

**FCAT PRACTICE****Reading Strategy****CHAPTER 6****Identifying the Main Idea**

To understand a reading passage, you must first figure out its **main idea**—the message, opinion, or insight the writing focuses on.

**Strategy for Identifying the Main Idea**

**STEP 1** Read the entire passage and identify the subject. Pay attention to the title and to repeated words and phrases. Think about what ideas the writer is talking about.

**STEP 2** Look for a sentence that states the main idea (sometimes called a topic sentence). This sentence often appears as the first or second sentence of the passage.

**STEP 3** If there is no topic sentence, study the details in the passage, and create a statement that includes all the details. This statement is the main idea.

**Sample Passage and Question for Identifying the Main Idea**

Some people in Mexico practice subsistence farming, but most of the land is owned by a few people and large corporations. Farming is big business. These agri-businesses grow fruit, corn, cotton, sugarcane, and coffee, and most of these products are exported. Mexico produces most of its own food.

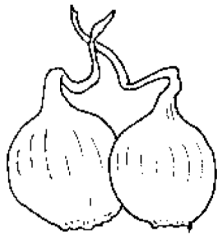
**What is the main idea of this passage?**

- (A) Some Mexicans have their own farms.
- (B) Farmers make a good living from exports.
- (C) Farming in Mexico is big business.
- (D) Mexico produces its own food.

**ANSWER KEY WITH TEST DOCTOR**

These answers have been analyzed and explained by the **TEST DOCTOR**. See where you may be having problems.

- (A) **Incorrect** This statement is a detail from the passage.
- (B) **Incorrect** This statement is a conclusion drawn from one of the passage's details.
- **CORRECT** This statement is the passage's main idea; it is supported by all the details in the passage.
- (D) **Incorrect** This statement is a detail from the passage.

**CHAPTER 6****Excerpt from *Like Water for Chocolate***  
by Laura Esquivel**JANUARY: CHRISTMAS ROLLS****INGREDIENTS:**

1 can of sardines, chorizo sausage, 1 onion, oregano, 1 can of chiles serranos, and 10 hard rolls

**PREPARATION:**

Take care to chop the onion fine. To keep from crying when you chop it (which is so annoying!), I suggest you place a little bit on your head. The trouble with crying over an onion is that once the chopping gets you started and the tears begin to well up, the next thing you know you just can't stop. I don't know whether that's ever happened to you, but I have to confess it's happened to me, many times. Mama used to say it was because I was especially sensitive to onions, like my great-aunt, Tita.

Tita was so sensitive to onions, any time they were being chopped, they say she would just cry and cry; when she was still in my great-grandmother's belly her sobs were so loud that even Nacha, the cook, who was half-deaf, could hear them easily. Once her wailing got so violent that it brought on an early labor. And before my great-grandmother could let out a word or even a whimper, Tita made her entrance into this world, prematurely, right there on the kitchen table amid the smells of simmering noodle soup, thyme, bay leaves, and cilantro, steamed milk, garlic, and, of course, onion. Tita had no need for the usual slap on the bottom, because she was already crying as she emerged; maybe that was because she knew then that it would be her lot in life to be denied marriage. The way Nacha told it, Tita was literally washed into this world on a great tide of tears that spilled over the edge of the table and flooded across the kitchen floor.

That afternoon, when the uproar had subsided and the water had been dried up by the sun, Nacha swept up the residue the tears had left on the red stone floor.

**FCAT PRACTICE****Reading****CHAPTER 6**

There was enough salt to fill a ten-pound sack—it was used for cooking and lasted a long time. Thanks to her unusual birth, Tita felt a deep love for the kitchen, where she spent most of her life from the day she was born.

When she was only two days old, Tita’s father, my great-grandfather, died of a heart attack and Mama Elena’s milk dried up from the shock. Since there was no such thing as powdered milk in those days, and they couldn’t find a wet nurse anywhere, they were in a panic to satisfy the infant’s hunger. Nacha, who knew everything about cooking—and much more that doesn’t enter the picture until later—offered to take charge of feeding Tita. She felt she had the best chance of “educating the innocent child’s stomach,” even though she had never married or had children. Though she didn’t know how to read or write, when it came to cooking she knew everything there was to know. Mama Elena accepted her offer gratefully; she had enough to do between her mourning and the enormous responsibility of running the ranch—and it was the ranch that would provide her children the food and education they deserved—without having to worry about feeding a newborn baby on top of everything else.

From that day on, Tita’s domain was the kitchen, where she grew vigorous and healthy on a diet of teas and thin corn gruels. This explains the sixth sense Tita developed about everything concerning food. Her eating habits, for example, were attuned to the kitchen routine: in the morning, when she could smell that the beans were ready; at midday, when she sensed the water was ready for plucking the chickens; and in the afternoon, when the dinner bread was baking, Tita knew it was time for her to be fed.

Sometimes she would cry for no reason at all, like when Nacha chopped onions, but since they both knew the cause of those tears, they didn’t pay them much mind. They made them a source of entertainment, so that during her childhood Tita didn’t distinguish between tears of laughter and tears of sorrow. For her, laughing was a form of crying.

Likewise for Tita the joy of living was wrapped up in the delights of food. It wasn’t easy for a person whose knowledge of life was based on the kitchen to comprehend the outside world. That world was an endless expanse that began at the door between the kitchen and the rest of the house, whereas everything on the kitchen side of that door, on through the door leading to the patio and the kitchen and herb gardens was completely hers—it was Tita’s realm.

# FCAT PRACTICE

## Reading: Multiple Choice

### CHAPTER 6

Read the following questions and completely fill in the bubble next to the correct answer.

- 1 Which of the following sentences includes an OPINION?
  - (A) Tita was born amid cooking smells.
  - (B) Nacha knew best how to feed Tita.
  - (C) Mama Elena worried about feeding Tita.
  - (D) They couldn't find a wet nurse.
- 2 Which of the following is an effect of Tita's birth?
  - (F) Nacha being half-deaf
  - (G) a ten-pound sack of salt
  - (H) crying for no reason
  - (I) onions that make people cry
- 3 What is the main idea expressed in paragraph 5?
  - (A) Tita had a sixth sense about food.
  - (B) Tita ate three times a day.
  - (C) Tita grew healthy and vigorous.
  - (D) Tita grew up in the kitchen.
- 4 Why does the author mention onions?
  - (F) They are a connection to the past.
  - (G) They are an essential ingredient to many dishes.
  - (H) They create a kitchen atmosphere.
  - (I) They make everyone's eyes water.
- 5 What is the main idea of the passage?
  - (A) The main idea is Tita's relationship with food.
  - (B) The main idea is Tita's birth and life.
  - (C) The main idea is Tita's crying and tears.
  - (D) The main idea is Tita's relationship with Nacha.

# FCAT PRACTICE

## Reading: Short Response

### CHAPTER 6

- 6** What can you predict about Tita and her ability to cook? Support your answer with examples from the passage.



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- 7** What does the last paragraph forecast about Tita's future?



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## CHAPTER 6

**8** Describe Nacha's relationship with Tita. Support your answer with examples from the passage.

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**FCAT PRACTICE**

### ***Writing Plus: Essay***

## CHAPTER 6

[illegible]





# FCAT PRACTICE

## Math: Short Response

### CHAPTER 6

- 6** María estimates how much money she is spending with each item she puts in her shopping cart. She only has \$50 to spend. Does she want her estimate to be greater or less than \$50? Explain in words how you determined your answer.




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- 7** You need to earn \$250 to go to **El Festival Internacional Cervantino**. You earn \$6.50 for each candle that you sell. Write an equation that could be used to determine the number of candles you need to sell, and then solve your equation.




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**FCAT PRACTICE****Science: Multiple Choice****CHAPTER 6**

**Read the following questions and completely fill in the bubble next to the correct answer.**

- 1** Santos conducts an experiment. The data he collects do not support his hypothesis. What should Santos do when he writes a lab report for his experiment?
- (A) change his data so they support his hypothesis
  - (B) report his data and observations accurately and honestly
  - (C) change the hypothesis to support the data
  - (D) change both the hypothesis and the data
- 2** Plant cells have structures that make food for the plant through a process called photosynthesis. Which of the following statements about photosynthesis is not true?
- (F) It takes place in the leaves of plants.
  - (G) It requires light energy.
  - (H) It requires a pigment known as *chromatid*.
  - (I) It converts light energy into chemical energy.
- 3** Juanita's teacher asked the class to perform experiments to see whether salamanders prefer light or darkness. At the beginning of class, Juanita and her partner washed their hands. During the experiment, they wore protective gloves and handled the salamander very carefully. When Juanita and her partner finished, they put the salamander back in the aquarium, wiped their table, and got their books together to leave the classroom. Which step did they miss?
- (A) waiting for the teacher's permission to perform an experiment
  - (B) cleaning up
  - (C) washing their hands after handling the salamander
  - (D) washing their hands before handling the salamander
- 4** Jaime and Marisol examine rock layers at three sites near Mexico City. At all three sites, they discover the same index fossil in one of the rock layers. What conclusion can Jaime and Marisol draw about the rock layers that contain the same index fossils?
- (F) The rock layers formed at different times.
  - (G) All of the rock layers are different ages.
  - (H) All of the rock layers are about the same age.
  - (I) All of the rock layers formed as a result of a catastrophic event.

# FCAT PRACTICE

## Science: Extended Response

### CHAPTER 6

- 5** Black fur is dominant in guinea pigs. María has a guinea pig that is homozygous for black fur. She also has a guinea pig that is homozygous for white fur.



**PART A** Is it possible for a cross of María's guinea pigs to produce offspring with white fur? Explain your answer.

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**PART B** Use a Punnett Square to demonstrate your answer for Part A.


## About the FCAT Preparation Guide

This workbook has been created to help you understand the material in your Spanish textbook and to prepare you for the FCAT. Since Spanish isn't one of the subject areas tested on the FCAT, you might not think that taking a Spanish class can help you prepare for the test. Fortunately, learning a foreign language often improves your knowledge of English. Many of the skills you use to read and write in Spanish are the same skills you use to read and write in English. Any time you practice reading or writing in either language, you reinforce what you've learned in both. And while you may not do complex math or science problems in your Spanish class, you do learn cultural information related to science and math. In the *¡Exprésate!* Student Edition, you may have noticed the “**Conexiones**” header in the **GeoCultura** sections. In that feature you'll find literature, math, and science links to the Spanish-speaking world. The **Cultura** pages or the **Notas culturales** are other textbook features that may have information about other subject areas. Finally, your teacher may give you additional information that will reinforce the reading, writing, math, and science concepts you've studied in other classes, and that could help you on the test.

The opening section of this workbook contains specific test-taking strategies to help you with the reading, writing, math, and science FCAT tests. Read them carefully and get to know the format of each test. The more familiar you are with the format, the more comfortable you'll be when it comes time to take the test.

The bulk of the workbook contains practice items for each of the FCAT subject areas. The practice items are related culturally or thematically to each chapter in *¡Exprésate!* and follow the FCAT format. For each chapter you will find:

- A literary excerpt, a poem, or an informative reading, accompanied by a strategy to help analyze the passage
- Multiple-choice, short-response, and extended-response questions about the reading
- A writing sample and multiple-choice questions based on the sample, OR an expository or persuasive prompt for an essay
- Multiple-choice questions, and either gridded-response, short-response, or extended-response questions for both math and science

If you want to check your progress, your teacher can provide you with answers from the Test Doctor. If you practice consistently throughout the year, you will be more familiar with the types of questions asked on the test, and you should find it easier to complete the practice items in a time-efficient manner.

Good luck!

## Hints for Taking the FCAT Reading Test

The FCAT Reading Test measures your ability to read, analyze, and write about either an informational or a literary text. After you read a selection, you'll answer three types of questions: multiple choice, short response, and extended response. As you prepare for the test, keep the following in mind:

- Know the format of the test. Practice answering the three different types of questions before you take the test.
- Read the instructions carefully, and ask your teacher to clarify anything you don't understand. Make sure to follow the instructions and do what you're asked.
- Read each question carefully and make sure you answer every part. If you don't understand the question, go back and review the passage. You can read the passage as many times as you need to, and this will often help clarify what you're expected to answer.
- Don't spend too long on a question. If you don't know the answer, move on and come back to it later.
- Write your answer on the lines provided. If you're answering multiple-choice questions, fill the bubbles in completely, but don't make stray marks around them.
- Remember to include details and information from the passage in your answer. Don't add a lot of detail that isn't relevant, or that doesn't come from the passage.
- Use clear, concise language to explain your answer, and keep your thoughts organized. *How* you answer is just as important as *what* you answer.
- Reread your answers to make sure they say what you want them to say.

If you want to check your progress, your teacher can provide you with answers from the Test Doctor. For the multiple-choice questions, the Test Doctor not only tells you why one answer is correct, but it explains why the other answers are incorrect. For each short-and extended response, there is an example of a top-scoring response that you can use to compare to your answers.

## Hints for Taking the FCAT Reading Test

### HOW SHORT-RESPONSE QUESTIONS ARE GRADED

The short-response questions require a detailed answer of two or three sentences.

In this workbook, they are indicated by this icon:



You can receive full or partial credit for both short-and extended-response questions, so it's always a good idea to craft a well-organized and detailed answer. Knowing what is expected and how you will be graded ahead of time helps you to write better answers. As you work through the practice activities in this workbook, you may want to refer back to this rubric to make sure you're including everything you need for a top-scoring response.

### RUBRIC FOR SHORT-RESPONSE QUESTIONS

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**2 points:** You'll receive the full two points if you can show you have a complete understanding of the concept presented in the task. So, for example, if you are asked to draw conclusions based on what you've read, your response will be accurate and complete, and you will have answered all parts of the question. You may have drawn several conclusions, and you will have supported each of those conclusions with details from the text. Your answer doesn't have excess information that has no relevance to the question.

**1 point:** You'll receive partial credit if you show that you somewhat understood the concept. Your answer is essentially correct, and there is some supporting detail from the text, but it may be too general, or too simplistic to rate full credit. You may have omitted some details that would have helped to support your statements, and you may have used other examples that weren't relevant.

**0 points:** You won't get any credit if your answer is not accurate, or if you don't answer the question asked. You'll also receive no credit if your answer is too confusing or if it's completely irrelevant.

## Hints for Taking the FCAT Reading Test

The extended-response questions are longer and more detailed and require that you write a short paragraph. You'll know to write an extended response when you see this icon:



Just like short-response questions, you can receive full or partial credit for the answers you write. Here are the general grading criteria for this type of question. As you work through the practice activities in this workbook, you may want to refer back to this rubric to make sure you're including everything you need for a top-scoring response.

## HOW EXTENDED-RESPONSE QUESTIONS ARE GRADED

### RUBRIC FOR EXTENDED-RESPONSE QUESTIONS

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- 4 points:** You'll receive the full four points if you can show you have a complete understanding of the concept presented in the task. So, if you are asked to determine the main idea of the passage, your response will be accurate and complete, and you will have answered all parts of the question. You will have identified the main idea, and you will have also identified how the author used details and organization to get this idea across. The examples you give come straight from the text. Your answer doesn't have excess information that has no relevance to the question.
- 3 points:** You'll receive three points if you can show you understand the concept presented in the task. Your answer is accurate and fulfills all the basic requirements of the task, but it lacks some supporting details. It's possible you didn't use examples from the text, or, if you did, you didn't use as many as you could have.
- 2 points:** You'll receive two points of partial credit if you show that you somewhat understood the concept. Your answer is essentially correct, and there is some supporting detail from the text, but it may be too general, or too simplistic to rate more credit. You may have omitted some details that would have helped to support your statements, and you may have used other examples that weren't relevant.
- 1 point:** You'll receive one point if you show you have a limited understanding of the concept presented in the task. You may not have answered all parts of the question, and the parts you did answer may be incomplete. There is little organization, and some details provided may be irrelevant.
- 0 points:** You won't receive any credit if you don't answer the question asked. You'll also receive no credit if your answer is too confusing or completely irrelevant.



## Hints for Taking the FCAT Writing Plus Test

The FCAT Writing Plus Test measures your ability to analyze other people's writing, as well as your ability to write an expository and a persuasive essay. As you prepare for the test, keep the following in mind:

- Get familiar with the format of the test. Practice analyzing writing samples and writing essays before you take the test.
- Read the instructions carefully, and ask your teacher to clarify anything you don't understand. Make sure to follow the instructions and do what you're asked.
- Read each question or prompt carefully and make sure you answer every part. If you don't understand the question, reread it. If you're working with a writing sample, you can read it as many times as you need to.
- Don't spend too long on a question. If you don't know the answer, move on and come back to it later.
- If you're answering the multiple-choice questions, double-check and make sure you've selected the BEST answer for that item. Fill the bubbles in completely, but don't make stray marks around them. When you write your essays, write only on the lines provided.
- Before you write your essays, organize your thoughts and make an outline. Make sure all your statements are clearly supported with details or reasons.
- Reread your essays to make sure they say what you want them to say. Proofread for spelling and grammatical errors.

If you want to check your progress, your teacher can provide you with answers from the Test Doctor. For the multiple-choice questions, the Test Doctor not only tells you why one answer is correct, but it explains why the other answers are incorrect. For each essay, there is a description of a top-scoring response that you can use to compare to your essays.

## Hints for Taking the FCAT Writing Plus Test

### WRITING SAMPLES AND MULTIPLE-CHOICE QUESTIONS

For this part of the test, you'll be given one of several sample types: a draft of a letter or a composition, or a student's class notes. Another possible sample is a graphic organizer that a student used to plan an essay. Many of these samples have errors in them, and you are reading to find their strengths and weaknesses. After you read each sample, you'll answer a series of multiple-choice questions about what you've read. These questions will have four possible answers. One other type of sample you might read is a paragraph from an informative article. This paragraph will have blanks where words or phrases should be, and you'll have to select the best fit from three possible answers.

To analyze writing samples, you look for many things. You might focus on the reason why the author has written a text, or how he or she has chosen to organize it. You can see how the author supports his or her arguments, and whether he or she remains on topic. You can even look for errors in spelling, punctuation, or word choice. On the FCAT Writing Plus test, you'll answer questions about all these things. Since the questions cover so many aspects of writing, you'll have to activate a lot of prior knowledge. Here are some tips that should help you with the samples.

- Note the number of possible responses. If a question only has three answers, make sure you haven't marked "D" on your answer sheet.
- Treat the writing samples as you would the reading passages. You've learned many strategies for analyzing literature and informative articles. You can use those same strategies with the writing samples.
- For the questions where you identify errors and make corrections, review the comments your teacher has written on your own compositions. What mistakes have you made in the past? What did your teacher tell you to do to fix them?
- Some of the multiple-choice questions will refer you to a specific sentence in the sample. Use the numbers in parentheses at the beginning of each sentence to find the word or phrase called out in the question.

## Hints for Taking the FCAT Writing Plus Test

### EXPOSITORY AND PERSUASIVE WRITING PROMPTS

The second part of the test contains two essays. The expository essay will ask you to describe a process or give information. The persuasive essay will ask you to try and convince someone to either do something or to support your point of view. The prompts for the expository and persuasive essays come in two parts. The **Writing Situation** introduces the topic, and usually gives examples or definitions as clarification. The **Directions for Writing** include suggestions for what kind of writing—expository or persuasive—you’ll do, who your audience is, and how to get started.

### STEPS FOR READING AND ANALYZING A PROMPT

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- 1** Determine your audience. The **Writing Situation** often mentions people, and in many cases those people are the target audience. If your audience is not stated directly, assume it is the general adult population.
- 2** Decide on your topic. What concept, main idea, or opinion is embedded in the prompt? It is usually found in the **Writing Situation**, but if you don’t see it there, reading the **Directions for Writing** can help you extract it.
- 3** Identify your purpose. Look at the **Directions for Writing**. What words in the prompt indicate your task or purpose? Expository prompts will often have words like “explain,” “describe,” or “give information.” Persuasive prompts use words like “convince,” “persuade,” “defend,” or “explain why.”
- 4** Determine how you will address this purpose. If you’re writing an expository essay, you’ll need to list facts, ideas, or other types of information. You may have to explain how to do something. If you’re writing to persuade, then you’ll need to state your point of view on the issue and give reasons and evidence to support your opinion.


## Hints for Taking the FCAT Math Test

The FCAT Math Test analyzes your ability to solve a variety of mathematical problems related to algebra, geometry, data analysis and probability, number sense, and measurements. There are four different question types: multiple-choice, gridded-response, short-response, and extended-response. Since there are so many question types, read each question very carefully. Make sure you know what kind of question it is and what you have to do to answer it. Here are some general tips to help you prepare for the test.

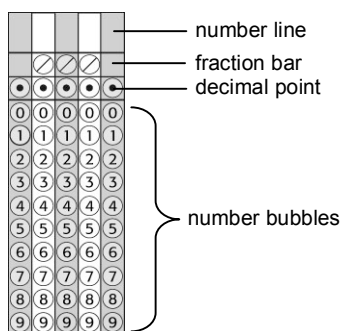
- For multiple-choice questions, read through all of the answer choices carefully before you choose an answer. Be sure to select the answer choice that BEST answers the question.
- As you work the multiple-choice questions, eliminate as many answer choices as you can. Use mental math, estimation techniques, and logical thinking to help you determine wrong answers.
- Watch for distractors. A distractor is an answer choice arrived at by making a simple mistake in the calculation.
- For gridded-response questions, solve the problem at least twice. If possible, solve it in two different ways to make sure your answer is correct.
- Be sure to fill in the bubbles on the grids correctly. Look at the directions for how to answer gridded-response questions. Be sure to erase fully any changes you make.
- Answer the questions you know first. If you cannot answer a question right away, mark it and move on to the next one. When you have gone through all the questions on the test, go back to the questions you skipped. Try not to spend too much time on any one question.
- A scoring rubric is used to grade short- and extended-response questions. Never leave these questions blank. Always show your work, and explain your thinking process in detail.
- Work at a steady pace. Take your time and read each question carefully. Review the questions and your answers at the end of the test.
- Stay calm and think positively. You will work better if you are not nervous.

If you want to check your progress, your teacher can provide you with answers from the Test Doctor. For the multiple-choice questions, the Test Doctor not only tells you why one answer is correct, but it explains why the other answers are incorrect. For the short- and extended-responses, there are descriptions of top-scoring responses that you can use to compare to your answers.

## Gridded-Response Questions on the Math Test

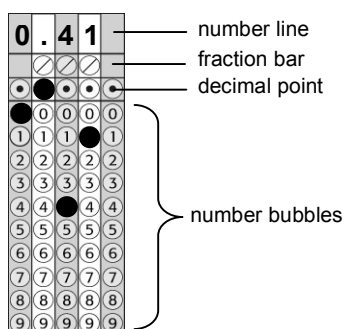
Gridded-response questions with this symbol  require that you fill in your answer on the grid provided on the answer sheet.

**Response Grids have these parts:**



**Follow these steps to grid a decimal or fractional answer:**

- 1** Write your answer in the answer boxes at the top of the grid. Put the first digit of your answer in the box on the left **OR** put the last digit of your answer in the box on the right.
- 2** Put only one digit, or the fraction bar, or the decimal point in each box. Do **NOT** leave a blank box in the middle of an answer. Mixed numbers cannot be written in the answer box. You must convert the answer to an improper fraction. So,  $2\frac{1}{6}$  must be gridded as  $13/6$ .
- 3** Remember that the fraction bar and the decimal point have a designated box.
- 4** Shade the bubble of each digit in the same column as the digit in the answer box.
- 5** Always use a pencil. Be sure to fill in the entire bubble. Be careful not to rip the paper.
- 6 EXAMPLE:** Grid the answer 0.41



Write the number starting with zero in the first box on the left.

Shade the decimal point between 0 and 4.

Shade the correct bubbles.

## Short- and Extended-Response Questions on the Math Test

You can receive full or partial credit for your answers to the short- and extended-response problems. That means you should always answer these questions as best you can. Even if you are not sure of the correct answer, you may get parts of the problem correct and receive partial credit.

- Read each question carefully. Make sure you answer what the question asks. If you are uncertain, read the question again until you are certain you understand it.
- Be sure to answer the question fully. If the question has more than one part, be sure to answer each part. Write as neatly as you can so that your answer can be read easily. Use only the space provided on the answer sheet.
- Read through your answers at least twice to make sure you have included all the important information.

## HOW SHORT-RESPONSE QUESTIONS ARE GRADED



This symbol indicates short-response questions. For these questions, you will write a short response that is from 2 to 4 sentences long. You also need to show your work. You should spend about 5 minutes on one short-response question.

A correct response to a short-response question is worth 2 points. A partially correct response is worth 1 point. As you work through the practice activities in this workbook, you may want to refer back to this rubric to make sure you're including everything you need to score the maximum number of points.

## SCORING RUBRIC FOR SHORT-RESPONSE QUESTIONS

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- 2 points:** You'll receive two points if you write the appropriate equation, show all work, and make no errors in computations. You explain your reasoning and answer the question in complete sentences.
- 1 point:** You'll get a point if you show most of your work and either make no errors or make minor ones. If you answer the question but don't explain how the answer was determined, then you get partial credit.
- 0 points:** You won't score any points if your answer is incorrect, and no work is shown. You also won't receive any credit if your work shows that you don't understand the concepts needed to do the task.

**HOW EXTENDED-RESPONSE QUESTIONS ARE GRADED**

This symbol indicates extended-response questions. For these questions, you will write a longer answer that is from 5 to 8 sentences long. You also need to show your work. You should spend about 15 minutes on one extended-response question. A correct response to an extended-response question is worth 4 points. A partially correct response is worth 1, 2, or 3 points. As you work through the practice activities in this workbook, you may want to refer back to this rubric to make sure you're including everything you need to score the maximum number of points.

**SCORING RUBRIC FOR EXTENDED-RESPONSE QUESTIONS**

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- 4 points:** You'll receive four points if your answer demonstrates a thorough understanding of the concepts and/or procedures found in the question. Your calculations are correct, and your explanations are clear, coherent, and complete. You may have minor errors in the response, but they do not detract significantly from your answer.
- 3 points:** You'll receive three points when your response demonstrates a general understanding of the concepts. Your answer may be essentially accurate, but the explanations you've given are not thorough, nor well-organized. You may have calculation errors in the response that suggest a misunderstanding or an incomplete grasp of the concepts needed to do the task.
- 2 points:** You'll receive two points when your answer is partially correct. You may have arrived at valid conclusions or made appropriate interpretations, but you may not provide accurate explanations for them. Your response contains calculation errors that suggest a misunderstanding of essential concepts.
- 1 point:** You'll receive one point when your answer shows a very limited understanding of the key concepts or procedures relevant to the task. You've tried to show your reasoning, but you may have drawn invalid conclusions or presented inaccurate explanations. You may also have several major calculation errors.
- 0 points:** You won't score any points if your answer is incorrect, and no work is shown. You also won't receive any credit if your work shows that you don't understand the concepts needed to do the task.


## Hints for Taking THE FCAT Science Test

The FCAT Science Test analyzes your ability to solve a variety of scientific problems related to physical and chemical science, earth and space science, life and environmental science, and scientific thinking and processes. There are four different question types: multiple-choice, gridded-response, short-response, and extended-response. Since there are so many question types, read each question very carefully. Make sure you know what kind of question it is and what you have to do to answer it. Here are some general tips to help you prepare for the test.

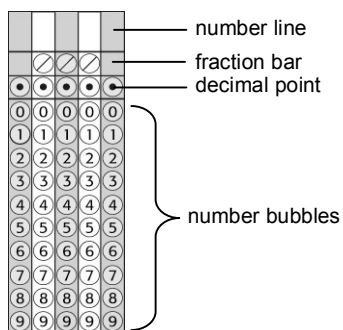
- For multiple-choice questions, read through all of the answer choices carefully before you choose an answer. Be sure to select the answer choice that BEST answers the question.
- As you work the multiple-choice questions, eliminate as many answer choices as you can. Use estimation techniques and logical thinking to help you determine wrong answers.
- Watch for distractors. A distractor is an answer choice arrived at by making a simple mistake in the calculation.
- For gridded-response questions, solve the problem at least twice. If possible, solve it in two different ways to make sure your answer is correct.
- Be sure to fill in the bubbles on the grids correctly. Look at the directions for how to answer gridded-response questions. Be sure to erase fully any changes you make.
- Answer the questions you know first. If you cannot answer a question right away, mark it and move on to the next one. When you have gone through all the questions on the test, go back to the questions you skipped. Try not to spend too much time on any one question.
- A scoring rubric is used to grade short- and extended-response questions. Never leave these questions blank. Always show your work, and explain your thinking process in detail.
- Work at a steady pace. Take your time and read each question carefully. Review the questions and your answers at the end of the test.
- Stay calm and think positively. You will work better if you are not nervous.



## Gridded-Response Questions on the Science Test

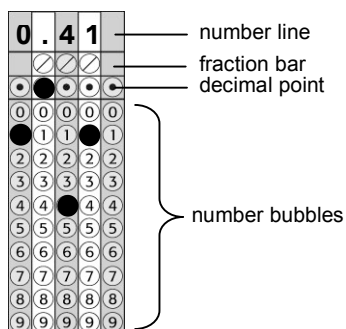
Gridded-response questions with this symbol  require that you fill in your answer on the grid provided on the answer sheet.

**Response Grids have these parts:**



**Follow these steps to grid a decimal or fractional answer:**

- 1 Write your answer in the answer boxes at the top of the grid. Put the first digit of your answer in the box on the left **OR** put the last digit of your answer in the box on the right.
- 2 Put only one digit, or the fraction bar, or the decimal point in each box. Do **NOT** leave a blank box in the middle of an answer. Mixed numbers cannot be written in the answer box. You must convert the answer to an improper fraction. So,  $2\frac{1}{6}$  must be gridded as  $13/6$ .
- 3 Remember that the fraction bar and the decimal point have a designated box.
- 4 Shade the bubble of each digit in the same column as the digit in the answer box.
- 5 Always use a pencil. Be sure to fill in the entire bubble. Be careful not to rip the paper.
- 6 **EXAMPLE:** Grid the answer 0.41



Write the number starting with zero in the first box on the left.

Shade the decimal point between 0 and 4.

Shade the correct bubbles.

## Short-and Extended-Response Questions on the Science Test

You can receive full or partial credit for your answers to the short-response problems. That means you should always answer these questions as best you can. Even if you are not sure of the correct answer, you may get parts of the problem correct and receive partial credit.

- Plan on taking about 5 minutes to answer the short-response questions and about 15 minutes for the extended-response questions.
- Read each question carefully. Make sure you answer what the question is asking. If you are uncertain, read the question again until you are certain you understand it.
- Be sure to answer the question fully. If the question has more than one part, be sure to answer all the parts. Write your answers clearly. Write as neatly as you can so that your answer can be read easily. Use only the space provided on the answer sheet.
- Read through your answers at least twice to make sure you have included all the important information.

## HOW SHORT-RESPONSE QUESTIONS ARE GRADED



This symbol indicates short-response questions. For these questions, you will write a short response that is from 2 to 4 sentences long. You should spend about 5 minutes on one short-response question. A correct response to a short-response question is worth 2 points. A partially correct response is worth 1 point. As you work through the practice activities in this workbook, you may want to refer back to this rubric to make sure you're including everything you need to score the maximum number of points.

### RUBRIC FOR SHORT-RESPONSE QUESTIONS

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- 2 points:** You'll be awarded two points if your response demonstrates a thorough understanding of the concepts and/or procedures found in the question. Your explanations are clear, coherent, and complete. You may have minor errors in the response, but they don't detract significantly from the correctness of the response.
- 1 point:** You'll be awarded one point when your response is only partially correct. You may have made errors when drawing conclusions or making interpretations. You may have shown that you didn't fully understand the concepts underlying the task.
- 0 points:** You'll receive zero points if your response is incorrect, undecipherable, or nonexistent.

**HOW EXTENDED-RESPONSE QUESTIONS ARE GRADED**


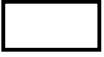



This symbol indicates extended-response questions. For these questions, you will write a longer answer that is from 4 to 6, sentences long. You should spend about 15 minutes on one extended-response question. A correct response to an extended-response question is worth 4 points. A partially correct response is worth 1, 2, or 3 points. As you work through the practice activities in this workbook, you may want to refer back to this rubric to make sure you're including everything you need to score the maximum number of points.

**RUBRIC FOR EXTENDED-RESPONSE QUESTIONS**

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- 4 points:** You'll receive four points if your answer demonstrates a thorough understanding of the concepts and/or procedures found in the question. Your explanations are clear, coherent, and complete. You may have minor errors in the response, but they do not detract significantly from the correctness of the response.
- 3 points:** You'll receive three points when your response demonstrates a general understanding of the concepts. Your response may be essentially accurate, but the explanations you've given are not thorough. You may have errors in the response that suggest a misunderstanding of or an incomplete grasp of the underlying concepts.
- 2 points:** You'll receive two points when your response is partially correct. You may have arrived at valid conclusions or made appropriate interpretations, but you may not provide accurate explanations for them. Your response contains errors that suggest a misunderstanding of essential concepts.
- 1 point:** You'll receive one point when your response shows a very limited understanding of the key concepts or procedures relevant to the task. You may have drawn invalid conclusions or presented inaccurate explanations. Your response contains many errors regarding scientific concepts or procedures.
- 0 points:** You'll receive zero points if your response is incorrect, undecipherable, or nonexistent.

## Grades 9–10 FCAT Mathematics Reference Sheet






AREA		
	Triangle	$A = \frac{1}{2}bh$
	Rectangle	$A = lw$
	Trapezoid	$A = \frac{1}{2}bh(b_1 + b_2)$
	Paralellogram	$A = bh$
	Circle	$A = \pi r^2$

KEY	
$b$ = base	$d$ = diameter
$h$ = height	$r$ = radius
$l$ = length	$A$ = area
$w$ = width	$C$ = circumference
$\ell$ = slant height	$V$ = volume
$S.A.$ = surface area	
Use 3.14 or $\frac{22}{7}$ for $\pi$ .	

### CIRCUMFERENCE

$$C = \pi d \quad \text{or} \quad C = 2\pi r$$

### VOLUME/CAPACITY

	Right Circular Cone	$V = \frac{1}{3}\pi r^2 h$
	Right Square Pyramid	$V = \frac{1}{3}lwh$
	Sphere	$V = \frac{4}{3}\pi r^3$
	Right Circular Cylinder	$V = \pi r^2 h$
	Rectangular Prism	$V = lwh$

### TOTAL SURFACE AREA

$$S.A. = \frac{1}{2}(2\pi r)\ell + \pi r^2 \quad \text{or} \quad S.A. = \pi r\ell + \pi r^2$$

$$S.A. = 4\left(\frac{1}{2}l\ell\right) + l^2 \quad \text{or} \quad S.A. = 2l\ell + l^2$$

$$S.A. = 4\pi r^2$$

$$S.A. = 2\pi rh + 2\pi r^2$$

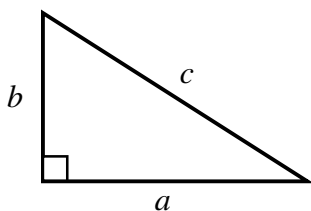
$$S.A. = 2(lw) + 2(hw) + 2(lh)$$

In the following formulas,  $n$  represents the number of sides.

- In a polygon, the sum of the measures of the interior angles is equal to  $180(n - 2)$
- In a regular polygon, the measure of an interior angle is equal to  $\frac{180(n - 2)}{n}$

## Grades 9–10 FCAT Mathematics Reference Sheet

Pythagorean theorem:



Distance between two points

$P_1(x_1, y_1)$  and  $P_2(x_2, y_2)$ :

$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Slope-intercept form of an equation of a line:

$$y = mx + b$$

where  $d$  = distance,  $r$  = rate,  $t$  = time.

Midpoint between two points

$P_1(x_1, y_1)$  and  $P_2(x_2, y_2)$ :

$$\left( \frac{x_2 + x_1}{2}, \frac{y_2 + y_1}{2} \right)$$

Distance, rate, time formula:

$$d = rt$$

where  $d$  = distance,  $r$  = rate,  $t$  = time.

Simple interest formula:

$$I = prt$$

where  $p$  = principle,  $r$  = rate,  $t$  = time.

### CONVERSIONS

1 yard = 3 feet = 12 inches

1 mile = 1760 yards = 5280 feet

1 acre = 43,560 square feet

1 hour = 60 minutes

1 minute = 60 seconds

1 liter = 1000 milliliters = 1000 cubic centimeters

1 meter = 100 centimeters = 1000 millimeters

1 kilometer = 1000 meters

1 gram = 1000 milligrams

1 kilogram = 1000 grams

1 cup = 8 fluid ounces

1 pint = 2 cups

1 quart = 2 pints

1 gallon = 4 quarts

1 pound = 16 ounces

1 ton = 2000 pounds

Metric numbers with four digits are presented without a comma (e.g. 9960 kilometers).

For metric numbers greater than four digits, a space is used instead of a comma

(e.g. 12 500 liters).

## FCAT Science Reference Sheet

### EQUATIONS

Acceleration ( $\bar{a}$ )	=	$\frac{\text{change in velocity (m/s)}}{\text{time taken for this change (s)}}$	$\bar{a}$	=	$\frac{v_f - v_i}{t_f - t_i}$
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Average Speed ( $\bar{v}$ )	=	$\frac{\text{distance}}{\text{time}}$	$\bar{v}$	=	$\frac{d}{t}$
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Density (D)	=	$\frac{\text{mass (g)}}{\text{volume (cm}^3\text{)}}$	D	=	$\frac{m}{V}$
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Percent Efficiency (e)	=	$\frac{\text{Work out (J)}}{\text{Work in (J)}} \times 100$	%e	=	$\frac{W_{\text{out}}}{W_{\text{in}}} \times 100$
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Force in newtons (F)	=	mass (kg) $\times$ acceleration (m/s <sup>2</sup> )	F	=	ma
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Frequency in hertz (f)	=	$\frac{\text{number of events (waves)}}{\text{time (s)}}$	f	=	$\frac{n \text{ of events}}{t}$
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Momentum ( $\rho$ )	=	mass (kg) $\times$ velocity (m/s)	$\rho$	=	mv
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Wavelength	=	$\frac{\text{velocity (m/s)}}{\text{frequency (Hz)}}$	$\lambda$	=	$\frac{v}{f}$
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Work (W)	=	Force (N) $\times$ distance (m)	W	=	Fd
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### UNITS OF MEASURE

cm = centimeters	Hz = hertz	kg = kilograms	N = newton
g = gram	J = joule (newton-meter)	m = meter	s = second

[illegible]