



# MAP 8<sup>th</sup> Grade

# PDF Sample Test

Math, Reading, Language Usage, and Science Practice Questions



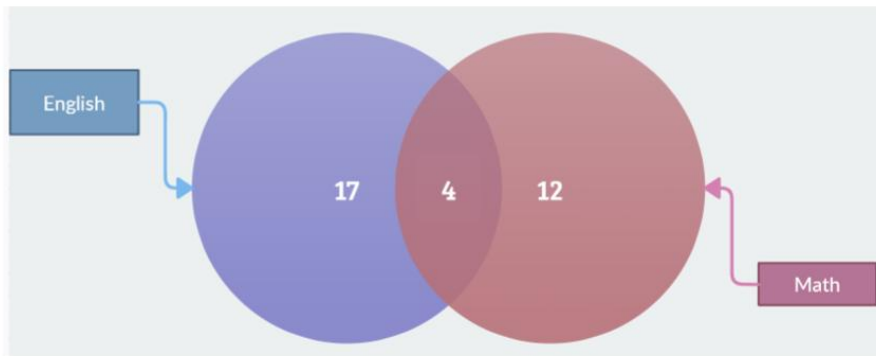
\* The correct answers and explanations are located at the end of this PDF.

## NWEA MAP 8<sup>th</sup> Grade Math Practice Questions

### Question #1

#### Statistics and Probability Sample Question - Below-Grade-Level

The Venn diagram below shows the number of students enrolled in different subjects in a class.



How many students are enrolled only in English and not in Math?

- A. 17
- B. 21
- C. 33
- D. 29

### Question #2

#### Operations and Algebraic Thinking Sample Question - At-Grade-Level

A "Sports Championship" has 180 participants, divided into 15 teams. Each participant competes in four events, and all teams take part in the same events. Each team sends one representative to every event.

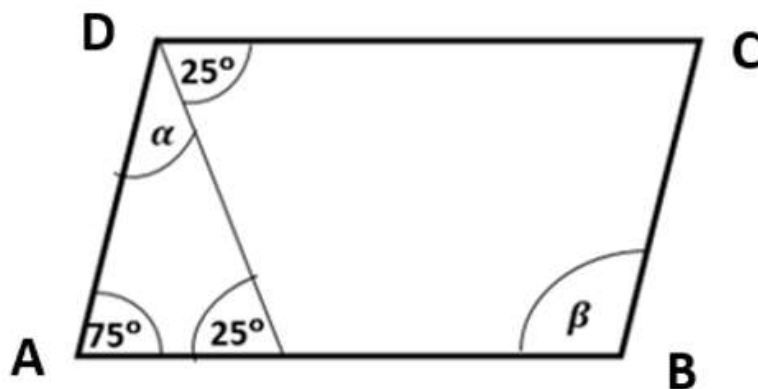
Estimate the number of events.

- A. 12
- B. 48
- C. 45
- D. 58

Question #3

**Geometry Sample Question - Above-Grade-Level**

Use the following shape to find  $\alpha$  and  $\beta$



- A.  $\alpha=155^\circ, \beta=100^\circ$
- B.  $\alpha=80^\circ, \beta=105^\circ$
- C.  $\alpha=105^\circ, \beta=80^\circ$
- D.  $\alpha=105^\circ, \beta=105^\circ$

**NWEA MAP 8<sup>th</sup> Grade Reading Practice Questions**

Question #4

**Informational Text Sample Question - Below-Grade-Level**

Read the text about "Protecting the Rainforest"

## Text 1

by Maria Lopez

Maria Lopez explains the urgent need to protect rainforests because they are home to more than half of the world's plant and animal species. She focuses on the role of global warming and how cutting down trees increases carbon dioxide in the air. She calls for stronger international laws and cooperation between countries to reduce deforestation.

## Text 2

by Jamal Carter

Jamal Carter emphasizes the importance of community-based solutions to protect rainforests. He highlights how local groups work together to plant trees and monitor illegal logging. Jamal also discusses how educating farmers about sustainable methods can help preserve the forests while still supporting their livelihoods.

Compare the details included in both texts:

Detail	Text 1	Text 2
Rainforests are home to many species	✓	✓
Deforestation increases global carbon levels	✓	x
International cooperation is needed	✓	x
Community involvement is key to rainforest protection	x	✓
Educating locals supports both people and forests	x	✓

Who would likely agree that rainforests are important because they support a large number of plants and animals?

- A. Author of Text 1
- B. Author of Text 2



- C. Both Authors
- D. None of the Above

#### Question #5

### Vocabulary Sample Question - At-Grade-Level

What does the word charge mean in the sentence below?

The knight lowered his sword and began to charge at the enemy.

- A. To give someone a job or responsibility
- B. To ask someone to pay a price
- C. To put electricity into a battery
- D. To rush forward in attack

#### Question #6

### Literary Text Sample Question - Above-Grade-Level

Read the passage below. Then choose the correct narrative point of view.

Jason stared out the window, watching the rain trace slow lines down the glass. He wished he had remembered his umbrella this morning. Across town, Maria hurried through the crowded street to catch the bus, not knowing that her brother was thinking of her at that very moment.

What is the narrative point of view in this passage?

- A. First person
- B. Third person omniscient
- C. Second person
- D. Third person limited

## NWEA MAP 8<sup>th</sup> Grade Language Usage Practice Questions

#### Question #7

### Understand and Edit for Mechanics Sample Question - Below-Grade-Level



Which sentence uses commas correctly with an interrupter?

- A. The truth however is that we may never know.
- B. The truth however, is that we may never know.
- C. The truth however is, that we may never know.
- D. The truth, however, is that we may never know.

#### Question #8

### **Understand, Edit for Grammar, Usage - At-Grade-Level**

**Identify the gerund and its function in the following sentence:**

The experiment was repeated multiple times to ensure accuracy. \_\_\_\_\_, the results still showed slight inconsistencies.

- A. Nevertheless
- B. In addition
- C. Consequently
- D. For example
- E. Likewise

#### Question #9

### **Write & Revise Texts for Purpose and Audience Sample Question - Above-Grade-Level**

**Read the following paragraph and choose the best topic sentence:**

Students today face an increasing number of distractions while studying, from buzzing smartphones to streaming platforms. These distractions can lower productivity, reduce concentration, and negatively impact academic performance. Effective time management strategies and minimizing digital interruptions are key to maintaining focus.

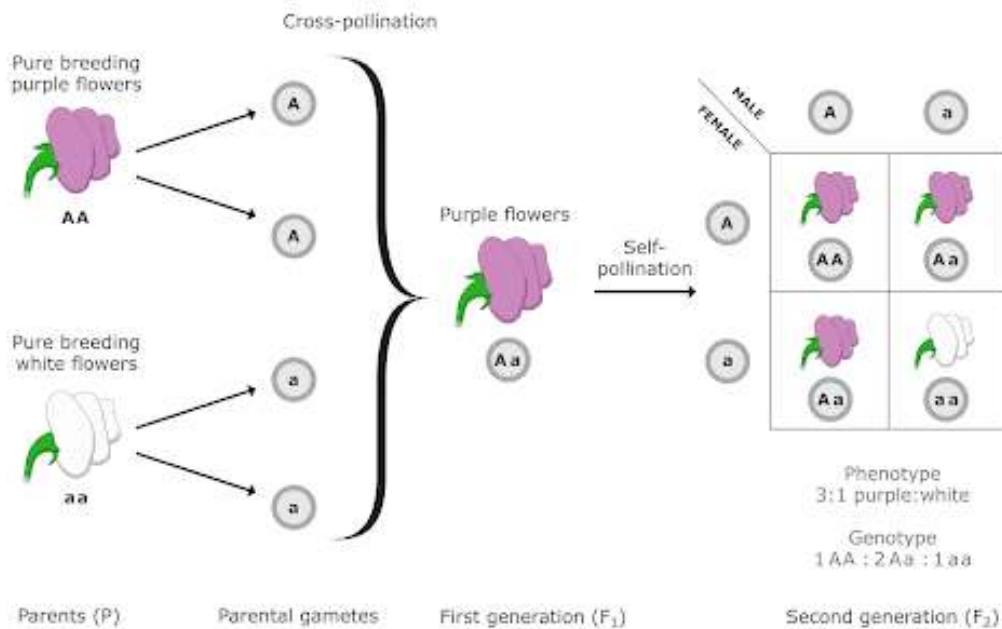
- A. Technology has improved students' lives in many ways.
- B. Students should spend more time on social media to stay connected.
- C. Distractions are unavoidable, so students should multitask.
- D. Many students struggle with distractions that negatively affect their focus and academic success.

## NWEA MAP 8<sup>th</sup> Grade Science Practice Questions

### Question #10

#### Life Sciences Sample Question - Below-Grade-Level

This pea plant has purple flowers. It grew from seeds produced by Parent 1 (purple flowers) and Parent 2 (white flowers). The offspring's flower color is an example of an inherited trait.



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From which parent(s) did it likely inherit the information for its flower color?

- A. Only Parent 1 (purple)
- B. Only Parent 2 (white)
- C. From both parents
- D. From the soil

**Question #11**

**Earth and Space Sciences Sample Question - At-Grade-Level**

A geologist studies the rock layers shown in the diagram.



**What does this pattern of fossils most likely indicate about the history of this landscape?**

- A.** The area has always been deep under the ocean.
- B:** The area was once dry land and was later covered by an ocean.
- C:** The area was once an ocean and later became a dry, tropical forest.
- D:** Land plants and sea creatures have always lived together in this area.

## Question #12

### Physical Sciences Sample Question - Above-Grade-Level

A company wants to develop a new type of instant cold pack that uses the dissolving of a chemical salt in water to absorb thermal energy and become cold. They are testing two salts, Salt X and Salt Y.



**Test 1:** 10g of Salt X dissolved in 100mL of water causes a 15°C temperature drop.

**Test 2:** 10g of Salt Y dissolved in 100mL of water causes a 10°C temperature drop.

**Constraint:** The cold pack must not cost more than \$0.50 per unit to produce. Salt X costs \$0.20 per 10g, and Salt Y costs \$0.10 per 10g. The other components cost \$0.25.

**Based on achieving the greatest cooling effect while meeting the cost constraint, which salt is the better choice and why?**

- A. Salt X, because it causes a greater temperature drop, and the total cost is \$0.45.
- B. Salt Y, because it is cheaper, even though it cools less.
- C. Salt X, because it cools more, even though it makes the pack cost \$0.55.



D. Salt Y, because it meets the cost constraint (\$0.35 total) and still provides significant cooling.

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## Correct Answers & Explanations

### Question #1

Correct answer: A

Explanation:

From the above Venn diagram:

- 17 students were enrolled in English but not in Math.
- 4 students were enrolled in both subjects.
- 12 students were enrolled in Math but not in English.

Hence, Option A is correct.

### Question #2

Correct answer: B

Explanation:

Total participants: 180

Number of teams: 15

Each participant competes in 4 events.

Each team sends 1 representative per event.



The number of events is independent of the total number of participants. It depends only on how many representatives (one per team) are required to compete in each event.

Since there are 15 teams, and each team sends 1 representative per event, the number of events is determined by dividing the total number of participants' events ( $180 \text{ participants} \times 4 \text{ events} = 720 \text{ participant-events}$ ) by the representatives per event (15 teams).

$$\text{Total events} = 720/15$$

$$\text{Total events} = 48 \text{ (option B).}$$

### Question #3

**Correct answer: B**

**Explanation:**

The sum of the interior angles in any triangle is always  $180^\circ$ .

So,

$$75^\circ + 25^\circ + \alpha = 180^\circ$$

Solving for  $\alpha$ :

$$100^\circ + \alpha = 180^\circ$$

$$\alpha = 180^\circ - 100^\circ$$

$$\alpha = 80^\circ$$

Now, we find  $\beta$ :

$$\angle D = \alpha + 25^\circ$$

$$\angle D = 80^\circ + 25^\circ \text{ (using } \alpha = 80^\circ \text{)}$$

$$\angle D = 105^\circ$$

In a parallelogram, opposite angles are equal.

$$\angle D = \angle B$$

$$\beta = 105^\circ$$

Hence, Option B is correct.

### Question #4



**Correct answer: C. Both Authors**

**Explanation:**

Both texts clearly mention that rainforests are home to many species.

Maria Lopez (Text 1) stresses the need to protect the habitats of these animals, while Jamal Carter (Text 2) also acknowledges this fact as part of the reason communities work to protect the rainforest.

### **Question #5**

**Correct answer: D. To rush forward in attack**

**Explanation:**

In this context, the sentence describes a knight in battle. The phrase “lowered his sword” sets the scene for action or combat. So, charge means to rush forward quickly toward someone in an aggressive or attacking way.

Why the other choices are incorrect:

A. To give someone a job or responsibility:

While charge can mean being in charge of something, this sentence doesn't mention leadership or responsibility – it describes physical action.

B. To ask someone to pay a price:

This definition is about money (like at a store), which has nothing to do with a knight in battle.

C. To put electricity into a battery:

This meaning of charge relates to technology or energy, not physical movement or fighting.

### **Question #6**

**Correct Answer: B. Third person omniscient.**

**Explanation:**

The narrator describes the thoughts and actions of more than one character (Jason and Maria), which is a key feature of the third-person omniscient point of view.



### Why the other choices are incorrect:

A. First person

The passage does not use “I” or “my,” and the narrator is not a character in the story.

C. Second person

There is no use of “you,” which would be necessary for second-person narration.

D. Third person limited

This point of view would only reveal the thoughts of one character, but this passage reveals both Jason’s and Maria’s perspectives.

### Question #7

**Correct answer: D. The truth, however, is that we may never know.**

#### **Explanation:**

“However” is an interrupter, so it must be set off by commas.

**Rule:** Use commas around interrupters to show they break the flow but are part of the sentence.

### Question #8

**Correct answer: A. Nevertheless**

#### **Explanation:**

- “Nevertheless” is a conjunctive adverb used to introduce a contrast or unexpected result. It fits perfectly because, despite repeated testing, inconsistencies remained.
- **Why the other choices are incorrect:**
- In addition – Adds information but doesn’t show contrast.
- Consequently – Shows a result, but here the second idea contrasts with the first.
- For example – Introduces an example, not used here.



- Likewise – Indicates similarity, not contrast.

### Question #9

**Correct Answer: D. Many students struggle with distractions that negatively affect their focus and academic success.**

This sentence directly introduces the main idea that the paragraph develops: distractions and their impact on students' focus and performance.

**Why the other choices are incorrect:**

- A) While technology has benefits, the paragraph focuses on distractions, not improvements.
- B) This contradicts the paragraph's point by encouraging distraction rather than addressing it.
- C) This dismisses the problem instead of introducing it as something that negatively impacts students.

### Question #10

**Correct Answer: C. From both parents**

Organisms inherit traits, or characteristics, from their parents through genetic information.

For sexually reproducing organisms like pea plants, offspring receive genetic information from both parents.

Even though the offspring plant shows purple flowers (which is a dominant trait in peas over white), it inherited genetic information related to flower color from both the purple-flowered parent and the white-flowered parent.

The way these inherited traits are expressed can be complex, but the genetic foundation comes from both contributors.

### Question #11

**Correct Answer: B**

The principle of superposition in geology states that in undisturbed rock layers, the oldest layers are at the bottom and the youngest are at the top.



The diagram shows that the lower, older rock layer contains fossils of land plants, indicating the environment was once dry land.

The upper, younger layer contains marine fossils, indicating the environment changed and became covered by an ocean.

This evidence from rock strata allows scientists to reconstruct the history of a landscape and see how it has changed over millions of years.

### **Question #12**

**Correct Answer: A**

This problem requires evaluating two design solutions (using Salt X vs. Salt Y) based on criteria (greatest cooling) and constraints (cost).

Cost with Salt X (\$0.45) meets the constraint. Cost with Salt Y (\$0.35) meets the constraint.

Since both salts meet the cost constraint, the better choice is the one that best meets the primary performance criterion: cooling.

Salt X provides a greater temperature drop (15°C vs 10°C) while still keeping the total cost at \$0.45, which is within the \$0.50 limit. Therefore, Salt X is the better choice.

Option C incorrectly calculates the cost for Salt X.

Option D correctly identifies Salt Y meets the cost constraint but undervalues the superior cooling of Salt X which also meets the constraint.

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