

# ***ISTEP+*** Spring 2010

Indiana Statewide Testing for Educational Progress Plus

Mathematics • English/Language Arts • Science  
**Grade 6**



Indiana Department of Education  
SUPPORTING STUDENT SUCCESS

Web Version

Use only a Number 2 pencil to respond to the questions in this book. Responses written in pen CANNOT be scored.

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1 2 3 4 5 6 7 8 9 REL 12 11 10 09

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If you see this symbol, you may use your reference sheet to help solve the problem.



If you see this symbol, you may use a calculator to solve problems in the test.

**NOTE:** A correct answer **CANNOT** receive full credit if no work is shown.

Since you may receive partial credit for all problems in this test, it is important to show ALL work in the spaces provided in this book. When you see the words **Show All Work**, be sure to

- **show all the steps needed to solve the problem**
- **make your handwriting clear and easy to read**
- **write the answer on the answer line**

**As you complete each problem, remember to**

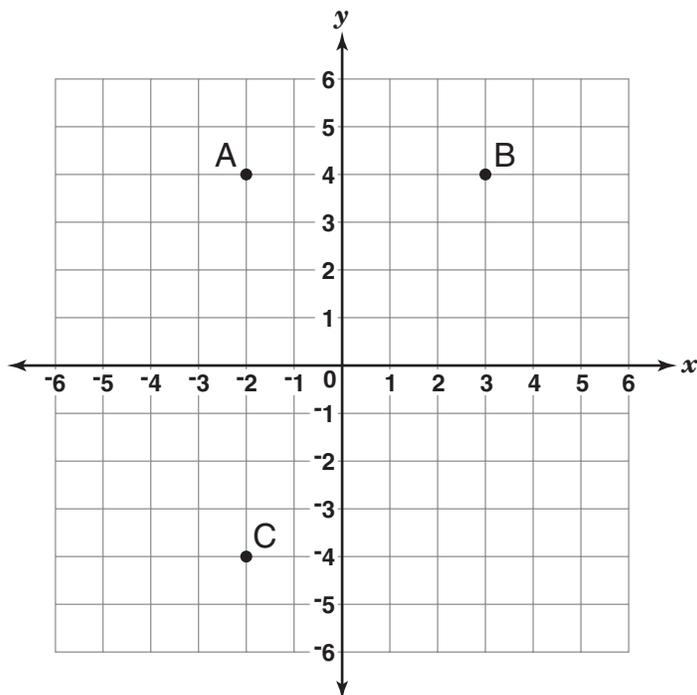
- READ** the problem carefully
- PLAN** how to solve the problem
- SOLVE** the problem showing all steps
- CHECK** your work

# Session 1: Mathematics



1

A city planner created a model of a park, as shown on the grid below. The fourth corner (D) of the rectangular park is missing from the model.



What are the coordinates of the four corners of the rectangular park?

**Answer** A ( \_\_\_\_\_, \_\_\_\_\_ )

B ( \_\_\_\_\_, \_\_\_\_\_ )

C ( \_\_\_\_\_, \_\_\_\_\_ )

D ( \_\_\_\_\_, \_\_\_\_\_ )

Go On



# Session 1

The distance, in units, between point A and point B represents the width of the park.

The distance, in units, between point A and point C represents the length of the park.

What is the area, in square units, of the park?

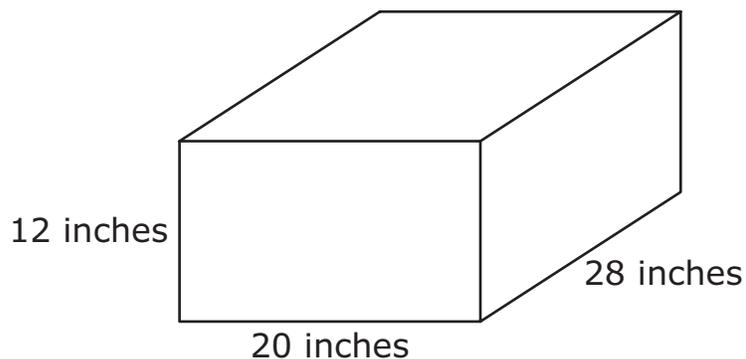
**Show All Work**

**Answer** \_\_\_\_\_ square units



**2**

The Big Toy Company is determining how many individual toys will fit in the shipping box shown in the diagram below.



Each individual toy package is a cube with a side length of 4 inches. How many individual toy packages will fit in the shipping box?

**Show All Work**

**Answer** \_\_\_\_\_ toy packages

**Go On**



3

The price of gasoline is \$4.20 per gallon. This price includes all taxes. Melissa has a coupon that will give her 10% off her entire purchase.

How much will Melissa pay for 35 gallons of gasoline if she uses her coupon?

**Show All Work**

**Answer** \$ \_\_\_\_\_

Melissa's company pays her \$0.45 for each mile she drives for work. She drives an average of 150 miles each week for work.

How much money does Melissa's company pay her for miles that she drives for work for 4 weeks?

**Show All Work**

**Answer** \$ \_\_\_\_\_

- 4** Ana and Raul are playing a game. The winner of the game is the person who scores 200 points in the least amount of turns. The maximum number of points per turn is 25.

Ana scored a total of 20 points on her first 3 turns.

Write an equation that can be used to determine the number of points ( $p$ ) Ana still needs to score 200 points.

**Equation** \_\_\_\_\_

Raul completed his game by scoring 20 points on each turn.

Write an equation that can be used to determine the number of turns ( $t$ ) it took Raul to score 200 points.

**Equation** \_\_\_\_\_

Is it possible for Ana to win the game? Use words, numbers, and/or symbols to justify your answer.

**Show All Work**

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**ATTENTION! Please do not leave your punchouts or reference sheet in this book.**



**STOP! --- STOP! --- STOP! --- STOP! --- STOP!**

**ATTENTION!**

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until you are  
told to do so.**



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Whenever you see this icon, you will be doing a writing activity. Your writing will not be scored on your personal opinions or choices, but will be scored objectively on

- how clearly you address the prompt
- how well you organize your ideas
- how effectively you express yourself
- how consistently you use correct paragraphing, grammar, spelling, and punctuation

Be sure to use the rules of Standard English. Standard English is the English commonly used in formal writing. It does not include slang or jargon.

# Session 2: English/Language Arts

## 1

### An Unexpected Package

Read the writing prompt below and complete the writing activity.

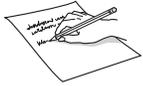
Imagine that one day the postal carrier appears at your door and hands you a package. You are surprised because you did not order anything and were not expecting any mail, but the package is addressed to you. What is in this package? Why did you receive it? What happens next?

Write a fictional story about a character who receives an unexpected package. The characters in your fictional story could be you and people you know, or they could be made up. Include details about what is in the package and why the package was sent, but focus your fictional story mainly on what happens after the package is received.

Be sure to include

- a main character or characters
- an explanation of what is in the package and why it was sent
- details that show how your character or characters react to receiving this package
- a beginning, a middle, and an end to your fictional story

## Session 2



Use the blank Prewriting/Planning space below for notes, lists, webs, outlines, or anything else that might help you plan your writing. If you need additional paper for planning, raise your hand and your teacher will give you more paper. **You must write your final draft on the lines beginning at the top of the next page.**

### Prewriting/Planning

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Now check your writing using this Editing Checklist.

### Editing Checklist

- 1** Check your capitalization and punctuation.
- 2** Spell all words correctly.
- 3** Check for sentence fragments or run-on sentences.
- 4** Keep verb tense consistent.
- 5** Make sure subject and verb agree.
- 6** Use words according to the rules of Standard English.
- 7** Remember to paragraph correctly.



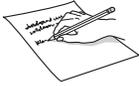
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until you are  
told to do so.**



# Session 3: English/Language Arts



Whenever you see this icon, you will be doing a writing activity. Your writing will not be scored on your personal opinions or choices, but will be scored objectively on

- how clearly you address the prompt
- how well you organize your ideas
- how effectively you express yourself
- how consistently you use correct paragraphing, grammar, spelling, and punctuation

Be sure to use the rules of Standard English. Standard English is the English commonly used in formal writing. It does not include slang or jargon.

## Directions

For Session 3, you will read an article called “For All the Marbles” and complete Numbers 1 through 3. You may look back at the article as often as you like. Then you will complete a writing activity.

Go On



# For All the Marbles

Sean McCollum



Andrew Martinez kneels down as he nears the end of his quest. His agate<sup>1</sup> shooter is jammed between his index finger and the tough-as-leather callous on his thumb. His head bobs as he lines up the shot, his eyes locking on the target six feet away. The crowd falls quiet. This is for all the marbles. Flick! The shot flies out of his hand . . .

Andrew shares characteristics of the gunslingers from the Old West. The Colorado teen has unbreakable concentration, nerves of steel, dead-eye aim. (He even has something more: a loving mother reminding him to practice.) Over the past four years, he has honed<sup>2</sup> these talents, chasing the title of United States marbles king. And in June 2000 he traveled to Wildwood, New Jersey, for one last shot at walking out with the tallest trophy in the 14-and-under national championships.

### What It Takes

Andrew’s quest began in Palisade, a small town in western Colorado. His fifth-grade teacher Leah Lee, Andrew, and some of his classmates formed a marbles club. Andrew won the local tourney and qualified as the first Coloradan to compete at the national tournament.

<sup>1</sup>**agate:** a type of mineral with colored bands

<sup>2</sup>**honed:** sharpened

"I came in 16th out of 30," says Andrew, who did win the sportsmanship award that year. "After that I realized what it would take to win at that level: dedication. Practice is everything."

He returned home and created a marble ring on the concrete floor of the family garage. He coated the surface with gray paint to simulate the ring in New Jersey. And then he went to work, with Ms. Lee as his coach.

He practiced every kind of shot: the break shots that start the game, long distance shots, and the short shots that seem like sure things but are the difference between winning and losing. He perfected the backspin on his shooter so that the shooter would knock the target marble from the ring and then "stick"—come to a dead stop so he could shoot again.

As he practiced, the skin on Andrew's shooting thumb split and bled, then became tough. His knees ached from the constant kneeling. As the 1998 tournament approached, he practiced four hours a day.

"That was the hardest part," he says, "getting into the habit of practice. My mom definitely helped, too, reminding me to keep at it."

He finished sixth at nationals that year. His determination grew. Now he started practicing a different part of the game—the mental part.

"Some players are really good, but when the pressure's on, they have problems. You've really got to psych yourself up."

It worked. In 1999, his climb continued. He finished second.

### Last Shot

When Andrew flew to New Jersey for the 2000 nationals, it was his last chance to compete in the 14-and-under tournament. Besides the pressure to play, he led the singing of the national anthem to open the tournament. "I was most nervous about that," he says. Then his march toward the championship match began.

In the end, Andrew faced Ralph Dillon, a good friend from West Virginia, for the championship. "We had to set our friendship aside for a while," he says. The match went back and forth as each boy tried to be the first to win eight out of 15 games.

Finally, Andrew faced that six-foot shot. Flick! Clack! The blue marble shot out of the circle. It had taken four years and thousands of hours of practice, but Andrew Martinez was the last man kneeling. Ralph jumped

Go On



up and gave him a huge hug . . . then joined the other players in the tradition of tossing the champ into a swimming pool.

**Using His Marbles**

Andrew won that tall trophy he'd sought plus a \$2,000 college scholarship. He was on TV and in every major Colorado newspaper.

His city declared "Andrew Martinez Day" and he had to give a speech. In it, he summed up the larger lessons he had learned during his four-year quest:

"When I look back at my life when marbles first started for me, I was just a little kid who had no goals for my life. Then when marbles came along, it was like a blueprint for life. I set goals and always had something to work for."

It's clear that Andrew Martinez knows how to use his marbles.

- 1** What parts of Andrew's hobby are most challenging? Support your answer with details from the article.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

2 Determination is one of the main ideas in the article. How did Andrew show his determination to win the 14-and-under national championships? Support your answer with details from the article.

Handwriting lines for question 2

3 What advice might Andrew give to someone facing a difficult task? Support your answer with details from the article.

Handwriting lines for question 3

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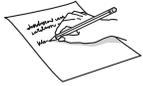
4 Read this information about an ice hotel in Sweden. Then complete the writing activity that follows.

### Ice Hotel

Every winter, artists and architects from all over the world come to Sweden to build an ice hotel. It is a hotel made completely from snow and ice! The ice hotel, called "ICEHOTEL," has more than 80 rooms and suites, a restaurant, and a church. It is rebuilt each December and lasts until about April when spring temperatures cause it to melt.

At the ice hotel, guests sleep in thermal sleeping bags on reindeer skins on top of a bed of ice. During the day, guests can take a snowmobile ride or a dogsled ride to view the wonders of nature that surround the ice hotel.

Now imagine what it would be like to take a trip to Sweden and stay at the ice hotel. Write an original story about the ice hotel in which you describe some of the guests and their experiences staying at this famous hotel.



Use the blank Prewriting/Planning space below for notes, lists, webs, outlines, or anything else that might help you plan your writing. If you need additional paper for planning, raise your hand and your teacher will give you more paper. **You must write your final draft on the lines beginning at the top of the next page.**

Prewriting/Planning

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Use the Editing Checklist on page 30. Check your original story for correct grammar, spelling, punctuation, and capitalization. **Remember, your original story should be well organized.**

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# Session 4: Science

- 1** Foxes, frogs, mice, minks, and muskrats can all live in wetlands. The table below shows food sources for each of these animals.

**Food Sources for Wetland Animals**

<b>Animals</b>	<b>Food Sources</b>
foxes	fish, minks, muskrats, snakes
frogs	insects, worms
mice	fruit, seeds
minks	fish, frogs
muskrats	clams, frogs, snails, water plants

Using the information in the table, name TWO different animals that would compete for a food source.

1) \_\_\_\_\_

2) \_\_\_\_\_

Identify the food source that the animals you named would compete for.

\_\_\_\_\_

According to the information in the table, if this food source vanished, which of the two competing animals you named would be **MORE LIKELY** to survive **WITHOUT** the food source? Explain your answer.

\_\_\_\_\_

\_\_\_\_\_

**2** Ian and Eric are investigating the relationship between force and mass by pushing boxes of the same size and shape across a carpeted floor. Ian's box is full of books and Eric's box is empty.

If both boys move their boxes across the room with equal amounts of force, whose box will take the LONGEST amount of time to reach the other side of the room? Explain your answer.

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Describe ONE way the boys could change their investigation so that both boxes will reach the other side of the room at the SAME time.

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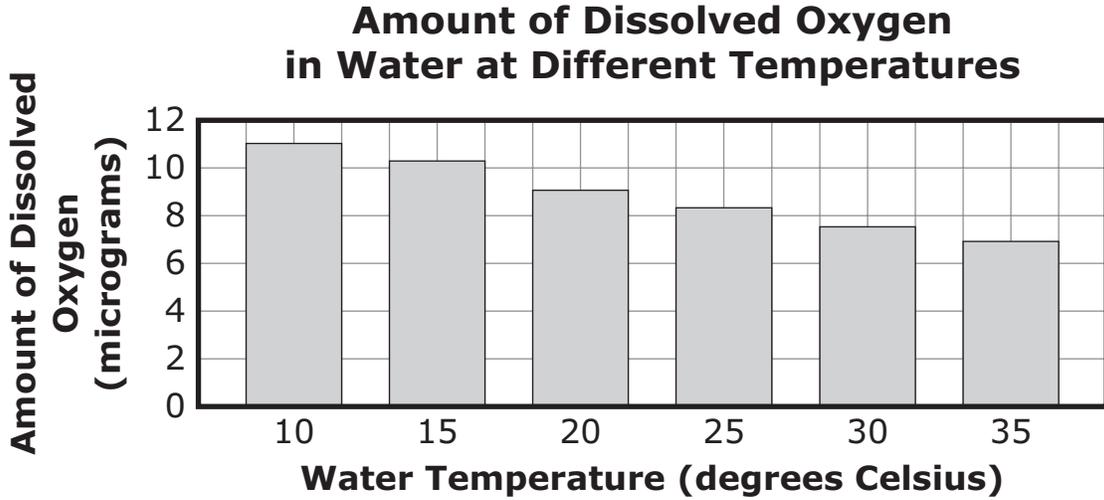
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**3**

Fish and other animals that live in water use oxygen dissolved in the water to breathe. One science class has been studying how the amount of dissolved oxygen in a pond is affected by the temperature of the water. While researching this topic, the students found the graph below.



According to the graph, approximately how many micrograms of dissolved oxygen would be found in pond water that has a temperature of 20 degrees Celsius?

**Answer** \_\_\_\_\_ micrograms

According to the graph, predict the amount of dissolved oxygen in water that has a temperature of 40 degrees Celsius?

**Answer** \_\_\_\_\_ micrograms

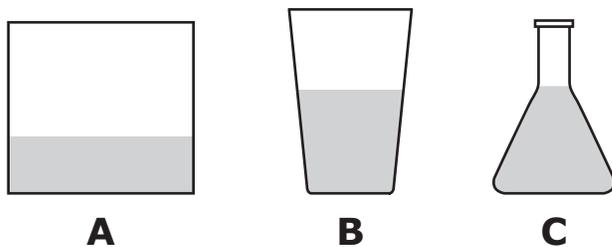
According to the graph, what is the relationship between water temperature and the amount of dissolved oxygen in water?

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**4** Sara and Jennifer are testing whether the shape of a container affects how quickly water evaporates from it. The containers used in the test are shown below.



The girls poured 100 milliliters (mL) of water into each of the three containers. They measured the amount of water remaining in each container over five days. Their results are listed below.

**Beginning of Day 1**

Container A had 100 mL of water.  
 Container B had 100 mL of water.  
 Container C had 100 mL of water.

**Beginning of Day 2**

Container A had 95 mL of water.  
 Container B had 99 mL of water.  
 Container C had 99.5 mL of water.

**Beginning of Day 3**

Container A had 90 mL of water.  
 Container B had 98 mL of water.  
 Container C had 99 mL of water.

**Beginning of Day 4**

Container A had 85 mL of water.  
 Container B had 97 mL of water.  
 Container C had 98.5 mL of water.

**Beginning of Day 5**

Container A had 80 mL of water.  
 Container B had 96 mL of water.  
 Container C had 98 mL of water.

## Session 4

Use the information given on page 36 to complete the DATA TABLE below.

### Comparing the Amount of Water Evaporated from Different Containers

Day			

Describe the differences in how much water evaporated each day from containers A, B, and C. Explain what might have caused these differences.

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Using the information in the table you completed, describe ONE conclusion the girls could make about how the shape of a container relates to the amount of water that evaporates from it.

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# Applied Skills Assessment

Mathematics • English/Language Arts • Science

## Grade 6



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