard: **RI.04.05**

Key: **C**

1. Read the sentences from Passage 1.

Many forest trees are very tall and grow close together. Their leaves and branches act like an umbrella, blocking out the strong sunlight.

Which **best** tells how the two sentences are connected?

- A** The sentences explain how two events are similar to each other.
- B** The sentences explain how two events are different from each other.
- C** The first sentence explains a cause, and the second sentence shows an effect.
- D** The first sentence explains the first step in a process, and the second sentence tells the last step.

Alignment

Standard: **RI.04.07**

Key: **A**

2. How do the picture and its labels support the information in Passage 1?

- A** They show the parts of a rain forest.
- B** They show insects that live in a rain forest.
- C** They explain how the plants grow in a rain forest.
- D** They explain how heat becomes trapped in a rain forest.

Grade 4 | Reading

Alignment

Standard: **RI.04.03**

Key: **B**

3. According to the part **What Is the Weather Like?** in Passage 1, what causes the water in the leaves to form into clouds?
- A The roots collect water from the ground.
 - B The warmth of the air evaporates the water.
 - C The rain clouds release water into the forest.
 - D The water moves up the trunk from the roots.

Alignment

Standard: **RI.04.02**

Key: **D**

4. Which detail from Passage 1 **best** supports the idea that animals do important tasks in the rain forest?
- A "Some birds are fruit eaters, and some birds are seed eaters."
 - B "Some birds, like the nightjar, live on the ground."
 - C "Millions of tiny creatures such as insects and spiders live on the trees and in the undergrowth."
 - D "Termites help to clean the forest floor."

Grade 4 | Reading

Alignment

Standard: **RI.04.02**

Key: **D, A**

This question has two parts. Be sure to answer both parts of the question.

5. What is Passage 1 **mainly** about?
- A** ways to live in tropical rain forests
 - B** how tropical rain forests are formed
 - C** where tropical rain forests are located
 - D** ways that tropical rain forests are special

Which detail from the passage **best** supports the answer above?

- A** "Rain forests are home to the greatest variety of plants and animals in the world."
- B** "It is hot and dark, and often wet, inside a rain forest."
- C** "Trees are the largest rain forest plants."
- D** "Today there are millions of people living in rain forests around the world."

Alignment

Standard: **RI.04.01**

Key: **B**

6. According to paragraph 1 of Passage 2, what do all deserts have in common?
- A** They are hot.
 - B** They are dry.
 - C** They are flat.
 - D** They are sandy.

Grade 4 | Reading

Alignment

Standard: **RI.04.04**

Key: **C**

7. What is the meaning of the phrase soak up in paragraph 2 of Passage 2?
- A catch
 - B empty
 - C take in
 - D pour out

Alignment

Standard: **RI.04.03**

Key: **C**

8. Based on paragraph 4 of Passage 2, which **best** explains why the land on one side of the Pacific coast mountains is wet and covered with trees, while the other side is dry and bare?
- A The mountains are next to an ocean.
 - B The mountains are covered by shadows.
 - C Most of the rain falls on one side of the mountains.
 - D Most of the clouds form on one side of the mountains.

Grade 4 | Reading

Alignment

Standard: **RI.04.05**

Key: **D**

9. Read the sentences from paragraph 5 in Passage 2 below.

Ocean currents chill the air, creating a thick fog blanket that traps moisture within it. So the land is arid—a desert.

How is the information in the sentences **mainly** presented?

- A** by asking a question
- B** by comparing and contrasting
- C** by stating a problem and a solution
- D** by making a cause-and-effect statement

Grade 4 | Language Usage

Directions

Today you will take a test in language usage. For this test, you will read a passage and answer questions. Some questions might ask about how to improve the passage. Other questions might ask you to correct errors in the passage. Some of the questions may look different from test questions you have seen before, and some may ask about material that is new to you, but it is important to do your best. If you are not sure of the answer to a question, you should still try to answer it.

Read the passage. Then answer the questions that follow.

Time with a Friend

1. A gentle breeze brushed the branches of the peach trees, sending their sweet, summery smell into the air. **2.** The best friends relaxed on Karen's porch as they waited for Anita's father to come pick Anita up. **3.** They were feeling sad that their day was coming to an end. **4.** "Why does time go by so quickly when we hang out?" sighed Karen.

5. Afterward, Anita sat up straight. **6.** "I have an idea!" she said. **7.** "Maybe you can come to the zoo with me tomorrow!"

8. "I'd love to," Karen said. **9.** "But I already promised my mom that I would pick peaches with her." **10.** She didn't want to disappoint her best friend, but she was eager to help her mother pick peaches. **11.** It was a difficult decision.

12. Anita stood to leave as she saw her father's big blue truck turning into the driveway. **13.** Karen waved goodbye and then continued to sit on the porch wondering what she should do. **14.** Her thoughts were interrupted by the sound of the squeaky door as her mother walked out of the house and sat beside her.

15. "We sure have a lot of peaches this year, Karen's mother said." **16.** "And we will not be able to pick them all at once. **17.** Maybe we can pick just enough to make pies later this week," she suggested, giving Karen a gentle squeeze.

18. "Mom," Karen began. **19.** "Can Anita come over and bake with us? **20.** She loves peach pies!" **21.** Karen was excited by her new idea. **22.** Her mother said yes just as the phone rang.

23. "I bet that's Anita!" Karen shouted.

"Time with a Friend" © 2015 by Cognia, Inc.

Grade 4 | Language Usage

Alignment

Standard: **W.04.03.a**

Key: **D**

1. Which sentence would be the **best** to add before sentence 1 to help the reader understand the passage?
- A** The afternoon was coming to an end, and Anita and Karen were thinking about their other friends.
 - B** Anita and Karen were talking excitedly about their plan to go to the zoo.
 - C** Anita and Karen were hardly speaking to each other after another long argument.
 - D** It was a beautiful day, and Anita and Karen had spent it playing together.

Alignment

Standard: **W.04.03.c**

Key: **B**

2. How should the underlined word in sentence 5 be changed?
- A** NO CHANGE
 - B** All of a sudden,
 - C** Sooner or later,
 - D** At the same time,

Grade 4 | Language Usage

Alignment

Standard: **W.04.03.a**

Key: **A**

3. Where should sentence 12 be moved to **best** organize the events in the passage?
- A** NO CHANGE
 - B** after sentence 7
 - C** after sentence 9
 - D** after sentence 13

Alignment

Standard: **L.04.02.b**

Key: **D**

4. How should sentence 15 be changed?
- A** NO CHANGE
 - B** "We sure have a lot of peaches," this year Karen's mother said.
 - C** "We sure have a lot of peaches this year" Karen's mother said.
 - D** "We sure have a lot of peaches this year," Karen's mother said.

Grade 4 | Language Usage

Alignment

Standard: **W.04.03.d**

Key: **A**

5. What is the **most likely** reason the writer uses the phrase “gentle squeeze” in sentence 17?
- A** to suggest that Karen’s mom is caring
 - B** to illustrate that Karen’s mom is strict
 - C** to show that Karen’s mom changes her mind quickly
 - D** to demonstrate that Karen’s mom knows the work will be hard

Alignment

Standard: **W.04.03.e**

Key: **A, C**

This question has two parts. Be sure to answer both parts of the question.

6. Which sentence should be added at the end of the passage to provide the **best** conclusion?
- A** “I can’t wait to tell her about our plan!”
 - B** “How will I explain my decision to her?”
 - C** “Maybe she wants to get started picking peaches right away.”
 - D** “When two best friends work together, they can solve any problem.”

Which detail from the passage **best** supports the answer to the question above?

- A** “she was eager to help her mother pick peaches”
- B** “wondering what she should do”
- C** “Karen was excited by her new idea.”
- D** “just as the phone rang”



cognia.org