



# MAP 10<sup>th</sup> Grade

# PDF Sample Test

Downloadable Practice Test with Answers – Get a Feel for the  
Exam Topics & Increase Your Chances of Scoring High

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

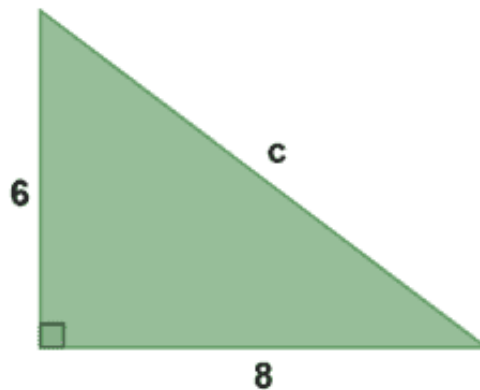
# Practice Questions

## NWEA MAP 10<sup>th</sup> Grade Math Practice Questions

### Question #1

#### Geometry

In a right triangle, the lengths of the two legs are 6 and 8. What is the length of the hypotenuse?



- A. 10
- B. 12
- C. 14
- D. 16
- E. 18

### Question #2

#### Operations and Algebraic Thinking

Given the equation  $y - 5 = -3(x + 2)$ , which point is on the graph of this line?

- A. (2,5)
- B. (-2,5)
- C. (-2,8)
- D. (2,8)
- E. (5,-2)



### Question #3

#### **Statistics and Probability**

What is the second quartile (Q2) of the data set below?

**3, 5, 7, 8, 12, 14, 17, 19, 20**

- A. 6
- B. 11
- C. 12
- D. 14
- E. 18

### Question #4

#### **The Real and Complex Number Systems**

A smartphone originally cost \$800. During a clearance event, the store reduced the price by 20%. One week later, the store applied an additional 10% discount to the new price.

**What was the final price of the smartphone after both discounts?**

- A. \$560
- B. \$576
- C. \$600
- D. \$640
- E. \$720

## **NWEA MAP 10<sup>th</sup> Grade Reading Practice Questions**

### Question #5

#### **Literary Text**

**Read the quotation.**

“It is not our abilities that show what we truly are... it is our choices.”  
—J.K. Rowling, Harry Potter and the Chamber of Secrets

**Which theme is most strongly supported by this quotation?**



- A. Natural talent determines a person's destiny.
- B. Success depends mainly on intelligence.
- C. Society defines who a person becomes.
- D. Personal responsibility shapes one's identity.
- E. People cannot escape their inherent traits.

#### Question #6

### Vocabulary

Read the sentence.

"While everyone else contributed generously, Marcus clutched his wallet and muttered about 'wasteful spending,' earning himself the nickname 'Scrooge' from his classmates."

**What does the allusion to "Scrooge" most strongly suggest about Marcus?**

- A. He is cautious and thoughtful about financial decisions.
- B. He dislikes participating in group activities.
- C. He is unwilling to share his money and lacks generosity.
- D. He feels pressured by others to donate.
- E. He prefers to save money for future responsibilities.

#### Question #7

### Informational Text

Read the following text.

**"I Have a Dream"**

"But there is something that I must say to my people who stand on the warm threshold which leads into the palace of justice. In the process of gaining our rightful place, we must not be guilty of wrongful deeds. Let us not seek to satisfy our thirst for freedom by drinking from the cup of bitterness and hatred. We must forever conduct our struggle on the high plane of dignity and discipline. We must not allow our creative protest to degenerate into physical violence. Again and again, we must rise to the majestic heights of meeting physical force with soul force."

–**Dr. Martin Luther King Jr.'s "I Have a Dream" speech**, delivered on August 28, 1963, during the March on Washington.



**Passage Excerpt:**

“Let us not seek to satisfy our thirst for freedom by drinking from the cup of bitterness and hatred. We must forever conduct our struggle on the high plane of dignity and discipline.”

**Which rhetorical strategy does the speaker mainly use in this excerpt?**

- A. Appeal to fear
- B. Use of statistics
- C. Repetition
- D. Metaphor
- E. Irony

## **NWEA MAP 10<sup>th</sup> Language Usage Practice Questions**

**Question #8**

**Understand and Edit for Mechanics**

Choose the sentence that uses the correct form of the superlative adverb.

- A. Out of the three contestants, she answered more politely than the others during the final round of questions
- B. He explained the entire scientific process most clearly than anyone else on the team, according to the teacher.
- C. She worked more hard than her classmates to finish the final project on time and with accuracy.
- D. Out of all the employees in the department, Mark arrived the earliest to the staff meeting and prepared the agenda.
- E. I solved the equation more faster than usual when the math challenge timer began.

**Question #9**

**Understand, Edit for Grammar, Usage**

**Which revision of the sentence best maintains correct parallel structure while preserving the original meaning?**

**Original:**

The committee valued members who were willing to lead discussions, organizing community events, and who actively participate in outreach programs



- A. The committee valued members who were willing to lead discussions, organize community events, and actively participate in outreach programs.
- B. The committee valued members who were willing to lead discussions, organizing community events, and actively participating in outreach programs.
- C. The committee valued members who were willing to lead discussions, to organize community events, and actively participate in outreach programs.
- D. The committee valued members who lead discussions, organizing community events, and actively participate in outreach programs.
- E. The committee valued members willing to lead discussions, organization of community events, and participating in outreach programs.

### Question #10

#### **Write & Revise Texts for Purpose and Audience**

Read the following excerpt from a student essay.

Excerpt:

Many animals are cool because they do cool things to survive. For example, some animals live in the desert, and they have stuff that helps them not get too hot. Also, some animals are able to find water, which is good. All these things show that animals are great at surviving.

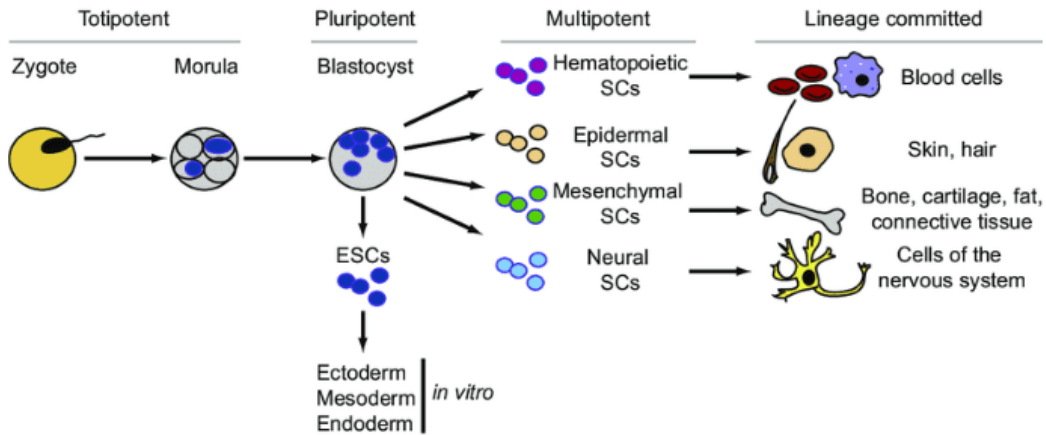
**Which revision strategy would most improve the writer's word choice in this paragraph?**

- A. By keeping casual words like “cool” and “stuff” so the paragraph sounds fun.
- B. By repeating the phrase “animals are great” more often to emphasize the idea.
- C. By using simpler language so younger readers will understand more easily.
- D. By including more emotional words to describe how amazing animals are.
- E. By replacing vague and casual words with specific, academic vocabulary that better explains the survival traits of animals.

## **NWEA MAP 10<sup>th</sup> Grade Science Practice Questions**

### Question #11

#### **Life Science**



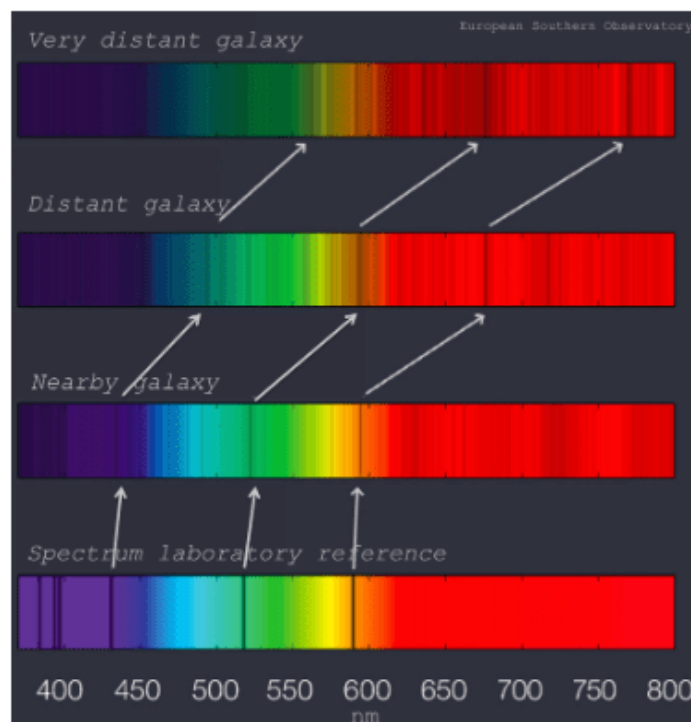
A complex multicellular organism, like a human, begins as a single fertilized egg, or zygote. Through billions of cell divisions, it develops into an organism with many different types of specialized cells.

**Which two processes are most directly responsible for this development?**

- A. Meiosis and fertilization
- B. Mitosis and cell differentiation
- C. Transcription and translation
- D. Natural selection and adaptation.

**Question #12**

**Earth and Space Science Physical Science**



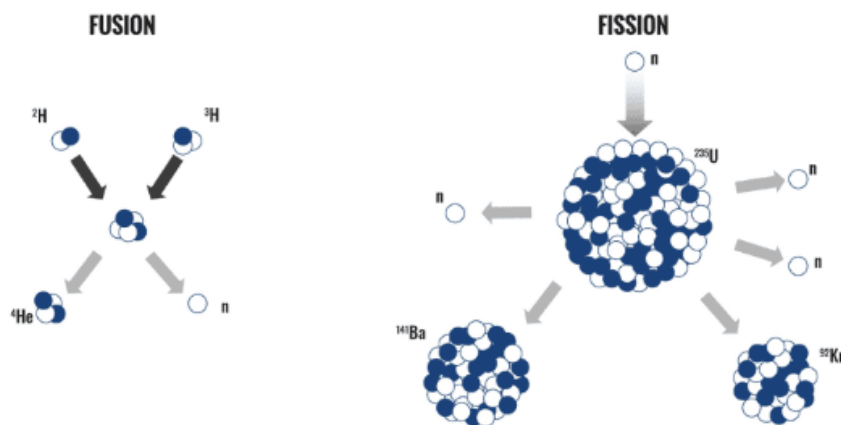
The diagram shows that the spectral lines from a distant galaxy are “redshifted” compared to a laboratory sample.

**What is the primary conclusion scientists draw from the observation that light from almost all distant galaxies is redshifted?**

- A. The distant galaxies are composed of different elements than those found on Earth.
- B. The distant galaxies are moving towards Earth at high speeds.
- C. The universe is expanding, causing the galaxies to move away from us and stretching the light waves.
- D. The light from distant galaxies loses energy and becomes redder as it travels through space.

**Question #13**

**Earth and Space Science Physical Science**



The diagram illustrates two types of nuclear reactions.

**How does the energy released in nuclear fusion and fission compare to the energy released in a typical chemical reaction, such as burning methane?**

- A. The energy released is on a much smaller scale.
- B. The energy released is on a comparable, but slightly larger, scale.
- C. The energy is absorbed in nuclear reactions, while it is released in chemical reactions.
- D. The energy released is on a vastly larger scale, by orders of magnitude.

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# Correct Answers & Explanations

## Question #1

Correct answer: A

Explanation:

You can use the Pythagorean Theorem to find the length of the hypotenuse in a right triangle.

The Pythagorean Theorem states that for a right triangle with legs  $a$  and  $b$ , and hypotenuse  $c$ :

$$a^2 + b^2 = c^2$$

Given: Leg 1:  $a = 6$ ; Leg 2:  $b = 8$

Apply the Pythagorean Theorem

$$a^2 + b^2 = c^2$$

$$(6)^2 + (8)^2 = c^2$$

$$36 + 64 = c^2$$

$$100 = c^2$$

Solve for  $c$ . Take the square root of both sides:

$$10 = c$$

The length of the hypotenuse is 10 units.

## Question #2

Correct answer: B

Explanation:

The equation is already in point-slope form:



$$y - y_1 = m(x - x_1)$$

Where:

$m$  = slope

$(x_1, y_1)$  = point the line passes through

In this case, comparing  $y - 5 = -3(x + 2)$  with  $y - y_1 = m(x - x_1)$ , we get:

The slope  $m = -3$ .

The point  $(x_1, y_1) = (-2, 5)$ .

So, the line passes through the point  $(-2, 5)$ .

We can verify this by substituting  $x = -2$  into the equation, and we should get  $y = 5$ :

$$y - 5 = -3(x + 2)$$

$$y - 5 = -3(-2 + 2)$$

$$y - 5 = -3(0)$$

$$y - 5 = 0$$

$$y - 5 + 5 = 0 + 5$$

$$y = 5$$

Since  $y = 5$  when  $x = -2$ , the point  $(-2, 5)$  is on the graph of the line  $y - 5 = -3(x + 2)$ .

### Question #3

**Correct answer:** C

**Explanation:**

The Second Quartile (Q2), also known as the median, represents the 50th percentile of the data set. It splits the data into two equal parts, with half of the values below it and half above it.

The median is the middle value of the ordered data set. Since there are 9 numbers in the data set, the median is the number at the 5th position. Make sure the given data is arranged in ascending order.

<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>9th</u>
<u>3</u>	<u>5</u>	<u>7</u>	<u>8</u>	<u>12</u>	<u>14</u>	<u>17</u>	<u>19</u>	<u>20</u>

Here, the 5th number is 12.

So, the second quartile (Q2) is 12.

#### **Question #4**

**Correct answer: B**

**Explanation:**

This problem involves two percentage decreases applied one after the other.

Percent decreases are **applied multiplicatively, not by simply adding percentages.**

**Step 1:** Apply the first 20% discount.

20% of 800 is:

$$0.20 \times 800 = 160$$

Or to make it simpler, 10% of 800 is 80, and then multiply by 2 to get the 20% ( $80 \times 2 = 160$ ).

Subtract from original price:

$$800 - 160 = 640$$

After the first discount, the price is \$640.

**Step 2:** Apply the second 10% discount to the new price.

10% of 640 is:

$$0.10 \times 640 = 64$$

Subtract:



$$640 - 64 = 576$$

**Final price = \$576**

### **Question #5**

**Correct answer: D**

#### **Explanation:**

The quotation says that our abilities do not define who we truly are. Instead, it says our choices define us.

This means the author is emphasizing that what we decide to do matters more than the skills or talents we are born with.

Let's look at the options:

**A** is incorrect because the quotation says abilities do not show who we truly are.

**B** is incorrect because intelligence is a type of ability, and the quotation says abilities are not what define us.

**C** is incorrect because the quotation does not mention society or other people.

**E** is incorrect because the quotation suggests the opposite – we are defined by our choices, not trapped by our traits.

Choice **D** is correct because it explains that a person's identity is shaped by the decisions they make. That idea matches the quotation exactly.

### **Question #6**

**Correct Answer: C**

#### **Explanation:**

The name "Scrooge" refers to Ebenezer Scrooge from A Christmas Carol, who is famous for being greedy and unwilling to spend money.

In the sentence, Marcus:



- Clutches his wallet
- Complains about “wasteful spending”
- Is called “Scrooge” by classmates

This context shows that he does not want to give money and appears stingy.

Let's look at the answer choices:

**A** and **E** suggest he is simply careful with money. That is not strong enough to match the negative tone of the nickname.

**B** focuses on group participation, which is not the main idea.

**D** suggests he feels pressured, but the sentence does not show that.

**C** correctly captures the negative meaning of the allusion – that Marcus is not generous and does not want to share his money.

### Question #7

**Correct answer: D. Metaphor**

**Explanation:**

The phrase “drinking from the cup of bitterness and hatred” is a metaphor comparing bitterness and hatred to a poisonous drink.

Why the other choices are incorrect:

- **A. Appeal to fear:** The speaker is not trying to frighten the audience but rather encouraging moral action.
- **B. Use of statistics:** No numerical evidence or data is used.
- **C. Repetition:** The passage does not repeat any words or phrases for emphasis.
- **E. Irony:** There is no irony (saying the opposite of what is meant) in this excerpt.

### Question #8

**Correct answer: D. Out of all the employees in the department, Mark arrived the earliest to the staff meeting and prepared the agenda.**

**Explanation:**



- The word “**earliest**” is the correct superlative form

of the adverb early. It is used appropriately in this sentence to show that Mark arrived before everyone else, comparing him to all other employees.

Why the other choices are incorrect:

- **A.** “More politely” is a comparative adverb, but the phrase “out of the three” calls for a superlative form like “most politely.”
- **B.** “Most clearly than” is incorrect because “than” must be paired with a comparative (“clearer”), not a superlative.
- **C.** “More hard” is incorrect. The proper comparative is “harder” or “more diligently,” depending on the meaning.
- **E.** “More faster” is a redundant construction. “Faster” alone is already the correct comparative form.

### Question #9

**Correct Answer: A.**

**Explanation:**

Parallel structure means that items in a list must follow the same grammatical form.

In the original sentence, the actions do not match:

- “to lead discussions” (infinitive form implied by “willing to”)
- “organizing community events” (gerund form)
- “who actively participate” (verb clause)

These are not parallel.

“**A**” is correct because all three verbs are in the same base form after “willing to.”

This creates consistent and correct parallel structure.

“lead discussions, organize community events, and actively participate”

B. Incorrect

“lead discussions, organizing community events, and actively participating”



This version changes the last two actions into gerunds (organizing, participating), while the first remains in base form (lead). The forms do not match.

#### C. Incorrect

“lead discussions, to organize community events, and actively participate”

This version mixes base verbs (“lead,” “participate”) with an infinitive phrase (“to organize”).

Because only one item uses “to,” the structure is inconsistent.

#### D. Incorrect

“who lead discussions, organizing community events, and actively participate”

This version removes “willing to,” which changes the original meaning.

It also still mixes verb forms (“lead” vs. “organizing”). The structure remains nonparallel.

#### E. Incorrect

“lead discussions, organization of community events, and participating”

This version mixes:

- a verb phrase (“lead”)
- a noun phrase (“organization”)
- a gerund (“participating”)

These are three different grammatical forms, so the structure is not parallel.

### Question #10

**Correct Answer: E. By replacing vague and casual words with specific, academic vocabulary that better explains the survival traits of animals.**

**Explanation:**



The words “cool,” “stuff,” and “great” are vague and informal. Revising these with precise, subject-specific vocabulary (e.g., “adaptations,” “temperature regulation”) would strengthen the essay’s clarity and academic tone.

Why the other choices are incorrect:

- A. Casual tone weakens the formal nature of an academic essay.
- B. Repetition without variation sounds redundant and adds little value.
- C. While clarity is important, the current word choice is already too simplistic for the audience.
- D. Emotional words don’t replace the need for accuracy or precision in informative writing.

### Question #11

**Correct Answer: B**

**Explanation:**

The development from a single cell to a complex organism relies on two fundamental processes.

First, mitosis is the type of cell division that produces two genetically identical daughter cells from a single parent cell, allowing the organism to grow in size and number of cells.

Second, cell differentiation is the process by which these cells become specialized.

Although they all share the same DNA, different genes are “turned on” or “turned off” in different cells, leading them to develop into distinct types, such as muscle cells, nerve cells, or skin cells, each with a specific structure and function.

### Question #12

**Correct Answer: C**

**Explanation**

The redshift of light from distant galaxies is a key piece of evidence for the Big Bang Theory and the expansion of the universe.

This phenomenon is an example of the Doppler effect for light.



As a galaxy moves away from us, the light waves it emits are stretched, increasing their wavelength and shifting them toward the red end of the electromagnetic spectrum.

The observation that nearly all galaxies are redshifted (and more distant galaxies are more redshifted) implies that the fabric of space itself is expanding, carrying the galaxies along with it.

### **Question #13**

**Correct Answer: D**

#### **Explanation**

Nuclear reactions involve changes within the nucleus of an atom, converting a small amount of mass directly into a large amount of energy according to Einstein's equation,  $E=mc^2$ .

Chemical reactions, in contrast, only involve the rearrangement of electrons and the breaking/forming of chemical bonds, which releases a much smaller amount of energy.

The forces holding the nucleus together (strong nuclear force) are immensely stronger than the electromagnetic forces involved in chemical bonds, so the energy changes in nuclear processes like fission and fusion are millions of times greater than in chemical processes.

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