

ISTEP+ Spring 2013

Indiana Statewide Testing for Educational Progress Plus

Mathematics • English/Language Arts • Social Studies
Grade 7

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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Excerpt from “*Speech made by Nelson Mandela at the Cathedral of St. John the Divine, New York City, September 20, 1988*” (Unique ID NMS630) courtesy of the Nelson Mandela Foundation.

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1 2 3 4 5 ROV 15 14 13

**DO
NOT
MARK
ON THIS
PAGE**



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

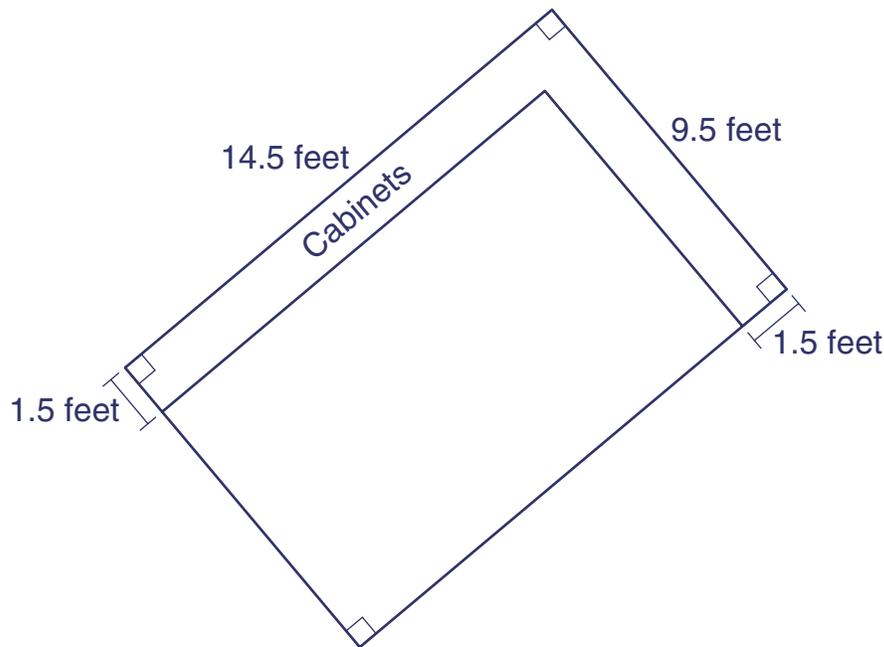
Session 1: Mathematics



1



Ms. Thompson is installing a new tile floor in her kitchen. There are cabinets along two sides of the kitchen floor that are 1.5 feet wide, as shown in the diagram below.



What is the area of the kitchen floor, not including the area covered with cabinets?

Show All Work

Answer _____ square feet

Go On



Session 1

Each 1-foot square tile costs \$4.50, before tax.

What would be the cost, before tax, to purchase enough 1-foot square tiles to cover the part of the kitchen floor that does not have cabinets on it, plus 10 extra tiles?

Show All Work

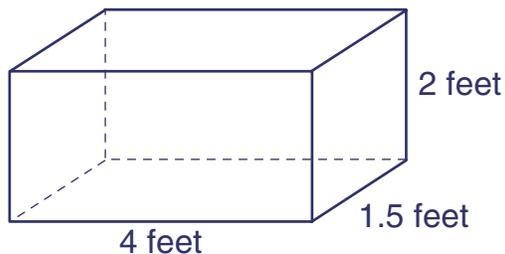
Answer \$ _____



Session 1

2

Angela is using water from her well to fill a fish tank that is shaped like a rectangular prism, as shown in the diagram below.



Angela is going to fill the fish tank to a level that is 3 inches below the top of the tank. Angela's well pumps 8 gallons of water per minute.

How many minutes will it take to fill the fish tank?

1 cubic foot \approx 7.5 gallons

Show All Work

Answer _____ minutes

Go On



3

Emily is playing a game. She needs 300 points to win the game. She scored 34 points on her first turn, 27 points on her second turn, and 23 points on her third turn.

Write an equation that can be used to determine the number of turns, n , Emily needs to win the game if she scores 27 points on each remaining turn.

Equation _____

The maximum number of points that can be scored on 1 turn is 40 points.

How many fewer turns will it take Emily to win the game if she scores 40 points on each of her remaining turns than if she only scores 27 points?

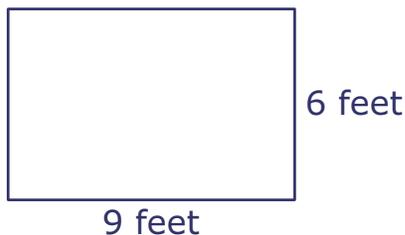
Show All Work

Answer _____ fewer turns

Session 1

4

A company is having 2 rectangular signs made to place in front of their building. A diagram of sign A is shown below.



Sign B is similar to sign A. The dimensions of sign B are $\frac{1}{3}$ the dimensions of sign A. The company will be charged in the following manner to have the signs made.

- \$18 per square foot for signs over 20 square feet
- \$13 per square foot for signs 20 square feet and under

What will be the total cost for the company to have both signs made?

Show All Work

Answer \$ _____

The company is thinking about having a third rectangular sign made to put on the side of their building. They want the sign to have the greatest area possible and still be charged at the \$13 rate instead of the \$18 rate.

What is a possible length and width of the third sign?

Length _____ feet

Width _____ feet



STOP! _____ **STOP!** _____ **STOP!** _____ **STOP!** _____ **STOP!** _____

ATTENTION!

Do NOT go on
until you are
told to do so.



STOP



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



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 Sweepstakes Winner

Read the writing prompt below and complete the writing activity.

Imagine you have won the Grand Prize in the Jet-Around-The-World Sweepstakes! You and a friend or family member have won the use of an airplane for three whole days! You can choose any destination in the world, and you will be flown there for free!

Now that you have won this Grand Prize, where will you choose to go? Whom will you take with you? What kinds of adventures will you have?

Write a story about what you will do on this trip you have won. In your story, be sure to include details about where you will go and what you will do when you get there.

Be sure to include

- a description of where you will go and what you will do on the trip
- a description of who you will take with you
- a description of your adventures during the trip
- a beginning, a middle, and an end to your 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

DO NOT WRITE HERE

Go On



ATTENTION!

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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 a story called “Sierra Oscar Sierra” and complete Numbers 1 through 3. You may look back at the story as often as you like. Then you will complete a writing activity.

Go On



Sierra Oscar Sierra

by Lynn Murray

Most people think of radio as just a way of listening to music or hearing the news, but some people use the radio differently. Ham-radio operators use radios that can both receive and transmit radio waves, so they can talk to each other. Over the years, ham-radio buffs have developed their own way of talking, with terms that outsiders don't always recognize. They also communicate by Morse code, a system of long and short beeps that was first developed for telegraphs. Despite new inventions, like cellular telephones and e-mail, ham radio is still a popular hobby all over the world. Sometimes, ham radio can be more than just a fun way to pass the time and chat with friends.



Outside Eric's bedroom window the January blizzard raged. Treetops swayed dangerously as gusting winds sculpted snow into huge drifts. Eric turned on his ham radio and tuned in a station talking about the weather. An operator was reporting, "The National Weather Service has just issued a heavy snow alert for the Colorado Rocky Mountains at 1 P.M. today. Accumulations of up to two feet of snow are expected."

Bored, Eric programmed the receiver to scan different frequencies.¹ If he heard any of his radio friends, he'd contact them. The radio squawked conversation then static as it flipped from frequency to frequency. He heard no familiar voices, though.

Then the radio paused, emitting² a series of loud sounds. It continued to cycle through the frequencies, stopping briefly at each one. Eric kept listening. Once more, the radio paused when it located the sounds, then it moved on again.

How odd.

Eric watched the numbers changing rapidly as the radio scanned. When it stopped on the sounds, he read the display: 144.200 MHz.

That's not interference.³ It's too regular, too rhythmic. . . . Eric jolted to attention. Three short clicks, three long, three short. Morse code!

It was an SOS!

He couldn't believe it. Answering emergencies had come up on his licensing test, but this was no test. This was real.

The distress call repeated itself.

Eric grabbed his radio. "This is KC0ZSZ. Go ahead, SOS."

A steady stream of Morse code erupted. All the dits and dahs blurred together. Eric could decode only two words—*hurt* and *help*. He felt as if he'd forgotten all his code. For his Technician Plus license, he'd learned to copy five words a minute, but this speed was sonic!

Calm down. Think. He grabbed a pen and paper, then said, "This is KC0ZSZ. Name's Eric Bailey. I can't copy that fast. Slow down and tell me your location." He concentrated, deciphering one letter at a time until they made words, then phrases:

BLACK BEAR ROAD. UP SLIDE MOUNTAIN. MAC K0IDX.

Slide Mountain was ninety miles away! And could this be Mac from the ham-radio club? The burly instructor he had taken classes from? He couldn't forget Mac, the only man he knew with the same name as a semi-truck.

¹**frequencies:** radio waves sent through the air

²**emitting:** giving or sending out

³**interference:** unwanted static or noise

Go On



"Where on Black Bear?"

LAST RAVINE. TRUCK OVER EDGE.

"Stay on the radio. I'll send help." Eric bolted to the phone in the living room. The line was dead, probably severed⁴ by a falling tree. "No!" he shouted.

"What's wrong?" asked Eric's father, lowering his book.

"Someone on Slide Mountain needs help, and our phone's dead. I need to do something fast."

"That's pretty far," his father said. "He needs help from someone close. There must be another way to get him help."

Eric's mouth dropped open. "I know what to do."

Eric ran back to his room. Outside, the wind moaned, but inside, his radio sat deathly silent. He keyed the mike. "Mac, I'm still trying to get help. I'll need to switch frequencies for a minute. Hang in there."

Mac's code returned garbled.

Eric switched to another frequency. He drew in a shaky breath. "HELP. EMERGENCY. KC0ZSZ."

No response. He tried other frequencies. Finally he made contact.

"This is KC0WAA," a man's voice responded. "What's the emergency? Go ahead."

"This is Eric—KC0ZSZ. I've answered an SOS call—I repeat, a Sierra Oscar Sierra call—on another frequency. My phone line is dead. Can you call for help?"

"Yes. What's the location and problem?"

Eric rattled off the information, then added, "Mac's not responding well anymore. Please hurry."

"Hold on while I call."

Eric's body felt cold and numb. What was Mac feeling out there in the blizzard?

⁴severed: cut



"Eric? Slide Mountain Rescue is on their way with a team and ambulance. They know the place you're describing. I'll monitor this frequency for a while yet. Good luck. KC0WAA—clear."

Eric thanked him and signed off, switching back to 144.200. "Can you hear me, Mac? Help's coming! They're on their way."

There was no reply, only dead air.

Eric kept trying and got a slow response from Mac.

"You're doing great," Eric said. "Keep talking. Stay with me."

Mac responded occasionally, but slower each time.

Suddenly the radio crackled.

"This is Slide Mountain Rescue. We have Mac McKenzie."

"Yee-haw!" Eric shouted as he punched the air. "How is he?"

"He was getting pretty cold, but we arrived in time. Luckily he was able to tap code to you on the steering wheel. He wants to talk to you."

A barely audible⁵ voice asked, "You the Eric Bailey from ham-radio class in Leadville?"

"Yes, sir."

"Great rescue, son."

"Thanks. Great lessons, Mr. McKenzie."

"Seventy-three, Eric."

"Best regards to you, too," Eric said. "Get better soon."

⁵**audible:** loud enough to be heard

1

What clues does the author give at the beginning of the story that an emergency is likely to happen? Support your answer with details from the story.

Handwriting lines for question 1

2

How does the location of Eric’s house far away from the scene of the accident affect the events that take place in the story? Support your answer with details from the story.

Handwriting lines for question 2

3

How would this story be different if it were told by a narrator who knows the thoughts of ALL the characters (an omniscient narrator) rather than a narrator who knows the thoughts of the main character only (a limited narrator)? Support your answer with details from the story.

DO NOT WRITE HERE ↑

DO NOT WRITE HERE ↓

Go On 

4

Read this note that Patrick wrote to his mother explaining why he would not be home after school. Then complete the writing activity that follows.

Mom,

I have a lot of things to do after school today, so I won't be home until around 5:30. Tyler and I are working on our science project on the solar system which is due next Tuesday. We are going to use the computers in the lab at school to do our research. Then, I have to talk to Mrs. Rogers about the math test, because there are some things on the test tomorrow that I don't understand. Kara and Pete are also staying, so if we need to do additional practice for the math test we can do it together.

Also, I'm going to stop at the store on my bike ride home because I have to buy a birthday card for Grandma (you told me not to forget, and I promised I wouldn't). If it rains, though, I might need you to take me to the store after you get home. Would that be possible? I just wouldn't want to ride my bike home and get the card all wet. I'll call you from the office after school if it is raining.

Hope you have a great day, Mom! Talk to you later.

Patrick

Based on the note Patrick left for his mother, what kind of person do you think he is? What is important to Patrick? In what ways are you similar to or different from Patrick? Write an essay in which you describe the kind of person you think Patrick is and what is important to him, and then explain how he is similar to or different from you.



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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DO NOT WRITE HERE ↓

Go On





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

Lined writing area with horizontal lines for text entry.

DO NOT WRITE HERE

DO NOT WRITE HERE

Lined writing area with 15 horizontal lines.

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.



STOP! STOP! STOP! STOP! STOP!

ATTENTION!

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until you are
told to do so.**



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Session 4: Social Studies

1 Describe TWO ways the Silk Road affected ideas in Europe beginning in the first century A.D.

1) _____

2) _____

2 Look at the map below.

Some Natural Resources of Africa 2006



KEY	
Bauxite	Gold
Coal	Iron
Copper	Oil
Diamond	

DO NOT WRITE HERE

Session 4

A factory in Egypt manufactures cars.

Using information from the map, identify ONE resource that the factory owner would need to import in order to manufacture cars.

Resource: _____

Explain how the resource you identified would be used to manufacture cars.

Using information from the map, identify ONE resource that Egypt could trade for other resources.



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3

Read this excerpt from a speech by Nelson Mandela.

The healing of society means above all working together to improve the lives of especially the poor. If we take pride in the democracy we are creating, it is because it is not merely the hollow form of political freedom. Steadily but surely the lives of literally millions of our people are changing for the better, as they gain access to the simple and basic necessities of a decent life that were previously denied them.

Numbers have little meaning in themselves, but we know that you who helped us gain our freedom will share our pride in the fact that on every single day since our first democratic elections, 1,700 poor people have gained access to clean water; that 1,300 homes have been connected to an electricity supply; that each week has meant the building of two more clinics that bring health care to some 20,000 people; and that at the moment, 1,000 new houses are being started or completed every day.

—Nelson Mandela, 1998

In the second paragraph, Nelson Mandela identifies several improvements to the lives of the South African people. Describe TWO specific actions the government had to take in order to make these improvements possible.

- 1) _____

- 2) _____

- 4** The table below lists some major events in the history of Asia and Northern Africa.

Study the table.

**Some Major Events in the History of Asia
and Northern Africa**

Year	Event
3000 B.C.	Menes conquers Lower Egypt.
1700	Hammurabi develops his code of law.
539	Cyrus captures Babylon.
331	Alexander defeats the Persians.
610 A.D.	Muhammad has his first revelation.
1192	Yoritomo begins to rule Japan.
1206	Genghis Khan begins to rule the Mongols.
1271	Marco Polo arrives in China.

Go On



Session 4

Choose ONE event from the table. Then IDENTIFY the position or importance of the person named and EXPLAIN the importance of the event.

Event: _____

Position or importance of the person: _____

Importance of the event: _____

Choose a DIFFERENT event from the table. Then IDENTIFY the position or importance of the person named and EXPLAIN the importance of the event.

Event: _____

Position or importance of the person: _____

Importance of the event: _____

STOP! - - - STOP! - - - STOP! - - - STOP! - - - STOP!



Applied Skills Assessment

Mathematics • English/Language Arts • Social Studies

Grade 7