



Arkansas Comprehensive Testing, Assessment, and Accountability Program

TEACHER HANDBOOK

AUGMENTED BENCHMARK EXAMINATION GRADE 7

APRIL 2014 ADMINISTRATION

This document is the property of the Arkansas Department of Education, and all rights of this document are reserved by the Arkansas Department of Education. Arkansas public schools may reproduce this document in full or in part for use with teachers, students, and parents. All other uses of this document are forbidden without written permission from the Arkansas Department of Education. All inquiries should be sent to the Office of Student Assessment at the Arkansas Department of Education, 501-682-4558.

Arkansas Department of Education

Acknowledgments

The Arkansas Department of Education would like to thank those who have granted permission to reproduce the following copyrighted material:

Text

Pages 4–7: “8 Incredible Elephant Tales” text by Scott Elder, photograph by Michael Nichols/National Geographic Stock, *National Geographic Kids*, March 2009. Used with permission. All rights reserved.

Pages 12–14: “Safety Tips: Inline Skating” © 1995–2012. The Nemours Foundation/KidsHealth. Reprinted with permission. All rights reserved.

	PAGE
INTRODUCTION—2014 GRADE 7 AUGMENTED BENCHMARK EXAMINATION	1
SCORING STUDENT RESPONSES TO OPEN-RESPONSE ITEMS	
Reader Training.....	2
Scoring Procedures.....	2
READING PASSAGE A—2014 GRADE 7	4
READING ITEM A—2014 GRADE 7	8
READING ITEM A SAMPLE RESPONSES AND ANNOTATIONS—2014 GRADE 7	
Score Point: 4	9
Score Point: 3	10
Score Point: 2	10
Score Point: 1	11
Score Point: 0	11
READING PASSAGE B—2014 GRADE 7	12
READING ITEM B—2014 GRADE 7	15
READING ITEM B SAMPLE RESPONSES AND ANNOTATIONS—2014 GRADE 7	
Score Point: 4	16
Score Point: 3	17
Score Point: 2	18
Score Point: 1	18
Score Point: 0	18
WRITING RESPONSES	
Scoring Student Responses to Writing Prompts.....	20
Domain Scoring	20
Scoring Scale.....	20
Nonscoreable and Blank Papers.....	20
Writing Domains and Definitions— 2014 Grade 7 Augmented Benchmark Examination.....	21
WRITING PROMPT—2014 GRADE 7	
Prompt.....	22
WRITING PROMPT SAMPLE RESPONSES AND ANNOTATIONS—2014 GRADE 7	
Writing Sample Response 1	23
Writing Sample Response 2	26
Writing Sample Response 3	29

TABLE OF CONTENTS

	PAGE
MATH ITEM A—2014 GRADE 7	
Solution and Scoring	33
MATH ITEM A SAMPLE RESPONSES AND ANNOTATIONS—2014 GRADE 7	
Score: 4	34
Score: 3	35
Score: 2	36
Score: 1	37
Score: 0	38
MATH ITEM B—2014 GRADE 7	
Solution and Scoring	40
MATH ITEM B SAMPLE RESPONSES AND ANNOTATIONS—2014 GRADE 7	
Score: 4	42
Score: 3	43
Score: 2	44
Score: 1	45
Score: 0	46
MATH ITEM C—2014 GRADE 7	
Solution and Scoring	48
MATH ITEM C SAMPLE RESPONSES AND ANNOTATIONS—2014 GRADE 7	
Score: 4	49
Score: 3	50
Score: 2	51
Score: 1	52
Score: 0	53
SCIENCE ITEM A—2014 GRADE 7	
Solution and Scoring	57
SCIENCE ITEM A SAMPLE RESPONSES AND ANNOTATIONS—2014 GRADE 7	
Score: 4	58
Score: 3	59
Score: 2	60
Score: 1	61
Score: 0	62
SCIENCE ITEM B—2014 GRADE 7	
Solution and Scoring	64
SCIENCE ITEM B SAMPLE RESPONSES AND ANNOTATIONS—2014 GRADE 7	
Score: 4	65
Score: 3	66
Score: 2	67
Score: 1	68
Score: 0	69

The Arkansas Comprehensive Testing, Assessment, and Accountability Program (ACTAAP) includes an Augmented Benchmark Examination for seventh-grade students. It consists of multiple-choice and open-response items that directly assess student knowledge relative to science, math, reading, and writing. The Arkansas Curriculum Frameworks are the basis for development of the Augmented Benchmark Examinations.

In April 2014, seventh-grade students participated in the *Grade 7 Augmented Benchmark Examination*. Results of this examination will be provided to all students, schools, and districts to be used as the basis for instructional change.

This handbook provides information about the scoring of student responses to two open-response items in science, three open-response items in math, two open-response items in reading, and to one direct writing prompt. It describes the scoring procedures and the scoring criteria (rubrics) used to assess student responses. Copies of actual student responses are provided, along with scores given to those responses, to illustrate how the scoring criteria were applied in each content area.

Additional information about the *Grade 7 Augmented Benchmark Examination* is available through the Arkansas Department of Education. Questions can be addressed to the Office of Student Assessment at 501-682-4558.

The multiple-choice and open-response test items for the Reading, Writing, Math, and Science components of the *Grade 7 Augmented Benchmark Examination* are developed with the assistance and approval of Content Advisory Committees. All passages and items on the *Grade 7 Augmented Benchmark Examination* are based on the Arkansas Curriculum Frameworks and developed with the assistance and approval of Content Advisory Committees and Bias Review Committees. These committees comprise active Arkansas educators with expertise in science, math, English, and/or language arts education.

While multiple-choice items are scored by machine to determine if the student chose the correct answer from four options, responses to open-response items must be scored by trained “readers” using a pre-established set of scoring criteria.

Reader Training

Readers are trained to score only one content area. Qualified readers for Arkansas scoring will be those with a four-year college degree in science, math, English, language arts, education, or related fields.

Before readers are allowed to begin assigning scores to any student responses, they go through intensive training. The first step in that training is for the readers to read the writing prompt, the science open-response item, the math open-response item, or the reading passage and its open-response item as it appeared in the test booklet and to respond—just as the student test takers are required to do. This step gives the readers some insight into how the students might have responded. The next step is the readers’ introduction to the scoring rubric. All of the specific requirements of the rubric are explained by the Scoring Director who has been specifically trained to lead the scoring group. Then responses (anchor papers) that illustrate the score points of the rubric are presented to the readers and discussed. The goal of this discussion is for the readers to understand why a particular response (or type of response) receives a particular score. After discussion of the rubric and anchor papers, readers practice scoring sets of responses that have been pre-scored and selected for use as training papers. Detailed discussion of the responses and the scores they receive follows.

After three or four of these practice sets, readers are given “qualifying rounds.” These are additional sets of pre-scored papers, and, in order to qualify, each reader scoring responses must score in exact agreement on at least 80% of the responses, and each reader scoring writing responses must score in exact agreement with 70% of the responses in each domain. Readers who do not score within the required rate of agreement are not allowed to score the *Grade 7 Augmented Benchmark Examination* responses.

Once scoring of the actual student responses begins, readers are monitored constantly throughout the project to ensure that they are scoring according to the criteria. Daily and cumulative statistics are posted and analyzed, and the Scoring Director or Team Leaders reread selected responses scored by the readers. These procedures promote reliable and consistent scoring. Any reader who does not maintain an acceptable level of agreement is dismissed from the project.

Scoring Procedures

All student responses to the *Grade 7 Augmented Benchmark Examination* open-response test items are scored independently by two readers. Those two scores are compared, and responses that receive scores that are non-adjacent (a “1” and a “3,” for example) are scored a third time by a Team Leader or the Scoring Director for resolution.

This Teacher Handbook includes the science open-response items, the math open-response items, reading passages with their open-response items, and a writing prompt as they appeared in this year’s test. The specific scoring rubric for each item and annotated response for each score point of the rubric follows. The goal is for classroom teachers and their students to understand how responses are scored. It is hoped that this understanding will help students see what kind of performance is expected of them on the *Grade 7 Augmented Benchmark Examination*.

READING RESPONSES

8 Incredible Elephant Tales

by Scott Elder

Photograph by Michael Nichols

African elephants are the biggest land animals on Earth. Standing as tall as 13 feet and sometimes weighing more than 6 tons, these jumbos aren't dumbos. Elephants have the largest brains of any land mammal, and that includes you! Of course, elephants aren't as smart as humans; our brains are bigger compared with the size of our bodies, and that relationship is one key to intelligence. Still, in the animal kingdom they're practically geniuses. Here's how elephants show their smarts in the wild.

1

Elephants teach each other.

Not all of the humans that elephants encounter are friendly. The East African Maasai have a tradition of proving their bravery by spearing animals they consider dangerous, including elephants. Luckily, elephants can tell different human groups apart. In an experiment that proved this ability, elephants were presented with the clothing worn by two groups: the Maasai hunters and harmless local farmers. The elephants ran and hid when they saw or smelled the clothing worn by the Maasai, but reacted much more calmly to the farmers' clothes. Surprisingly, even elephants that had never been attacked responded in the same way. How did they know to run? "The elephants have learned over time and this kind of knowledge is passed down," says Joyce Poole, a biologist who studies elephants in Kenya with the organization Elephant Voices. "Just like humans: If your mother responds in a certain way, you learn from her by example."



2

Elephants listen to their elders.

Elephants rack up lots of birthdays. They live for about 60 years or more, which is one of the longest life spans among mammals. Elephants store all the knowledge they learn over the years in their big, powerful brains, and younger elephants trust the wisdom of their elders. Male elephants leave the family when they grow up, and the oldest female, called a matriarch, leads the group. All the adult females in the group help make decisions during calm times. “But if elephants are under threat, then everyone in the family looks to the matriarch for her strong and wise leadership,” says Poole. “Families led by the oldest matriarchs tend to be dominant, survive droughts best, and have the most babies.”

3

Elephants really never forget.

At one point, Poole made friends with a curious wild male named Vladimir. He would let Poole touch his trunk and tusks. After a separation of 12 years, Poole wondered how Vladimir would react to seeing her. “I called to him and he came over and let me touch him again,” she says. “There was no doubt in my mind that he remembered me—I was the only one who ever had that kind of interaction with him.” Elephants remember important things about their environment, too. A single elephant can devour hundreds of pounds of leaves and vegetation and guzzle 50 gallons of water every day. For the savannah elephants in the grasslands of East Africa, where trees are scattered and the land often becomes bone-dry, memorizing where to find distant food and water is a matter of survival. And even if an old watering hole appears dry, the clever elephants know to dig a well.

4

Elephants figure out things with their trunks.

Most people know that elephants use their trunks to trumpet loudly, to say things like “I’m happy” or “Leave me alone.” But elephants’ trunks, like our handy thumbs, also give them the ability to grab things and handle them carefully. Elephants use their trunks to stuff food into their mouths, fling stones, and sometimes get into mischief. “They outsmart humans all the time,” says George Wittemyer, a biologist who studies elephants with the organization Save the Elephants. Elephants lift the lids on water tanks and suck them dry while people sleep, and they’ve figured out how to turn on a faucet to get a drink. “It’s a testament to how intelligent they are,” says Wittemyer. “But unfortunately they don’t turn the faucet off—to the great annoyance of the people living there!”

5

Elephants care for the injured.

If elephants are in trouble, their friends and family help them. Wittemyer remembers when he and other researchers tranquilized a female elephant in order to fit her with a radio collar. “The elephant was starting to get woozy, and was about to fall over,” says Wittemyer. Other elephants thought she had been wounded and came to help. “They tried to hold her up,” he says. They lifted her with their tusks and pulled with their trunks. On another occasion, Wittemyer saw elephant family members visit a young female with a broken leg every day until she recovered. He thinks it is likely the injured female would have died without the companionship and assistance. “Being a good friend is very important to elephants,” he says.

6

Elephants feel sad when another dies.

Unlike most animals, elephants seem to grieve after a death. Wittemyer saw a female elephant become deeply depressed after her baby died from an illness. Sometimes the mother lingered alone near the place where her baby had died. “Other times she’d run around trumpeting and ripping up bushes,” he says. She stayed near the site for three months before rejoining her family group and returning to normal life. Elephants also behave very oddly when they come across elephant remains. They become unusually quiet and carefully sniff and feel the bones with their trunks. “I think they’re smart enough to make the connection between those large bones and a once-living elephant,” says Poole. “I feel elephants have a very clear understanding of their own mortality.”

7

Elephants make long-distance calls.

Imagine you’re wearing a blindfold. How many of your friends do you think you could identify by voices alone? Female elephants can recognize the calls of about 100 different extended family members. They can even tell who’s who from a mile and a half away. Elephant families tend to split up into smaller groups for days or weeks when they travel or search for food. Their ability to remember each other’s low-pitched rumbles lets elephants keep in touch until the next family reunion. But elephants’ “caller ID” also serves another purpose. “They’re able to recognize who’s a friend or foe,” says Poole. If the group hears a strange elephant’s call, they bunch up and prepare for potentially hostile visitors.

8

Elephants adopt orphans.

It's a sad fact that for many animal species, when a mother dies, her children do not have anyone to care for them and also die. Elephants are different. When a matriarch elephant named Tuskless died, her baby calf was orphaned. Tuskless's adult daughter Tulip already had a young calf of her own, but she adopted the orphan anyway. "Because they have such close bonds and close friendships, it's just natural that they would adopt and look after calves," says Poole. What surprised her, though, was when she saw Tulip nursing a third calf—another orphan—that wasn't even part of her extended family. "They're so caring about other elephants," she says. "They're kind of able to put themselves in another's shoes, so to speak . . . which is definitely a sign of higher intelligence."

A Identify two important pieces of knowledge that, based on the passage, an elephant might gain in sixty years of life. Use details from the passage to explain how each piece of knowledge enables the elephant to survive.

Reading Item A Scoring Rubric—2014 Grade 7

Score	Description
4	The response identifies two important pieces of knowledge an elephant might gain in its lifetime and explains, using at least one detail from the passage per explanation, how each piece of knowledge enables the elephant to survive.
3	The response identifies two important pieces of knowledge an elephant might gain in its lifetime and explains, using at least one detail from the passage, how one piece of knowledge enables the elephant to survive.
2	<p>The response identifies two important pieces of knowledge an elephant might gain in its lifetime.</p> <p style="text-align: center;">OR</p> <p>The response identifies one important piece of knowledge an elephant might gain in its lifetime and explains, using at least one detail from the passage, how that piece of knowledge enables the elephant to survive.</p>
1	<p>The response identifies one important piece of knowledge an elephant might gain in its lifetime.</p> <p style="text-align: center;">OR</p> <p>The response explains, using at least one detail from the passage, how an elephant’s knowledge enables it to survive.</p> <p style="text-align: center;">OR</p> <p>The response demonstrates minimal understanding of the question.</p>
0	The response is totally incorrect and shows no evidence that the student understands the task. The response may be off topic or completely irrelevant.
B	Blank—No response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for the item.)

SCORE POINT: 4

The response identifies two important pieces of knowledge an elephant might gain in its lifetime (“They could learn to tell the different human groups apart” and “They would figure out how to use their trunks”) and using details from the passage explains how each piece of knowledge enables the elephant to survive (“the East African Maasai was presented with clothing worn by two groups. They ran and hid from the group dressed like Maasai hunters but acted more calm around the group dressed like farmers. They would learn to run and hide. They would need to know who to hide from to survive” and “They can use it to stuff food in their mouth, fling stones, and sometimes get into mischief. This could help them eat and defend themselves they need that to survive”). The response demonstrates a thorough understanding of the task.

- ① They could learn to tell the different human groups apart. They would learn this from each other, for example, the East African Maasai was presented with clothing worn by two groups. They ran and hid from the group dressed like Maasai hunters but acted more calm around the group dressed like farmers. They would learn to run and hide. They would need to know who to hide from to survive
- ② They would figure out how to use their trunks. They can use it to stuff food in their mouth, fling stones, and sometimes get into mischief. This could help them eat and defend themselves they need that to survive

SCORE POINT: 3

The response identifies two important pieces of knowledge an elephant might gain in its lifetime (“Elephants will learn about one-hundred different calls from extended family members” and “Elephants will also listen to their elders”), using details from the passage to explain only how the first piece of knowledge enables the elephant to survive (“This can help the elephants to survive, because if they don’t know one of the one hundred calls, they will know that it is a predator”). The response shows evidence of a general, but not a comprehensive, understanding of the task.

Elephants will learn about one-hundred different calls from extended family members. This can help the elephants to survive, because if they don't know one of the one hundred calls, they will know that it is a predator. Elephants will also listen to their elders.

SCORE POINT: 2

The response identifies two important pieces of knowledge an elephant might gain in its lifetime (“The matriach is oldest and most experienced in the heard” and “Elephants adopt orphaned elephants whether their family or not”). The response shows evidence of only a basic understanding of the task.

The matriach is oldest and most experienced in the heard. Elephants adopt orphaned elephants whether their family or not.

SCORE POINT: 1

The response identifies one important piece of knowledge an elephant might gain in its lifetime (“they learn from there mom about how to survive”). The response provides evidence of minimal understanding.

one way is they learn
 from there mom about how to
 survive. two they are Born
 to know how to survive.

SCORE POINT: 0

There is no evidence that the student understands the task. The response is irrelevant.

Two things elephants will gain in life
 is weight because the elephant is
 getting older. And for the cause of low
 tall it can grow. That two things ele
 phants gain in life.

Safety Tips: Inline Skating

Whether you're in a skate park in the Northeast, cruising the boardwalks of California, or playing a game of roller hockey in the Midwest, inline skating is good exercise and an excellent off-season training program for hockey and skiing.

Why Is Inline Skating Safety Important?

Inline skating has exploded in popularity. Skaters can be found most everywhere that bicyclists, skateboarders, and joggers go. This greatly increases the chances of painful collisions.

- 3 Most of the many thousands of inline skating injuries that happen each year are to skaters who aren't wearing safety gear. The most commonly injured body parts are the hands and arms, although abrasions to other areas of the body are common. Most seriously, head injuries can plague skaters who don't wear helmets.

Gear Guidelines

Always wear safety gear—and make sure you have it on properly—anytime you go inline skating. Here's a rundown of what you'll need when you skate:

- 5 • **Helmet.** A helmet is a must every time you skate. It's the most important piece of safety equipment. Bicycle helmets are better than nothing, but you really should invest in a helmet designed specifically for inline skating or skateboarding. These come down lower in the back, toward the base of the skull, for maximum protection in the event of a backward fall. Plus, they just look cooler.

Helmets must fit properly. Helmets that are too large or improperly fastened can come off during a fall. If you need fit or sizing tips, ask when you buy the helmet. And always fasten chin straps snugly under your chin so the helmet doesn't move around.

- **Skates.** You'll want a sturdy pair of inline skates, with plenty of ankle support. One way to check if skates offer the support you need is to feel the plastic of the boot. If you can squeeze it, the material is not strong enough. Be sure to get skates that match your needs whether you're planning on racing, competing in freestyle events or just casually rolling down the boardwalk.

Check your skates before you put them on. Make sure that wheels and brakes are in good shape and tightly secured. If wheels or brakes are misshapen or worn, replace them right away. Check that any buckles are in proper working order. Always buckle up your skates and keep them nice and snug when you skate.

- **Pads.** Cuts, scrapes, and sprained or broken wrists are a constant danger to inline skaters. At a minimum you'll want to wear knee pads, elbow pads, and wrist guards every time you skate. Knee and elbow pads should have a cushioned interior with a hard plastic shell to protect against scrapes. Wrist guards should be made from rigid plastic that holds the wrist securely in place in the event of a fall. All pads should fit properly and be securely fastened at all times.
- **Other Gear.** Some skaters like to wear long pants and long-sleeve shirts below their pads for extra protection against scrapes and cuts. Light gloves can keep your fingers safe. Lastly, fitted mouthguards are a good idea in any activity that might involve falls or collisions.

Before You Start Skating

- 11 Better skaters have more fun and are less likely to get injured. Consider taking a lesson from a trained instructor or experienced skater before you try skating on your own. Know how to turn, control speed, stop, and skate with your head up so you can recognize and avoid obstacles and other people. Practice falling on grass or a gym mat so that when a real fall happens you'll be prepared to fall the right way.

Each time you head out, warm up with a gentle 5-minute skate and then stretch to keep your muscles and joints loose. This will help you avoid muscle tears and pulls.

Double-check to make sure you have all the necessary safety gear and that it is all being worn properly. Check to make sure your helmet's chin strap is fastened and snug.

If you're planning to skate on a trail, know how far you intend to go and how long it will take you to get back. Tell a family member or friend where you're going and how long you will be gone.

While Skating

Be aware of your surroundings at all times. Know where other skaters, pedestrians, bicyclists, and joggers are, and be sure to give them plenty of space to avoid collisions. If you're skating in a skate park, practice good etiquette by waiting until the area is clear and it's your turn to skate.

Stay to the right when skating on sidewalks, bike paths, and trails. If you're going to pass another person, do so on the left, and let them know you are coming by yelling out, "On your left!" Only pass when it's safe and there is room enough for you and the other person.

Watch out for changing conditions due to weather or other factors. Just because the pavement is smooth in one spot doesn't mean it will be smooth a hundred yards ahead. If you feel like you're approaching an area with a wet, oily, or cracked riding surface, slow down until you are sure it's safe to proceed.

Don't skate while wearing headphones unless you are in a controlled environment. Listening to music while skating will make it difficult to hear traffic, pedestrians, or other skaters.

Try to find a friend or friends to skate with. This will not only be more fun, but you'll also be able to look out for one another and get help in the event of an emergency. If you and your skating partners skate on a trail or sidewalk, make sure to form a single-file line.

A Few Other Reminders

- Never get towed behind a car, bike, or other vehicle. This is a sure-fire way to seriously hurt yourself.
- If you're skating outside on a sunny day, don't forget to apply sunscreen.
- Stay in control at all times. Losing control is the leading cause of inline skating injuries.
- If you plan to skate on private property, make sure you have the owner's permission to do so.
- Be courteous and polite to other skaters and anyone else you might encounter while skating. This will help you avoid confrontations and help prevent the possibility of skating being banned in your area. You can have a great time skating, but do whatever you can to make sure everyone else has a great time too.

- B** Identify one rule to follow before skating and explain why it is important. Identify one rule you should follow while skating and explain why it is important.

Reading Item B Scoring Rubric—2014 Grade 7

Score	Description
4	The response identifies one rule to follow before skating and explains why it is important, and identifies one rule to follow while skating and explains why it is important.
3	The response identifies one rule to follow before skating and explains why it is important, and identifies one rule to follow while skating. OR The response identifies one rule to follow before skating, and identifies one rule to follow while skating and explains why it is important.
2	The response identifies one rule to follow before skating and explains why it is important. OR The response identifies one rule to follow while skating and explains why it is important. OR The response identifies one rule to follow before skating and one rule to follow while skating.
1	The response identifies one rule to follow before skating. OR The response identifies one rule to follow while skating. OR The response provides evidence of minimal understanding.
0	The response is totally incorrect and shows no evidence that the student understands the task. The response may be off topic or completely irrelevant.
B	Blank—No response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for the item.)

SCORE POINT: 4

The response identifies more than the required one rule to follow before skating (“taking lessons from a trained instructor or experienced skater” and “each time you head out warm up with a gentle 5-min. skate and stretch”) and more than the required one rule to follow while skating (“Be aware of your surroundings at all times” and “Don’t skate while wearing headphones unless you’re in a controlled environment”) and explains why they are important (“because better skaters have more fun and are less likely to be injured,” “helps avoid muscle tears and pulls,” “it would avoid collisions,” and “Listening to music while skating will make it difficult to hear traffic, pedestrians, or other skaters” respectively). The response demonstrates a thorough understanding of the task.

One rule to follow before skating:
 1. * taking lessons from a trained instructor or experienced skater.
 • because better skaters have more fun and are less likely to be injured.

2. One rule to follow while skating:
 * Be aware of your surroundings at all times.
 • it would avoid collisions.

Another rule to follow before skating:
 3. * Each time you head out warm up with a gentle 5-min. skate and stretch.
 • helps avoid muscle tears and pulls.

4. Another rule to follow while skating:
 * Don't skate while wearing headphones unless you're in a controlled environment.
 • Listening to music while skating will make it difficult to hear traffic, pedestrians, or other skaters.

SCORE POINT: 3

The response identifies one rule to follow before skating (“do a gentle five minute warm up”) and one rule to follow while skating (“when your skating on sidewalks, bike paths, and trails, you need pass them on the left and let them know you are by yelling ‘On your left!’ Only pass when it’s safe and there is room enough for you and the other person”), but only explains why the rule to follow before skating is important (“You need to keep your muscles and joints loose to avoid muscle tears and pulls. You wouldn’t want to get hurt that way”). The response shows evidence of a general, but not a comprehensive, understanding of the task.

1) A rule you should do before skating is to do a gentle five minute warm up. stretch, get loose. You need to keep your muscles and joints loose to avoid muscle tears and pulls. You wouldn't want to get hurt that way.

2) A rule you should follow while skating is when your skating on sidewalks, bike paths, and trails, you need pass them on the left and let them know you are by yelling "On your left!" Only pass when it's safe and there is room enough for you and the other person.

SCORE POINT: 2

The response identifies one rule to follow before skating (“If you’re skating outside on a sunny day, don’t forget to apply sunscreen”) and explains why it is important (“because you can get a sunburn”). The response shows evidence of only a basic understanding of the task.

If you're skating outside on a sunny day,
don't forget to apply sunscreen, because you can
get a sunburn.

SCORE POINT: 1

The response identifies one rule to follow before skating (“you should always wear safty gear”). The response provides evidence of minimal understanding.

you should always wear safty
gear and that's the main thing

SCORE POINT: 0

There is no evidence that the student understands the task. The response is irrelevant.

You have to follow the rule that
you have to bress up for it.

WRITING RESPONSES

SCORING STUDENT RESPONSES TO WRITING PROMPTS

Domain Scoring

In domain scoring, which was developed in conjunction with Arkansas educators, the observation of writing is divided into several domains (categories), each composed of various features. The domains scored for Arkansas compositions are Content, Style, Sentence Formation, Usage, and Mechanics. (These domains are defined on the following page.) Each domain is evaluated holistically; the domain score indicates the extent to which the features in that domain appear to be under the control of the writer. The score reflects the student's performance for the entire domain with all features within the domain being of equal importance.

All responses are read independently by at least two readers. The two scores are averaged by domain. In cases where the two readers' scores are non-adjacent (a "1" and a "3," for example) in any domain, the response is read by a third reader for resolution.

The domain scores, along with an awareness of the features comprising each domain, can be used to plan developmental or remedial instruction for the student.

Scoring Scale

Each domain is scored independently using the following scale:

- 4 = The writer demonstrates **consistent**, though not necessarily perfect, control* of almost all of the domain's features.
- 3 = The writer demonstrates **reasonable**, but not consistent, control* of most of the domain's features, indicating some weakness in the domain.
- 2 = The writer demonstrates **inconsistent** control* of several of the domain's features, indicating significant weakness in the domain.
- 1 = The writer demonstrates **little** or **no** control* of most of the domain's features.

*Control: The ability to use a given feature of written language effectively at the appropriate grade level. A response receives a higher score to the extent that it demonstrates control of the features in each domain.

The application of the scale, using actual student writing, was done with the assistance of a committee of Arkansas teachers and representatives of the Arkansas Department of Education.

Nonscoreable and Blank Papers

Nonscoreable papers include student responses that are off-topic, illegible, incoherent, written in a language other than English, or too brief to assess. Nonscoreable papers will receive a score of "0." Blank papers indicate no response was written and will be reported as NA (no attempt), which translates into a score of "0."

**WRITING DOMAINS AND DEFINITIONS—
2014 GRADE 7 AUGMENTED BENCHMARK EXAMINATION**

Content (C)

The Content domain includes the focusing, structuring, and elaborating that a writer does to construct an effective message for a reader. It is the creation of a product, the building of a composition intended to be read. The writer crafts his/her message for the reader by focusing on a central idea, providing elaboration of the central idea, and delivering the central idea and its elaboration in an organized text. Features are:

- Central idea
- Unity
- Elaboration
- Organization

Style (S)

The Style domain comprises those features that show the writer is purposefully shaping and controlling language to affect readers. This domain focuses on the vividness, specificity, and rhythm of the piece and the writer’s attitude and presence. Features are:

- Selected vocabulary
- Selected information
- Sentence variety
- Tone
- Voice

Sentence Formation (F)

The Sentence Formation domain reflects the writer’s ability to form competent, appropriately mature sentences to express his/her thoughts. Features are:

- Completeness
- Expansion through standard coordination and modifiers
- Standard word order
- Embedding through standard subordination and modifiers
- Absence of fused sentences

Usage (U)

The Usage domain comprises the writer’s use of word-level features that cause written language to be acceptable and effective for standard discourse. Features are:

- Standard inflections
- Word meaning
- Agreement
- Conventions

Mechanics (M)

The Mechanics domain includes the system of symbols and cueing devices a writer uses to help readers make meaning. Features are:

- Capitalization
- Formatting
- Punctuation
- Spelling

This is one of the two writing prompts administered to all grade 7 students in April 2014.

Prompt

After a class discussion about childhood, your teacher asks you to write an essay about what you miss most about being a young child.

Before you begin to write, think about the differences between your childhood and your life now. What could you do as a child that you can no longer do now? What do you miss about these things and **why**?

Now write your essay explaining what you miss most about being a young child. Give enough detail so that your teacher will understand.

WRITER'S CHECKLIST

1. Look at the ideas in your response.

- Have you focused on one main idea?
- Have you used enough detail to explain yourself?
- Have you put your thoughts in order?
- Can others understand what you are saying?

2. Think about what you want others to know and feel after reading your paper.

- Will others understand how you think or feel about an idea?
- Will others feel angry, sad, happy, surprised, or some other way about your response? (Hint: Make your reader feel like you do about your paper's subject.)
- Do you have sentences of different lengths? (Hint: Be sure you have a variety of sentence lengths.)

- Are your sentences alike? (Hint: Use different kinds of sentences.)

3. Look at the words you have used.

- Have you described things, places and people the way they are? (Hint: Use enough detail.)
- Are you the same person all the way through your paper? (Hint: Check your verbs and pronouns.)
- Have you used the right words in the right places?

4. Look at your handwriting.

- Can others read your handwriting with no trouble?

WRITING SAMPLE RESPONSE 1

Content: 4

This response has a clear central idea (aspects of childhood innocence) and is fully elaborated (“Most of us don’t even know what the word death means,” “half a day counting cookies and making paper snowmen,” “the Tooth Fairy would pick it up”). There is clear organization and an effective closure that brings unity to the entire piece. The response demonstrates consistent control of the Content domain.

Style: 4

This response includes purposefully chosen information and vivid, precise vocabulary selected to affect the reader throughout (“merely brushed aside the fact,” “Perhaps even the first time you made your own meal,” “Princesses dwelled in luxurious castles”). The variety in sentence beginnings and lengths creates an interesting reading. An appropriate tone is maintained throughout, and the writer’s voice is strong. This response demonstrates consistent control of Style features.

Sentence Formation: 4

This response displays mature sentence structures, using expansion through coordination and embedding through subordination. This response demonstrates consistent control of Sentence Formation features.

Usage: 4

This response includes a verb tense shift, but it is not enough to lower the score. Standard inflections, agreement, word meaning, and conventions are all consistently controlled.

Mechanics: 4

This response includes few errors and demonstrates consistent control of capitalization, punctuation, formatting, and spelling.

Every one of us goes through a time in their life when all seems perfect. It is a time of happiness and laughter—and joy all around. As a young child, you do not understand or comprehend awful events in the world, you are free of hefty responsibilities and challenges, and you easily believed in joyous or magical things. Unfortunately, as we grow older, we begin to drift away from such fantasies and see reality the way it really is. When you are a young child, you believe in and can do more joyous things.

Young children do not realize the full extent of happenings in the world. When the World Trade Center was attacked in 2001, I was only three and merely brushed aside the fact that anything had even happened. Most of us don't even know what the word death means until we are six or seven. As adults and older children, we begin to see all these terrible events going on worldwide.

Remember the first time you did your laundry? Or washed the dishes? Perhaps even the first time you made your own meal. These

are all usually major landmarks in one's timeline. Another experience that almost all people also recognize changing is school. In kindergarten, you'd spend half a day counting cookies and making paper snowmen. However, as time goes, you have more responsibilities and challenges both at home and at school.

No one can forget the magic of being a young child—literally. If we lost a tooth, we'd stick it under our pillow and the Tooth Fairy would pick it up, leaving behind money. Princesses dwelled in luxurious castles. Pirates even sailed the seven seas. One time or another, you might be angered by the fact that none of these are real. It's all part of growing up.

All of us miss childhood in some way. While we'll never go back to that wondrous time, none of us will ever quite lose our childhood innocence. When you are a child, the world is wonderful because you cannot comprehend awful events, you are free of hefty responsibilities and believed in magical things. While it would be great to go back in time, we all have our duties as we grow older.

WRITING SAMPLE RESPONSE 2

Content: 3

This response has a clear central idea (things the writer misses about being a young child). Details support the central idea, but elaboration is not complete enough for a higher score. The response is organized by the three activities the student can no longer do (“take naps,” “color in class,” “just act different”), and there are no digressions. Overall, the response demonstrates reasonable control of the Content domain.

Style: 3

This response has purposefully selected vocabulary (“20-30 minute nap,” “assignment,” “grounded”) mixed with more general information. There is some variety in beginnings and lengths of sentences (“Sometimes I wish,” “Every day before last recess,” “For example we could say different words”). The writer’s tone is appropriate, and voice is present that fades at times when the information becomes general. The response demonstrates reasonable control of Style features.

Sentence Formation: 4

This response includes a comma splice (“We did not color because we wanted to, we did it because it was an assignment”). However, all other sentences are formed correctly, including some that go beyond simplistic construction. This response demonstrates consistent control of Sentence Formation features.

Usage: 4

Although this response is not perfect (“act different”), there is consistent use of standard inflections, agreement, word meaning, and conventions throughout the response which demonstrates consistent control of the Usage domain.

Mechanics: 3

Overall, the response demonstrates reasonable control of Mechanics features. There are several misspelled words (“assignment,” “opinion,” “realy,” “To day,” “can not,” “to much trouble,” “some one,” “deffintly”), missing commas, and an omitted apostrophe (“dont”).

Sometimes I wish I was still a young child, don't you? I wish this because there were many things I could do then that I can not do now. Some of the things were take naps, color in class, and just act different.

One thing I could do when I was young was take naps in kindergarten. Every day before last recess we would take a 20-30 minute nap. I am not sure why we did this but I think it is so we could have plenty of rest for that day.

Another thing I did when I was young was color. We did not color because we wanted to, we did it because it was an assignment. I wish I could still do this because it was really fun, and in my opinion I am really good at it.

One more thing we did was act really different. For example we could say different words and most of the time not get in to much trouble. Or even hit some one and not get grounded like today.

As you can see, things are really different from when we were young. We could take naps, color, and act different. To day if I took a nap or colored in class, I would defintly get detention.

WRITING SAMPLE RESPONSE 3

Content: 2

This response has a central idea focused on missing things about being a young child. Due to the lack of elaboration, the attempts at details are a list-like summary. Although the response is organized, the overall lack of elaboration and the simplistic closure demonstrate inconsistent control of the Content domain.

Style: 2

This response includes vocabulary and details that are mostly general (“whatever they want,” “stores,” “much work”), and show little evidence of purposeful selection. As a result, the tone is flat and the voice is dim. There is inconsistent control of the features of Style.

Sentence Formation: 4

This response does not have any errors in Sentence Formation, and there are examples of correctly formed simple and complex sentences. The response demonstrates consistent control of Sentence Formation features.

Usage: 4

Although this response includes an agreement error (“There is really a lot of things”), there is consistent use of correct standard inflections, agreement, word meaning, and conventions throughout the response which demonstrates consistent control of the Usage domain.

Mechanics: 4

Although this response has several missing commas and an omitted apostrophe (“cant”), consistent control of Mechanics features is displayed.

I miss a lot about being a child. Children get whatever they want but when you get older you don't. Children get to play in the little cars and trucks they have at stores, but when you get older you can't. When you are younger you don't have to do as much work in school, and it is easier. There is really a lot of things I miss about being a child.

MATH RESPONSES

A Chase is calculating membership costs for his gym, *Fit World*. He uses the equation $25m + 99 = c$ to find the cost of his membership which includes the \$25 monthly fee and the \$99 sign-up fee. Let c = the cost and m = the number of months.

1. Make a table of values to represent the costs for 3 months, 6 months, 9 months, and 12 months.
2. A new gym, *Health Space*, opened nearby and has no sign-up fee with a \$37 monthly fee. In which month would *Health Space* first become more expensive than Chase’s current gym? Explain and show your work.

BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

Math Item A Scoring Rubric—2014 Grade 7
--

Score	Description
4	The student earns 4 points. The response contains no incorrect work. An indication of money or dollars is required in both sections. “Months” label in Part 2 is not required.
3	The student earns 3 – 3½ points.
2	The student earns 2 – 2½ points.
1	The student earns ½ – 1½ point(s), or some minimal understanding is shown.
0	The student earns 0 points. No understanding is shown.
B	Blank—No Response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for the item.)

SOLUTION AND SCORING

Part	Points
1	<p>2 points possible:</p> <p>2 points: Four correct values in a table \$174, \$249, \$324, \$399</p> <p>OR</p> <p>1½ points: Two or three correct values in a table</p> <p>OR</p> <p>1 point: Four correct values without a table</p> <p>OR</p> <p>½ point: Two or three correct values without a table</p>
2	<p>2 points possible:</p> <p>1 point: Correct answer: 9 <i>Or correct answer based on Part 1</i></p> <p>AND</p> <p>1 point: Correct and complete explanation or work shown <i>Work may contain an arithmetic or copy error</i> Give credit for the following or equivalent: Ex. Health Space costs $37 \times 9 = 333$ at 9 months</p>

SCORE: 4

Part 1		Points
4 correct table values:	\$174, \$249, \$324, \$399	2

Part 2		Points
Correct answer:	9	1
Correct procedure:	$37 \times 9 = 333$	1
Total Points		4

Explain for #21

Health space becomes more expensive at month 9. What I did was 37×3 and it was cheaper than Fit World. So I did 37×6 and it was still cheaper. So then 37×9 and it was more. So I times 37×7 and $25 \times 7 + 99$ and Fit world was more. So then 37×8 and $25 \times 8 + 99$ and Fit world was still more but when you

①

months (v)	(dollars) Cost (x)
3	\$174
6	\$249
9	\$324
12	\$399

What I did was I took the number of months and times it by 25. then I added on \$99.

②

$37 \times 3 = 111$ Health space times 9, Health space is more.

$37 \times 6 = 222$

$37 \times 9 = 333$ → $37 \times 7 = 259$ → $25 \times 7 + 99 = 274$

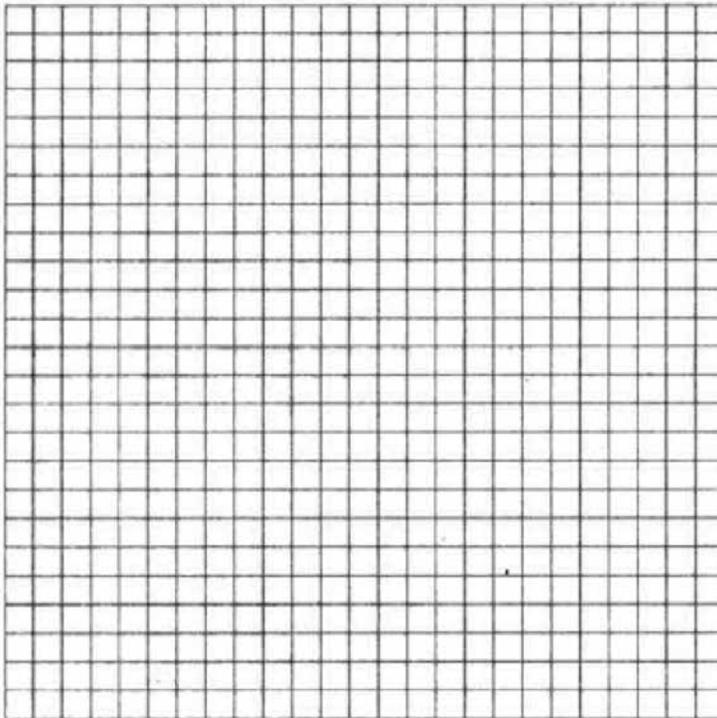
$37 \times 8 = 296$ → $25 \times 8 + 99 = 299$

Fit world is still more

SCORE: 3

<u>Part 1</u>		Points
4 correct table values:	\$174, \$249, \$324, \$399	2

<u>Part 2</u>		Points
Correct answer:	9	1
Missing procedure:		0
Total Points		3



②

3 months	37.3
cost =	111
6 months	
cost =	222
9 months	

They would be more expensive in da ninth month.

①

3 months	6 months	9 months	12 months
$25 \cdot 3 + 99$ 174 cost = 174	$25 \cdot 6 + 99$ 249 cost = 249	$25 \cdot 9 + 99$ 324 cost = 324	$25 \cdot 12 + 99$ 399 cost = 399

$25m + 99 = C$

SCORE: 2

Part 1		Points
3 correct table values:	\$174, \$249, \$324 but not in a table	½

Part 2		Points
Correct answer:	9	1
Correct procedure:	$37 \times 9 = 333$	1
Total Points		2½

1) The cost for 3, 6, and 9 months would be:

3 months = $25 \times 3 + 99 =$
 $\$174.00$

6 months = $25 \times 6 + 99 =$
 $\$249.00$

9 months = $25 \times 9 + 99 =$
 $\$324.00$

2) Chase's Gym
 $25 \times 1 + 99 = 124$
 $25 \times 2 + 99 = 149$
 $25 \times 3 + 99 = 174$
 $25 \times 4 + 99 = 199$
 $25 \times 5 + 99 = 224$
 $25 \times 6 + 99 = 249$
 $25 \times 7 + 99 = 274$
 $25 \times 8 + 99 = 299$
 $25 \times 9 + 99 = 324$

Health Spac
 $37 \times 2 = 74$
 $37 \times 3 = 111$
 $37 \times 4 = 148$
 $37 \times 5 = 185$
 $37 \times 6 = 222$
 $37 \times 7 = 259$
 $37 \times 8 = 296$
 $37 \times 9 = 333$

333 is greater than 324 which is in month 9.

It becomes more expensive on month 9.

SCORE: 1

Part 1		Points
2 correct table values not in a table:	\$174, \$324	½

Part 2		Points
Correct answer:	9th	1
Missing procedure:		0
Total Points		1½

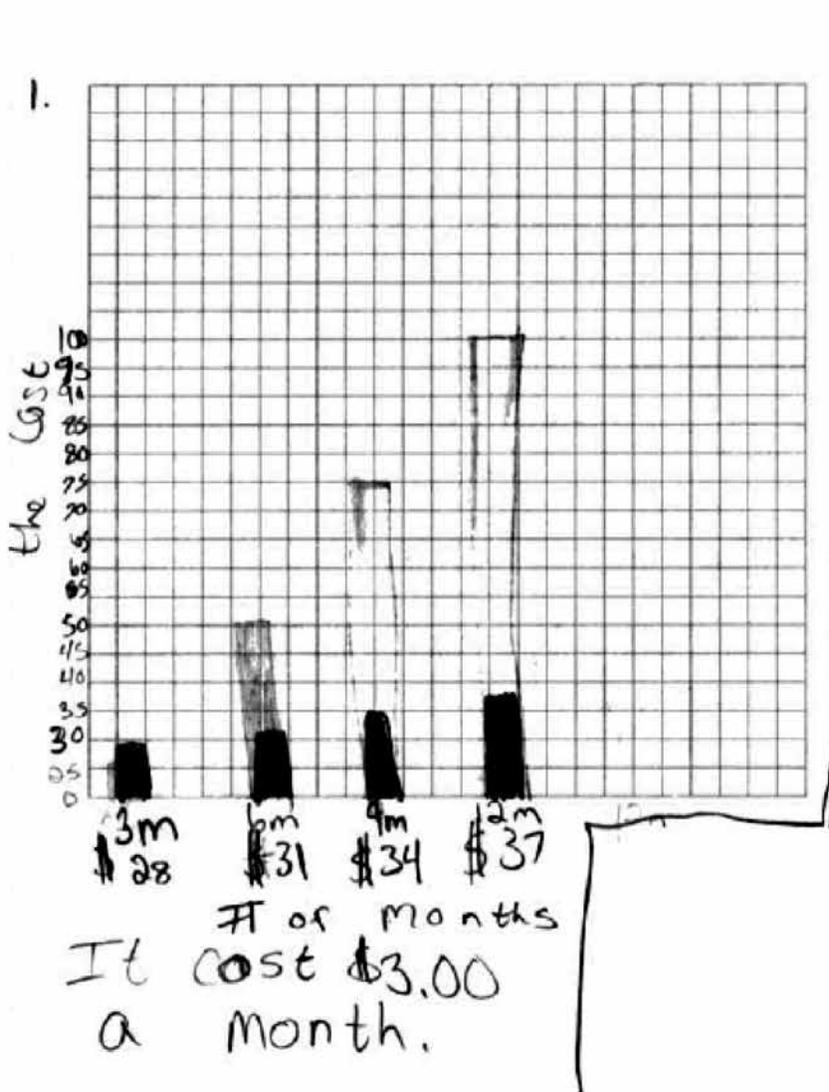
1. $25(3) + 99 = 174$ ^{do} _{9 months} | $25(6) + 99$ ^{+ 150} ₂₄₆ _{6 months} | $25(9) + 99 = 324$ _{9 months} ^{+ 99} ₃₂₄

2. The 9th month because it will be \$333 / 9 months

SCORE: 0

Part 1		Points
0 correct table values:	\$28, \$31, \$34, \$37	0

Part 2		Points
Incorrect answer:	1	0
Incorrect procedure:	$37 + 3$; $37 + 6$; $37 + 9$; $37 + 12$	0
Total Points		0



2. Health Space
 for 1 months it cost \$37, 3 months it cost \$40, for 6 months it cost \$43, for 9 months it cost \$46, and for 12 months it cost \$49.
 I added $37 + 3$, $37 + 6$, $37 + 9$, and $37 + 12$. It is cheaper to go to chases fitness gym.

- B** Use the coordinate grid in your answer document to answer Parts 1 through 3.
1. On the coordinate grid in your answer document, plot and label the following ordered pairs.
 - A (−3, 4)
 - B (−4, 1)
 - C (−3, −2)
 - D (1, −2)
 2. Plot two more points so that all six points become the corners of a shape with three pairs of parallel sides. Label those two new points E and F.
 3. Answer these questions:
 - What is the most specific name for the kind of shape made by ABCDEF?
 - Is the shape regular or irregular?

BE SURE TO LABEL YOUR RESPONSES 1, 2, AND 3.

Math Item B Scoring Rubric—2014 Grade 7
--

Score	Description
4	The student earns 5 points. The response contains no incorrect work.
3	The student earns 3 – 4½ points.
2	The student earns 2 – 2½ points.
1	The student earns ½ – 1½ point(s), or some minimal understanding is shown.
0	The student earns 0 points. No understanding is shown.
B	Blank—No Response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for the item.)

SOLUTION AND SCORING

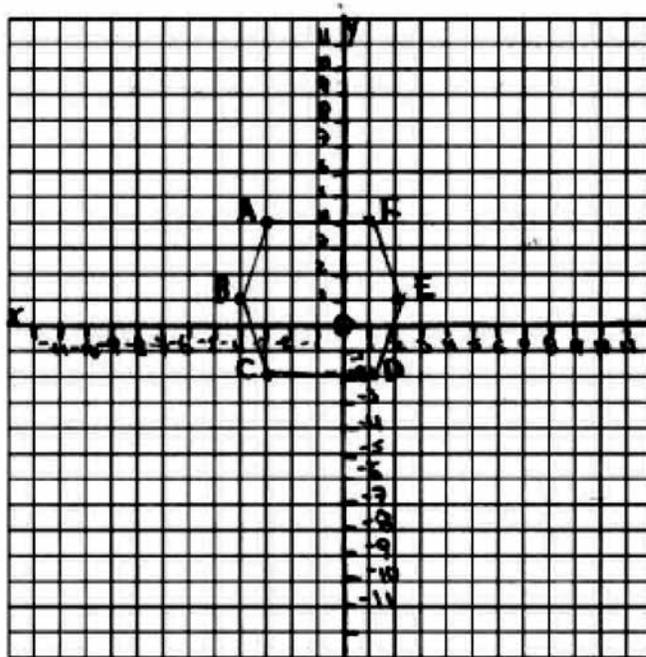
Part	Points
1	<p>2 points possible:</p> <p>2 points: Correct answer: Points A, B, C, and D are plotted and labeled correctly (<i>½ point apiece</i>)</p> <p>Give credit for the following or equivalent:</p> <p>Ex.</p> <div data-bbox="592 531 1172 1102" style="text-align: center;"> </div> <p><i>Note: Inconsistent interval(s) result in a score max of 1 point in Part 1 only. Points not labeled also result in a score max of 1 point in Part 1 only.</i></p>

Part	Points
<p>2</p>	<p>2 points possible:</p> <p>1 point: Correct answer: (1, 4) plotted and labeled as E or F <i>Or correct answer based on Part 1</i></p> <p>AND</p> <p>1 point: Correct answer: (2, 1) or (0, 1) plotted and labeled as E or F <i>Or correct answer based on Part 1</i> Ex.</p> <div data-bbox="602 667 1222 1297" data-label="Figure"> <p>The figure shows a coordinate plane with a grid. The x-axis and y-axis both range from -10 to 10, with major grid lines every 1 unit. Six points are plotted and labeled as follows:</p> <ul style="list-style-type: none"> Point A: (-3, 4) Point B: (-4, 1) Point C: (-3, -2) Point D: (1, -2) Point E: (2, 1) Point F: (1, 4) </div>
<p>3</p>	<p>1 point possible:</p> <p>1 point: Fully correct answer: Irregular Hexagon</p> <p>OR</p> <p>½ point: Partially correct answer: Hexagon</p>

SCORE: 4

<u>Part 1</u>		Points
4 correct points plotted:	A, B, C, D	2
<u>Part 2</u>		Points
2 additional points plotted correctly:	E (2, 1) and F (1, 4)	2
<u>Part 3</u>		Points
Correct answer:	hexagon and irregular	1
Total Points		5

① and ②



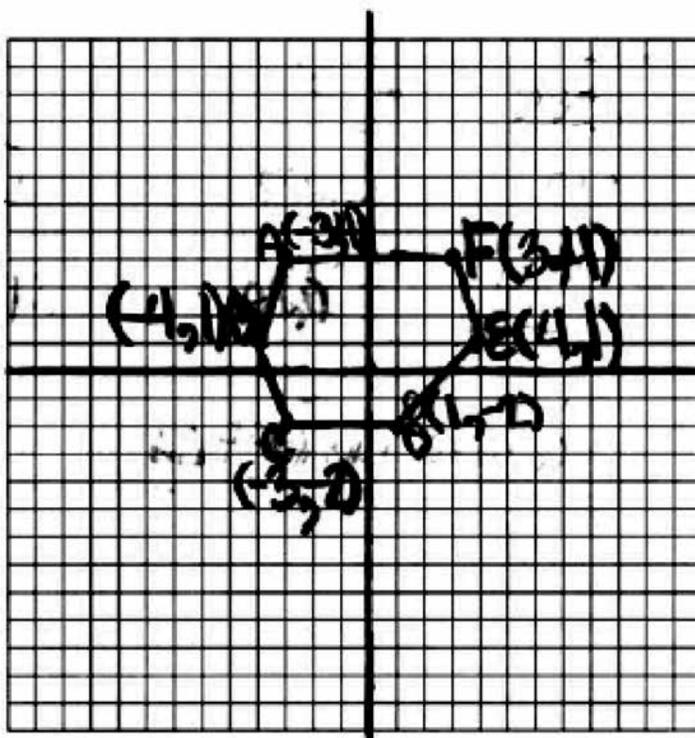
③

The figure name is = hexagon
It is = irregular

SCORE: 3

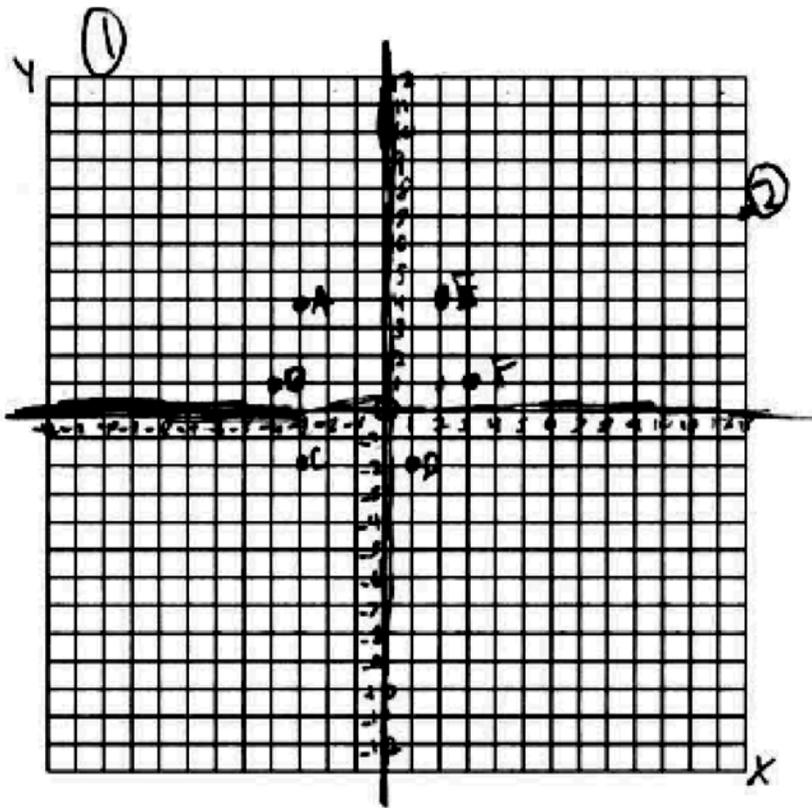
<u>Part 1</u>		Points
4 correct points plotted:	A, B, C, D	2
<u>Part 2</u>		Points
0 additional points plotted correctly:	E (4, 1) and F (3, 4)	0
<u>Part 3</u>		Points
Correct answer:	Hexagon and irregular	1
Total Points		3

- ① A(-3,4)
B(-4,1)
C(-3,-2)
D(1,-2)
- ② TWO MORE POINTS
- ③ 1. Hexagon
2. irregular



SCORE: 2

Part 1		Points
4 correct points plotted:	A, B, C, D	2
Part 2		Points
0 additional points plotted correctly:	E (2, 4) and F (3, 1)	0
Part 3		Points
Partially correct answer:	Hexagon	$\frac{1}{2}$
Total Points		$2\frac{1}{2}$



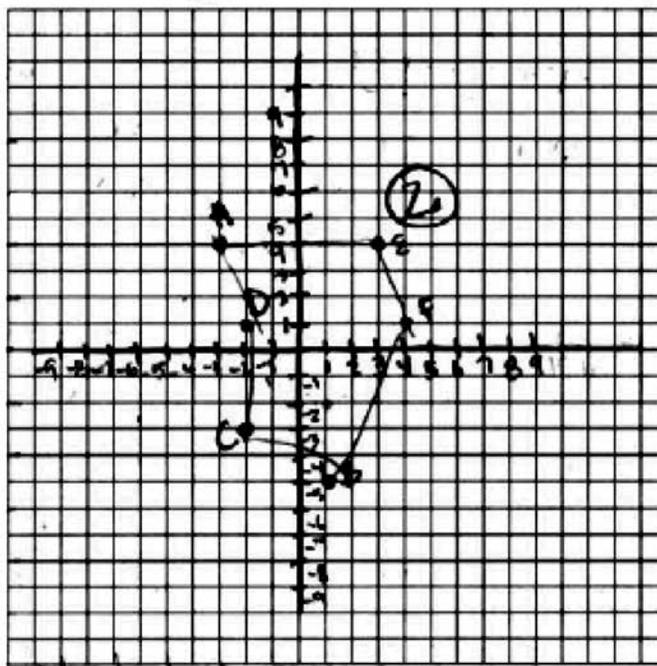
③ Hexagon, regular

SCORE: 1

<u>Part 1</u>		Points
1 correct point plotted:	A	$\frac{1}{2}$
<u>Part 2</u>		Points
0 additional points plotted correctly:	E (3, 4) and F (4, 1)	0
<u>Part 3</u>		Points
Correct answer:	Hexagon and irregular	1
Total Points		$1\frac{1}{2}$

②

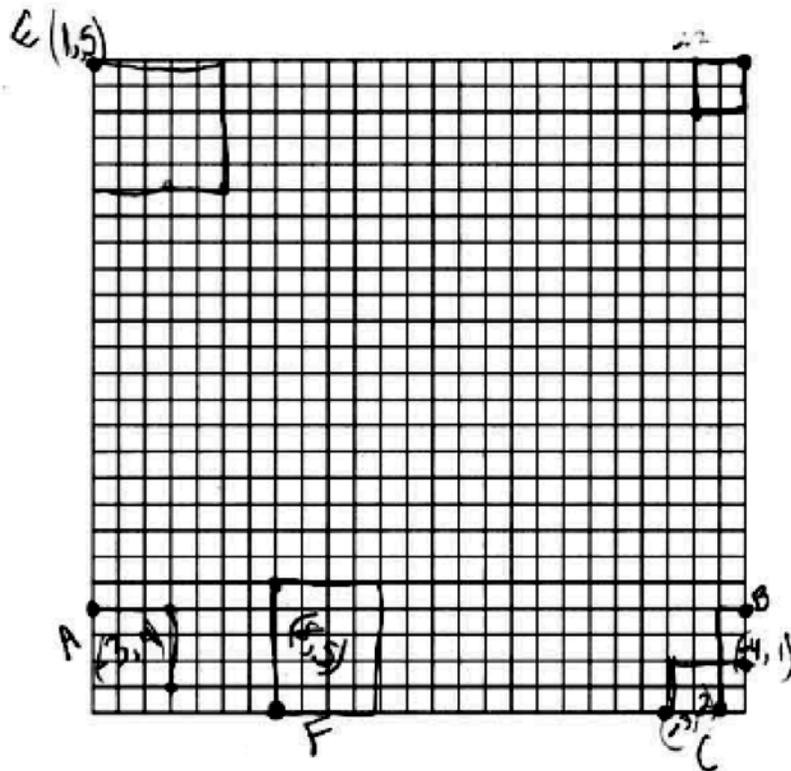
①



3. Hexagon,
Irregular

SCORE: 0

<u>Part 1</u>		Points
0 correct points plotted:		0
<u>Part 2</u>		Points
0 additional points plotted correctly:		0
<u>Part 3</u>		Points
Incorrect answer:	Square	0
Total Points		0



3.) The shape is irregular square

- C** Sofia has 44 feet of fencing to go around a vegetable garden.
1. Sofia wants the garden to be rectangular or square. What is the **greatest** area she can make the garden? Explain and give the dimensions of the garden.
 2. Sofia also has a rectangular flower garden. Is it possible for the flower garden to have the same area as the vegetable garden but need more than twice the fencing as the vegetable garden? Explain, using possible dimensions.

BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

Math Item C Scoring Rubric—2014 Grade 7
--

Score	Description
4	The student earns 4 points. The response contains no incorrect work. Correct units in both parts are present.
3	The student earns 3 points.
2	The student earns 2 points.
1	The student earns 1 point, or some minimal understanding is shown.
0	The student earns 0 points. No understanding is shown.
B	Blank—No Response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for the item.)

SOLUTION AND SCORING

Part	Points
1	<p>2 points possible:</p> <p>1 point: Correct answer: 121 ft²</p> <p>AND</p> <p>1 point: Correct and complete explanation or work shown <i>Work may contain an arithmetic or copy error</i> Give credit for the following or equivalent: Ex. $44 \div 4 = 11$ or a table showing the value of the area $11 \times 11 =$</p>
2	<p>2 points possible:</p> <p>2 points: Correct answer: Yes <i>Or correct answer based on Part 1</i> Correct and complete explanation or work shown <i>Work may contain an arithmetic or copy error</i> Give credit for the following or equivalent: Ex. 1×121 would have the same area of 121 ft² but have a perimeter of 244. $2(1) + 2(121) = 244$ Ex. 2×60.5 would have the same area of 121 ft² but have a perimeter of 125 ft. $2(2) + 2(60.5) = 125$</p> <p>OR</p> <p>1 point: Answer is incorrect due to arithmetic error (or is missing) Correct and complete work shown</p> <p>Or</p> <p>Correct answer and incomplete work is shown <i>Or correct answer based on Part 1</i> Ex. 2×60.5 would have the same area of 121 ft²</p>

SCORE: 4

<u>Part 1</u>		Points
Correct answer:	121 square feet	1
Correct procedure:	$11 \times 11 =$	1

<u>Part 2</u>		Points
Correct answer with complete work:	“the possible area is 121...” $100 \times 1.21 = 121$; $100 + 100 + 1.21 + 1.21 = 202.42$	2
Total Points		4

1. The greatest area Sofia can make the garden is a square that the area is 121 square feet. the perimeter is 44 feet.

44
12
32
32
+12
44

100ft
1.21ft = 2.42

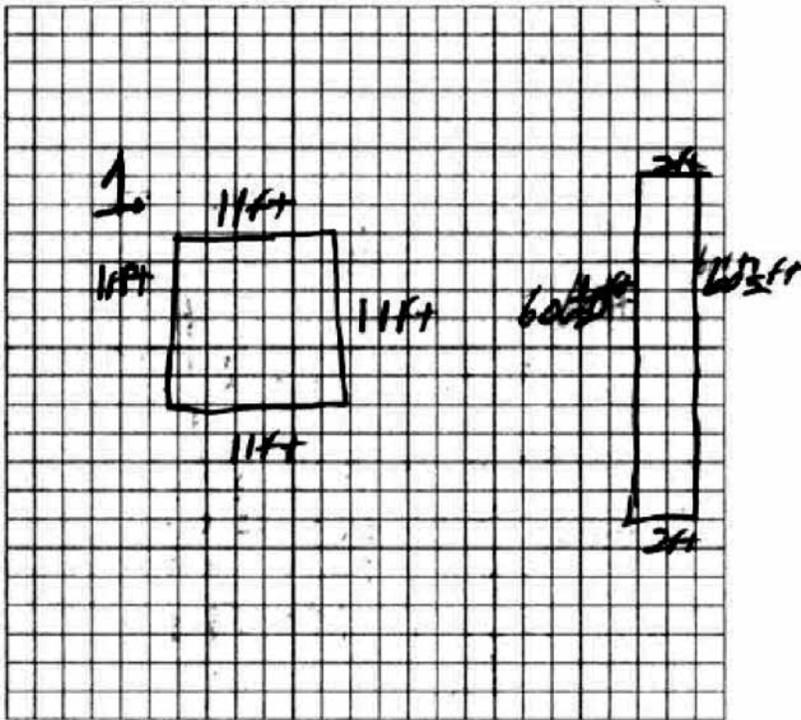
100ft +
100ft
= 200

2. The possible area is 121, and you can get it by 100×1.21 . The perimeter is $= 202.42$

SCORE: 3

Part 1		Points
Correct answer:	121 ft ²	1
Correct procedure:	11 × 11	1

Part 2		Points
Correct answer with incomplete work:	“yes” $60\frac{1}{2} \times 2$	1
Total Points		3



1. The dimensions are 11x11. The area is $11 \times 11 = 121 \text{ ft}^2$
2. yes $60\frac{1}{2} \times 2$. This is equal to 121 ft^2

SCORE: 2

<u>Part 1</u>		Points
Correct answer:	121 ft ²	1
Correct procedure:	11 × 11	1
<u>Part 2</u>		Points
Correct answer with incorrect work:	“yes” 30.25 × 30.25 ≠ 121	0
Total Points		2

$11 \frac{44}{4} = 11A$
 $A = 3^2$
 $11 \times 11 = 121A^2$
 The greatest area she could make her garden is 121 ft².

2) $A = 121A^2$
 30.25 ft
 $A = L \times W = 121 \text{ ft}^2$
 yes it is possible because 30.25 ft is more than twice the square garden which was 11 ft.

SCORE: 1

Part 1		Points
Incorrect answer:	122 cubic feet	0
Correct procedure:	Labeling of the shape with 11 on each side	1

Part 2		Points
Incorrect answer with missing work:	"No"	0
Total Points		1

1 The greatest area she could have is a 122 cubic feet

2

11 ft

11 ft

11 ft

11 ft

11 ft

11 ft

10 ft

11 ft

10 ft

11 ft

10 ft

11 ft

10 ft

NO because you would have to leave it the same size as the original garden to have the same area.

SCORE: 0

<u>Part 1</u>		Points
Incorrect answer:	74 ft	0
Incorrect procedure:	$11 + 4 + 11 + 4 = 30 ; 30 + 44$	0

<u>Part 2</u>		Points
Missing answer with incomplete work:	$44 \times 2 = 88$	0
Total Points		0

Handwritten work on grid paper:

11
 4 [REDACTED] 4
 11

$1144ft$
 $11+4+11+4=30$
 $44ft$
 $+30$
 $74ft$

$2 \cdot 44 \times 2 = 88ft$

She would need ~~88ft~~
 worth of fencing.

SCIENCE RESPONSES

- A** It is a hot, sunny day. Billy and his friends are swimming in a cold lake. Billy gets out of the water because he starts to feel cold.
1. Identify two body systems that work together to keep Billy’s body temperature stable when he starts to feel cold.
 2. Describe how the body systems identified in Part 1 work together to keep Billy’s body temperature stable.

Later, Billy and his friends play volleyball on the beach. Billy starts to feel hot.

3. Identify two body systems that work together to keep Billy’s body temperature stable when the outside temperature is hot.
4. Describe how the body systems identified in Part 3 work together to keep Billy’s body temperature stable.

BE SURE TO LABEL YOUR RESPONSES 1, 2, 3, AND 4.

Science Item A Scoring Rubric—2014 Grade 7

Score	Description
4	Response shows a complete understanding of the interactions between organ systems in the maintenance of homeostasis. The student presents correct descriptions to all parts of the task.
3	Response shows a nearly complete understanding of the interactions between organ systems in the maintenance of homeostasis. The student presents nearly all descriptions to all parts of the task. The response may contain minor errors.
2	Response shows a limited understanding of the interactions between organ systems in the maintenance of homeostasis. The student presents some descriptions correctly to most parts of the task. The response may contain a major error.
1	Response shows a minimal understanding of the interactions between organ systems in the maintenance of homeostasis. The student presents some descriptions. The response contains incomplete descriptions and major errors.
0	Response shows insufficient understanding of the interactions between organ systems in the maintenance of homeostasis. The descriptions, if any, contain major errors. There may be no descriptions, or the reader may not be able to understand the explanation. The reader may not be able to understand how and why decisions were made.
B	Blank—No response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for this item.)

SOLUTION AND SCORING

Part	Points
1	1 point possible: Identifies two body systems that work together.
2	1 point possible: Explains interaction of systems in restoring homeostasis.
3	1 point possible: Identifies two body systems that work together.
4	1 point possible: Explains interaction of systems in restoring homeostasis.

SCORE: 4

Part 1		Points
Correct systems:	“Nervous system Muscular system”	1
Part 2		Points
Correct description:	“The nervous system informs the muscular system that it is getting cold, so the muscular system starts to shiver making heat.”	1
Part 3		Points
Correct systems:	“Nervous system Integumentary”	1
Part 4		Points
Correct description:	“The nervous system informs the Integumentary system that it is getting hot. so the Integumentary system will start to sweat causing Billy’s body to cool down”	1
Total Points		4

① Nervous System
Muscular System

② The Nervous System informs the Muscular system that it is getting cold, so the muscular system starts to shiver making heat.

③ Nervous System
Integumentary

④ The nervous system informs the Integumentary system that it is getting hot, so the Integumentary system will start to sweat causing Billy's body to cool down.

SCORE: 3

<u>Part 1</u>		Points
Correct systems:	"The nervous and muscular system."	1
<u>Part 2</u>		Points
Correct description:	"The nervous system sends a signal to the brain saying he is cold. Then that signal is sent to the muscular system. The muscular system starts shivering to stay warm"	1
<u>Part 3</u>		Points
Correct systems:	"The endocrine system and the nervous system."	1
<u>Part 4</u>		Points
Incorrect description:	"The nervous system sends a signal to the brain saying he is hot then sends that signal to the endocrine system to release sweat"	-
Total Points		3

①. The nervous and muscular system.

②. The nervous system sends a signal to the brain saying he is cold. Then that signal is sent to the muscular system. The muscular system starts shivering to stay warm or keeps the body moving.

③. The endocrine system and the nervous system.

④. The nervous system sends a signal to the brain saying he is hot then sends that signal to the endocrine system to release sweat on his skin to cool him down.

SCORE: 2

<u>Part 1</u>		Points
Correct systems:	“Nervous system and endocrine system”	1
<u>Part 2</u>		Points
Incorrect description:	“Nervous system - tells the brain he is cold, homostatis kicks in endocrine – makes his body shiver to warm him up”	-
<u>Part 3</u>		Points
Correct systems:	“Nervous and endocrine systems”	1
<u>Part 4</u>		Points
Incorrect description:	“Nervous system – tells the brain by sending electrical impulses, that he’s hot endocrine system – makes him sweat to cool him down”	-
Total Points		2

1) Nervous system and endocrine system

2) Nervous system - tells the brain he is cold, homostatis kicks in
endocrine - makes his body shiver to warm him up

3) Nervous and endocrine systems

4) Nervous system - tells the brain, by sending electrical impulses, that he's hot
endocrine system - makes him sweat to cool him down.

SCORE: 1

<u>Part 1</u>		Points
Correct systems:	“nervous system and the integumentary system”	1
<u>Part 2</u>		Points
Incorrect description:	“the nervous system being able to know when he’s starting to get cold, and the integumentary system adapts his skin to the cool air and that raises his body temperature.”	-
<u>Part 3</u>		Points
Incorrect systems:	“nervous system and the brain system”	-
<u>Part 4</u>		Points
Incorrect description:	“the nervous system being able to tell the brain that Billy is getting hot and he needs to cool off.”	-
Total Points		1

① Two body systems that keep Billy's temperature stable are: nervous system and the integumentary system.

② These two systems work together by the nervous system being able to know when he's starting to get cold, and the integumentary system adapts his skin to the cool air and that raises his body temperature.

③ Two body systems that work together to keep Billy's body temperature stable for the outside temperature are the nervous system and the brain system.

④ These two systems work together by having the nervous system being able to tell the brain that Billy is getting hot and he needs to cool off.

SCORE: 0

<u>Part 1</u>		Points
Incorrect systems:	"The skin and the circulatory system."	-
<u>Part 2</u>		Points
Incorrect description:	"Skin – helps your body get warm. circulatory – helps your blood get trough your body and keeps body warm."	-
<u>Part 3</u>		Points
Incorrect systems:	"The muscular system and skeletal system"	-
<u>Part 4</u>		Points
Incorrect description:	"Muscular – The muscles have been moving too much and you began to get hot Skeletal – The skeletons get tired of moving and your arms hurt so you start to sweat."	-
Total Points		0

<p>1) The skin and the circulatory system.</p>	<p>2) Skin-helps your body get warm. Circulatory-helps your blood get trough your body and keeps body warm.</p>
<p>3) The muscular system and skeletal system</p>	<p>4) Muscular-The muscles have been moving too much and you began to get hot Skeletal-The skeletons get tired of moving and your arms hurt so you start to sweat</p>

B Two students are conducting an investigation with antacid tablets. They want to discover which variables affect the time it takes for an antacid tablet to dissolve in water. The students have the following supplies available for conducting their investigation.

- Hot water
 - Cold water
 - A stirring rod
 - A thermometer
 - Two stopwatches
 - Several beakers
 - Several antacid tablets
 - A mortar and pestle to crush the tablets
1. Describe two variables that could be tested using the available supplies. Only include the variables which could be tested and which might affect the time it takes for a tablet to dissolve.
 2. Choose one of the variables you described in Part 1. Briefly describe a procedure which could be used to determine if that variable has any effect on how long it takes a tablet to dissolve. In your answer, list some factors that should be held constant. Also include what you would measure and record.

BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

Science Item B Scoring Rubric—2014 Grade 7

Score	Description
4	Response shows a complete understanding of the effect of variables on solubility rates. The student presents correct descriptions to all parts of the task.
3	Response shows a nearly complete understanding of the effect of variables on solubility rates. The student presents nearly all descriptions to all parts of the task. The response may contain minor errors.
2	Response shows a limited understanding of the effect of variables on solubility rates. The student presents some descriptions correctly to most parts of the task. The response may contain a major error.
1	Response shows a minimal understanding of the effect of variables on solubility rates. The student presents some descriptions. The response contains incomplete descriptions and major errors.
0	Response shows insufficient understanding of the effect of variables on solubility rates. The descriptions, if any, contain major errors. There may be no descriptions, or the reader may not be able to understand the explanation. The reader may not be able to understand how and why decisions were made.
B	Blank—No response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for this item.)

SOLUTION AND SCORING

Part	Points
1	2 points possible: Describes two variables that could be tested.
2	2 points possible: Gives adequate descriptions of the procedure.

SCORE: 4

Part 1		Points
Correct variable:	“using hot or cold water”	1
Correct variable:	“crushed or whole tablets”	1
Part 2		Points
Complete response:	Student response contains a procedure, measurement, constants, and recording of results.	2
Total Points		4

1. Variable one - Using hot or cold water
Variable two - Crushed or whole tablets

2. step one - gather materials
step two - Fill beakers with water
step three - crush one antacid tablet with mortar and pestle
step four - put one whole antacid tablet in one beaker, and one crushed one in the other.
step five - Use stopwatch to time how long it takes for each to dissolve.
step six - record results

constants - fineness of crushed, amount of water, temp of water, size of tablets, brand of tablet

SCORE: 3

<u>Part 1</u>		Points
Correct variable:	“hot water, and cold water”	1
Incorrect variable:		-

<u>Part 2</u>		Points
Complete response:	Student response contains a procedure, measurement, constants, and recording of results.	2
Total Points		3

1. Two variables that could be tested using the available supplies is hot water, and cold water beakers.

2. A procedure which could be used to determine if hot water has any effect on the tablet is:

1. Have a beaker with hot water and cold water.
2. Drop an antacid tablet into each beaker of water.
3. Using your stopwatch, time how long it takes each tablet to dissolve.

Some factors that need to be kept constant are - the amount of water used, and how much ^{of an} antacid tablet is used.

I would measure and record the temperature of the water in each beaker, and the time it took each tablet to dissolve.

SCORE: 2

<u>Part 1</u>		Points
Correct variable:	"Cold water & Hot water"	1
Incorrect variable:		-

<u>Part 2</u>		Points
Incomplete response:	Student response contains a procedure, a constant, and recording of results, but an incorrect measurement.	1
Total Points		2

1 Cold water * Hot water



Procedure * make an hypothesis:

- 2 * Get Hot water
- 3 * Measure in the beaker about 40 ml
- 4 * Drop the tablet

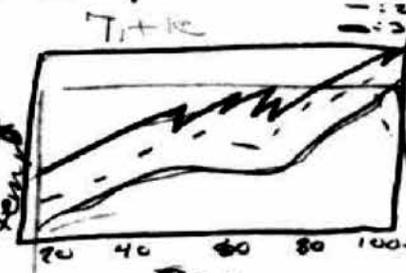
* ASA you drop the tablet start the stop watch

* Measure at each 20 sec wat temp it is. 100

* Stop watch when done 100

* Do 3 times total for accuracy

Record data in a line graph ex →



SCORE: 1

<u>Part 1</u>		Points
Correct variable:	“tablets could be crushed into different sizes”	1
Incorrect variable:		-

<u>Part 2</u>		Points
Incorrect response:	Student response does not contain a procedure.	-
Total Points		1

1) mortar and pestle. The tablets could be crushed into different sizes which would change how fast it dissolves

2) there could be big chunks or tiny pieces. this could change the outcome of the time. The big chunks would take longer to dissolve than the small pieces. Pieces should always be the same size. You would record how fast it dissolves.

SCORE: 0

<u>Part 1</u>		Points
Incorrect variable:	“two stopwatches”	-
Incorrect variable:	“thermometer”	-
<u>Part 2</u>		Points
Incorrect response:	Student response does not contain a procedure.	-
Total Points		0

1.) Two variables are the two stopwatches and the thermometer.

The stop-watch will be to time how long it takes to dissolve. The thermometer will be to test the temperature of the water.

2.) The stop-watch could tell you how long it takes to dissolve. The constants could be the time and the number of seconds/minutes it takes to dissolve. You would measure the minutes or seconds and record it on a graph.

ACTAAP

Arkansas Comprehensive Testing, Assessment, and Accountability Program

DEVELOPED FOR THE ARKANSAS DEPARTMENT OF EDUCATION, LITTLE ROCK, AR 72201

QAI 13073-AR1402-THB-GR7

