ACTAAP

Arkansas Comprehensive Testing, Assessment, and Accountability Program

Teacher Handbook

Arkansas Augmented Benchmark Examination

APRIL 2009 ADMINISTRATION

GRADE 7

Arkansas Department of Education

AR00000353

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Introduction—2009 Augmented Benchmark Grade 7

The **Arkansas Comprehensive Testing, Assessment, and Accountability Program (ACTAAP)** Augmented Benchmark Examinations are comprehensive examinations currently administered in Grades 3 through 8. They consist of multiple-choice items in Mathematics, Reading, Writing, and Science, as well as open-response questions in Mathematics, Reading, and Science and a Writing component that directly assess student writing. The Arkansas *Mathematics Curriculum Framework, English Language Arts Curriculum Framework,* and *Science Curriculum Framework* are the basis for the development of the Augmented Benchmark Examinations.

This handbook provides information about the scoring of the Grade 7 student responses to the open-response items in Mathematics, Reading, and Science and to the 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 Augmented Benchmark Examinations is available through the Arkansas Department of Education. Questions can be addressed to Dr. Gayle Potter at 501-682-4558.

Scoring Student Responses to Mathematics, Reading, and Science Open-Response Items—2009 Augmented Benchmark Grade 7

The multiple-choice and open-response test items for the Mathematics, Reading, and Science components of the Benchmark Examinations are developed with the assistance and approval of the Content Advisory Committees. All passages and items on the Benchmark Examinations are based on the Arkansas Curriculum Frameworks and are developed with the assistance and approval of Content Advisory Committees and Bias Review Committees. These committees are composed of active Arkansas educators.

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, but the training procedures are virtually identical for Mathematics, Reading, and Science readers. Qualified readers for the Arkansas scoring will be those with a four-year college degree in English, language arts, education, mathematics, science, 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 Mathematics open-response item, Reading passage and its item, or the Science 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 must score in exact agreement on at least 80% of the responses and have no more than 5% non-adjacent agreement on the responses. Readers who do not score within the required rate of agreement are not allowed to score the Benchmark Examinations 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 Scoring Directors 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 Student Responses to Mathematics, Reading, and Science Open-Response Items—2009 Augmented Benchmark Grade 7

Scoring Procedures

All student responses to the Benchmark Examinations 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 Mathematics open-response items, the Reading passages with their open-response items, and the Science open-response items 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 follow. 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 Benchmark Examinations.

MATHEMATICS RESPONSES

A

The Pep Club wants to sell spirit bracelets as a fund-raiser. The equation $y = 2x - 30$ represents the profits earned, y, from selling spirit bracelets. The number of bracelets sold is represented by x.

1. In your answer document, copy and complete the function table below.

x	y
0	
10	
20	
30	
40	

2. On the grid in your answer document, graph the x- and y-values from the table above on a coordinate plane.

3. How many bracelets would need to be sold for the Pep Club to make a profit of $60? Show your work and/or explain your answer.

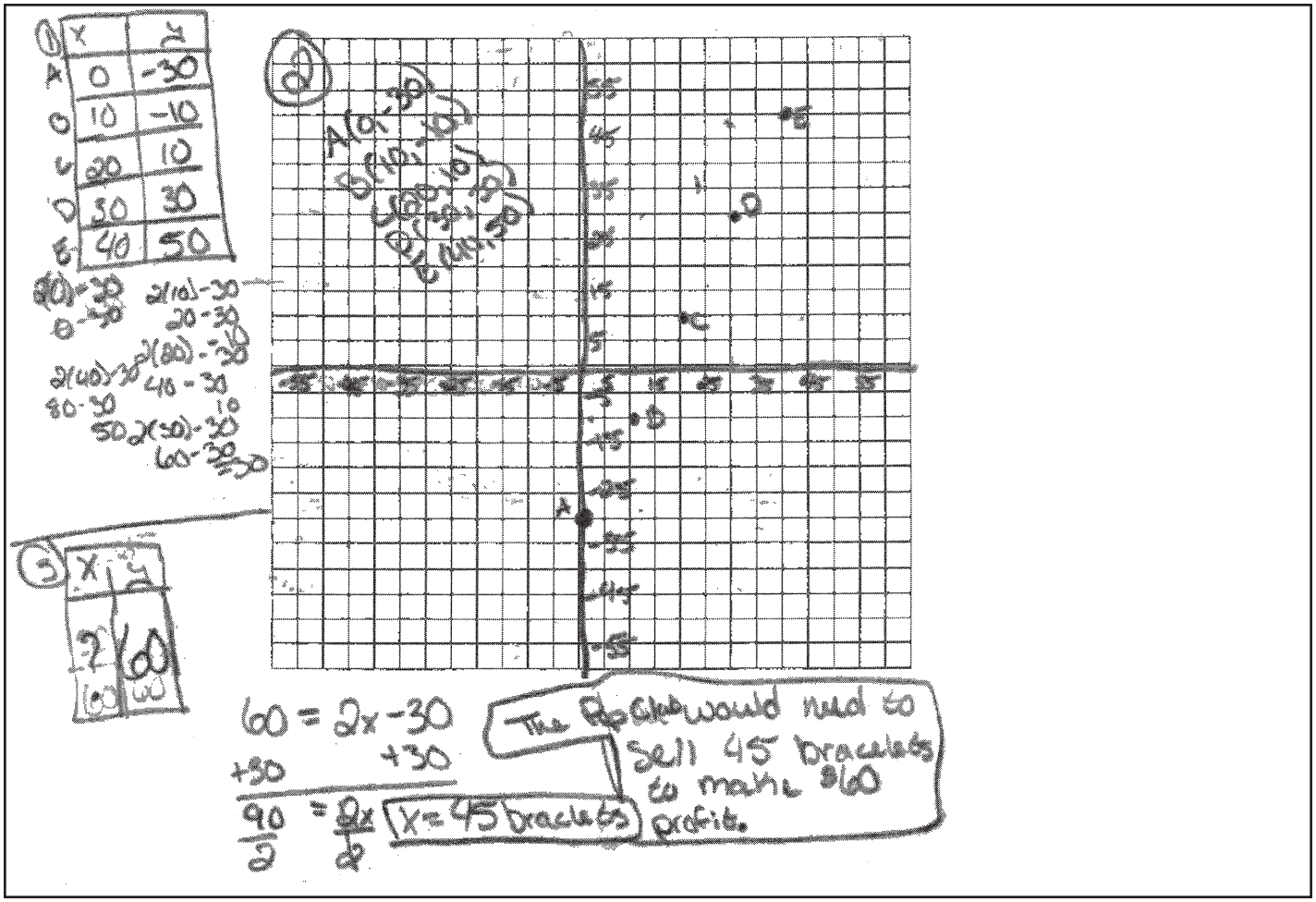
BE SURE TO LABEL YOUR RESPONSES 1, 2, AND 3.

MATHEMATICS ITEM A SCORING RUBRIC–2009 AUGMENTED BENCHMARK GRADE 7

SCORE	DESCRIPTION
4	The student earns 4 points. The response contains no incorrect work.
3	The student earns 3–3 $\frac{1}{2}$ points.
2	The student earns 2–2 $\frac{1}{2}$ points.
1	The student earns $\frac{1}{2}$–1 $\frac{1}{2}$ points, or some minimal understanding 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" assigned for the item.)

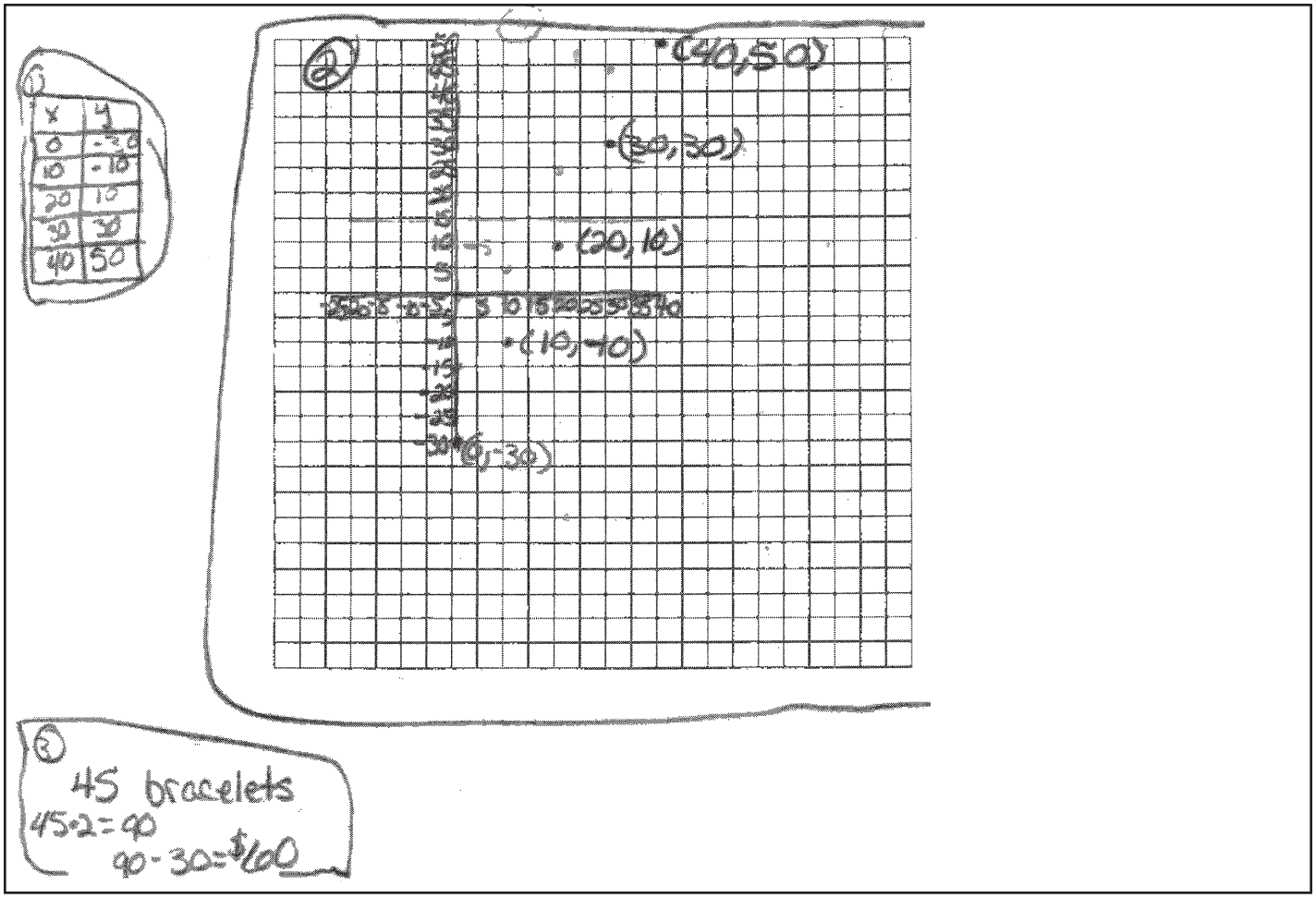
Solution and Scoring

Part	Points
1	**1 Point Possible** 1 point: Correct and complete table showing the y-values.
2	**1 Point Possible** 1 point: Correct and complete graph based on table. **OR** 1/2 point: Correct and complete graph using 4 out of 5 of the data points from the table.
3	**2 Points Possible** 1 point: Correct answer: Writes that the Pep Club sold 45 bracelets to make $60. **AND** 1 point: Correct and complete explanation shown and/or explained Give credit for the following or equivalent: Extending the table to show that 45 bracelets are needed to earn $60. Using $y = 2x - 30$, $y = 60$ ($x = 45$) to determine that 45 bracelets are needed to earn $60. Use the graph to determine that 45 bracelets are needed to earn $60. **OR** 1/2 point: Only verifying that 45 bracelets produce a profit of $60.

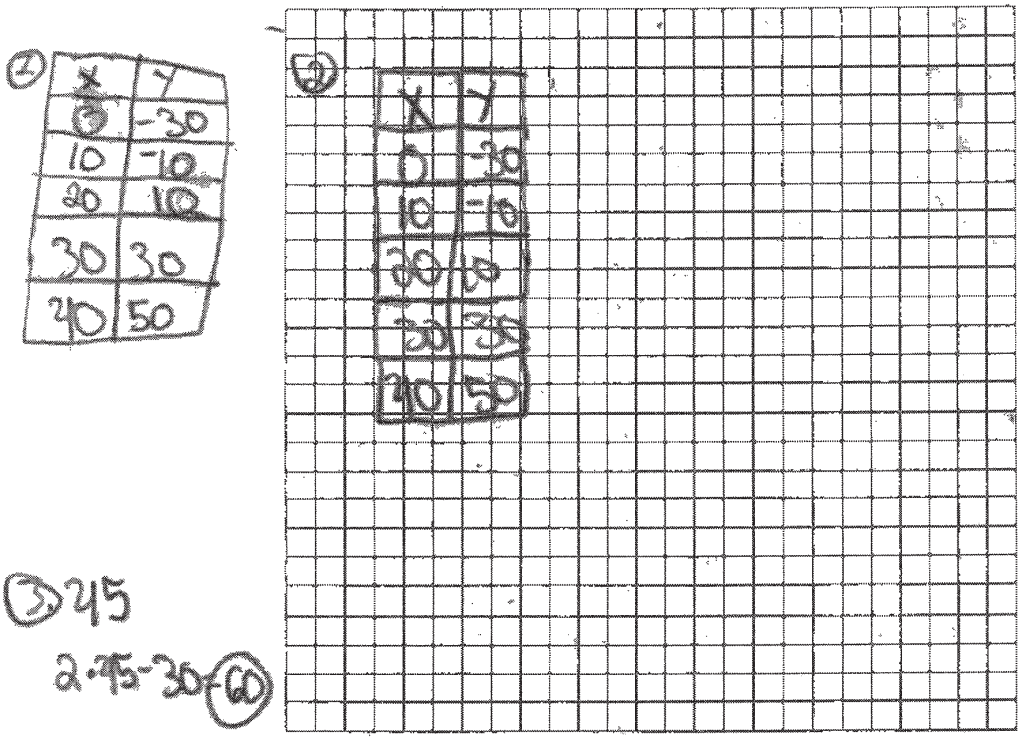


SCORE: 4 **Points**

Part 1, 1 pt: Correct and Complete Table Showing the *y*-Values	x | y 0 | -30 10 | -10 20 | 10 30 | 30 40 | 50	1
Part 2, 1 pt: Correct and Complete Graph Based on Table	Correctly draws the graph.	1
Part 3, 2 pts:		
Correct Answer	*The Pep Club would need to sell 45 bracelets to make $60 profit.*	1
Correct and Complete Explanation Shown	$60 = 2x - 30$ $+30 \quad +30$ $\frac{90}{2} = \frac{2x}{2}$ $x = 45$ braclets	1
TOTAL POINTS		**4**



SCORE: 3		**Points**
Part 1, 1 pt: Correct and Complete Table Showing the *y*-Values	<table><tr><th>*x*</th><th>*y*</th></tr><tr><td>*0*</td><td>*-30*</td></tr><tr><td>*10*</td><td>*-10*</td></tr><tr><td>*20*</td><td>*10*</td></tr><tr><td>*30*</td><td>*30*</td></tr><tr><td>*40*</td><td>*50*</td></tr></table>	1
Part 2, 1 pt: Correct and Complete Graph Based on Table	Correctly draws the graph.	1
Part 3, 2 pts:		
Correct Answer	*45 bracelets*	1
Verifies that 45 Bracelets Produce a Profit of $60	$45 \cdot 2 = 90$ $90 - 30 = \$60$	$\frac{1}{2}$
TOTAL POINTS		$3\frac{1}{2}$



SCORE: 2 **Points**

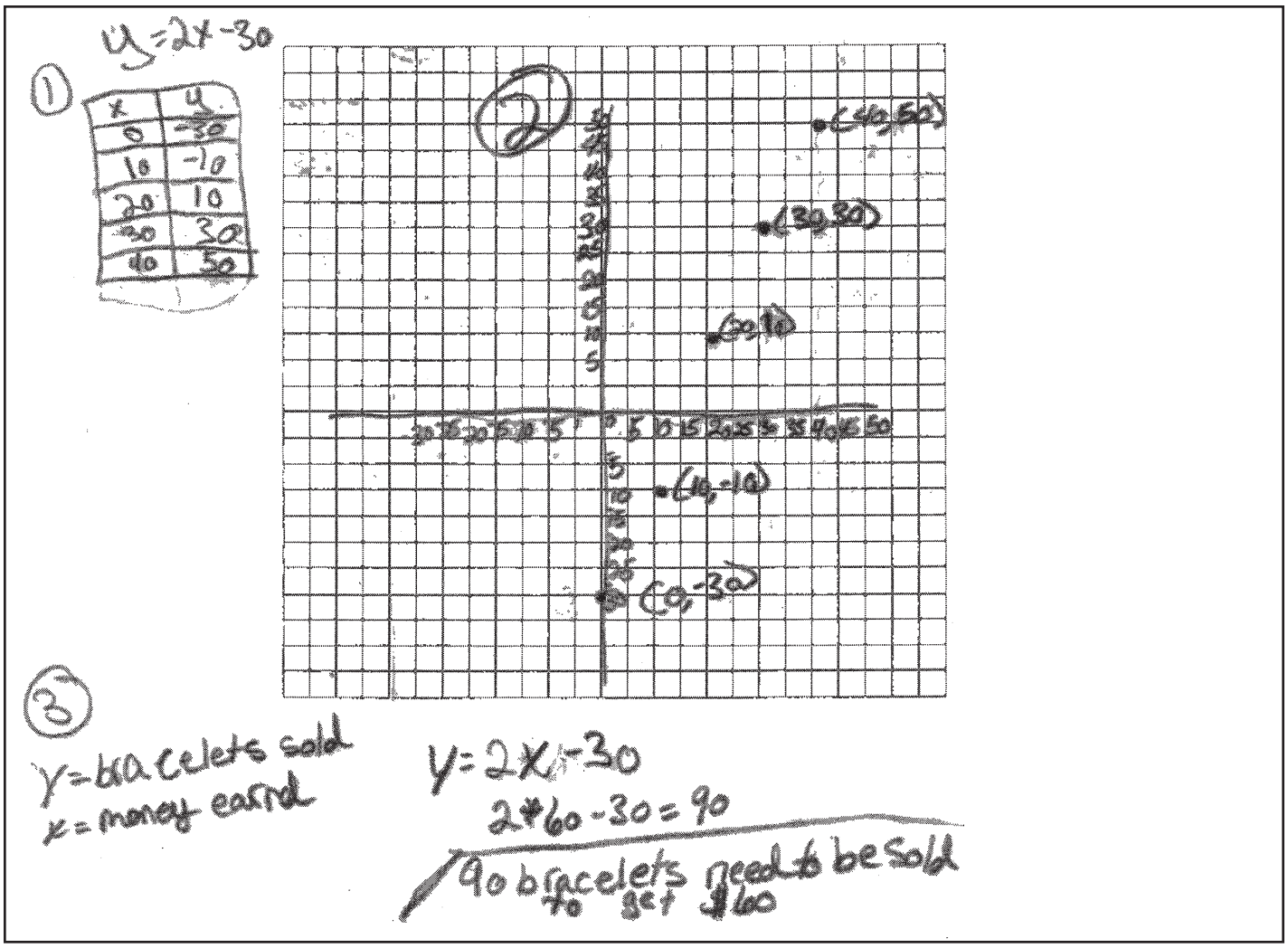
Part 1, 1 pt:
Correct and Complete Table Showing the *y*-Values — 1

x	*y*
0	*-30*
10	*-10*
20	*10*
30	*30*
40	*50*

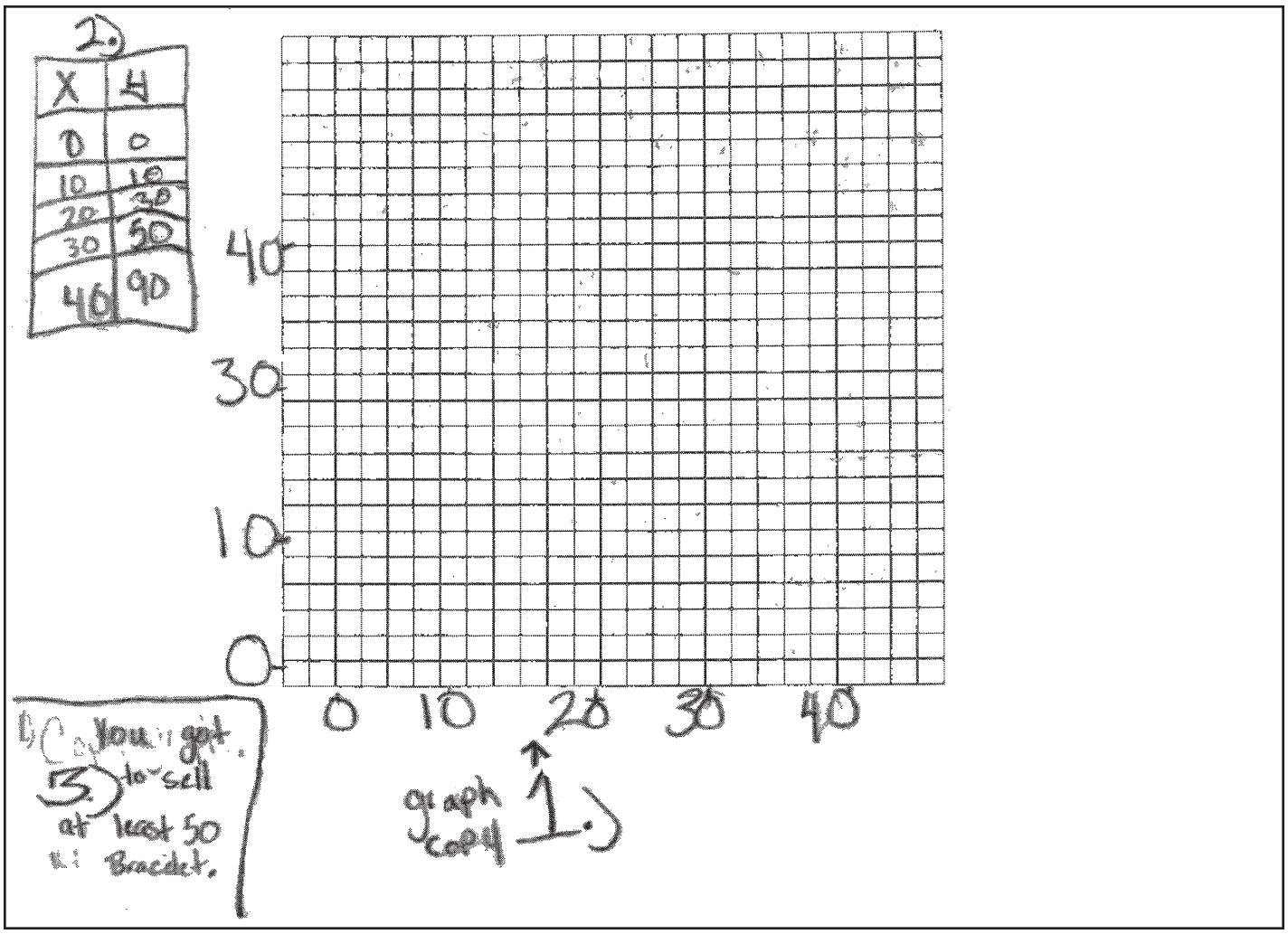
Part 2, 1 pt:
Incorrect Answer — No graph is drawn. — 0

Part 3, 2 pts:
Correct Answer — *45* — 1
Verifies that 45 Bracelets Produce a Profit of $60 — $2 \cdot 45 - 30 = \textcircled{60}$ — $\frac{1}{2}$

TOTAL POINTS $2\frac{1}{2}$



SCORE: 1		**Points**
Part 1, 1 pt: Correct and Complete Table Showing the *y*-Values	<table><tr><th>*x*</th><th>*y*</th></tr><tr><td>*0*</td><td>*-30*</td></tr><tr><td>*10*</td><td>*-10*</td></tr><tr><td>*20*</td><td>*10*</td></tr><tr><td>*30*</td><td>*30*</td></tr><tr><td>*40*</td><td>*50*</td></tr></table>	1
Part 2, 1 pt: Incorrect Answer	There is inconsistent scaling on the *y*-axis.	0
Part 3, 2 pts: Incorrect Answer Incorrect Procedure	*90 bracelets need to be sold to get $60* $y = 2x - 30$ $2 \cdot 60 - 30 = 90$	0 0
TOTAL POINTS		**1**



SCORE: 0 **Points**

Part 1, 1 pt:
Incorrect Table

x	*y*
0	*0*
10	*10*
20	*30*
30	*50*
40	*90*

0

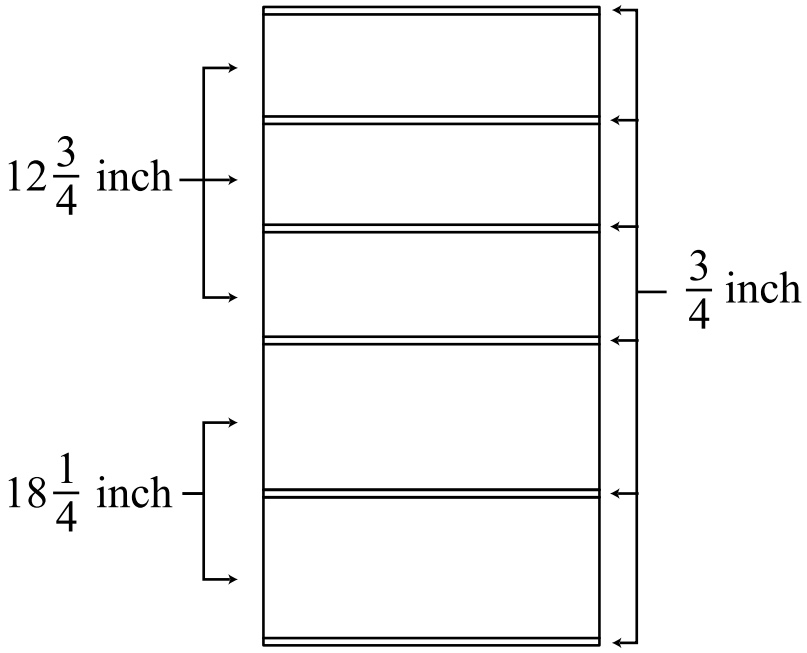
Part 2, 1 pt:
Incorrect Answer — No points were plotted. — 0

Part 3, 2 pts:
Incorrect Answer — *You got to sell at least 50 Bracelet.* — 0
Incorrect Procedure — This was not attempted. — 0

TOTAL POINTS **0**

B

Charlene is building a bookcase, as shown in the scale drawing below. The top three shelves within the bookcase each have $12\frac{3}{4}$ inches of space above them. The two lower shelves each have $18\frac{1}{4}$ inches of space above them. The thickness of the wood used for the shelves, including the one used for the top of the bookcase, is $\frac{3}{4}$ of an inch.



1. What is the total height of the bookcase, in inches? Write your answer as a decimal. Show all your work and/or explain your answer.
2. What percentage of the height of the bookcase is from the shelves? Round your answer to the nearest whole percent. Show your work and/or explain your answer.

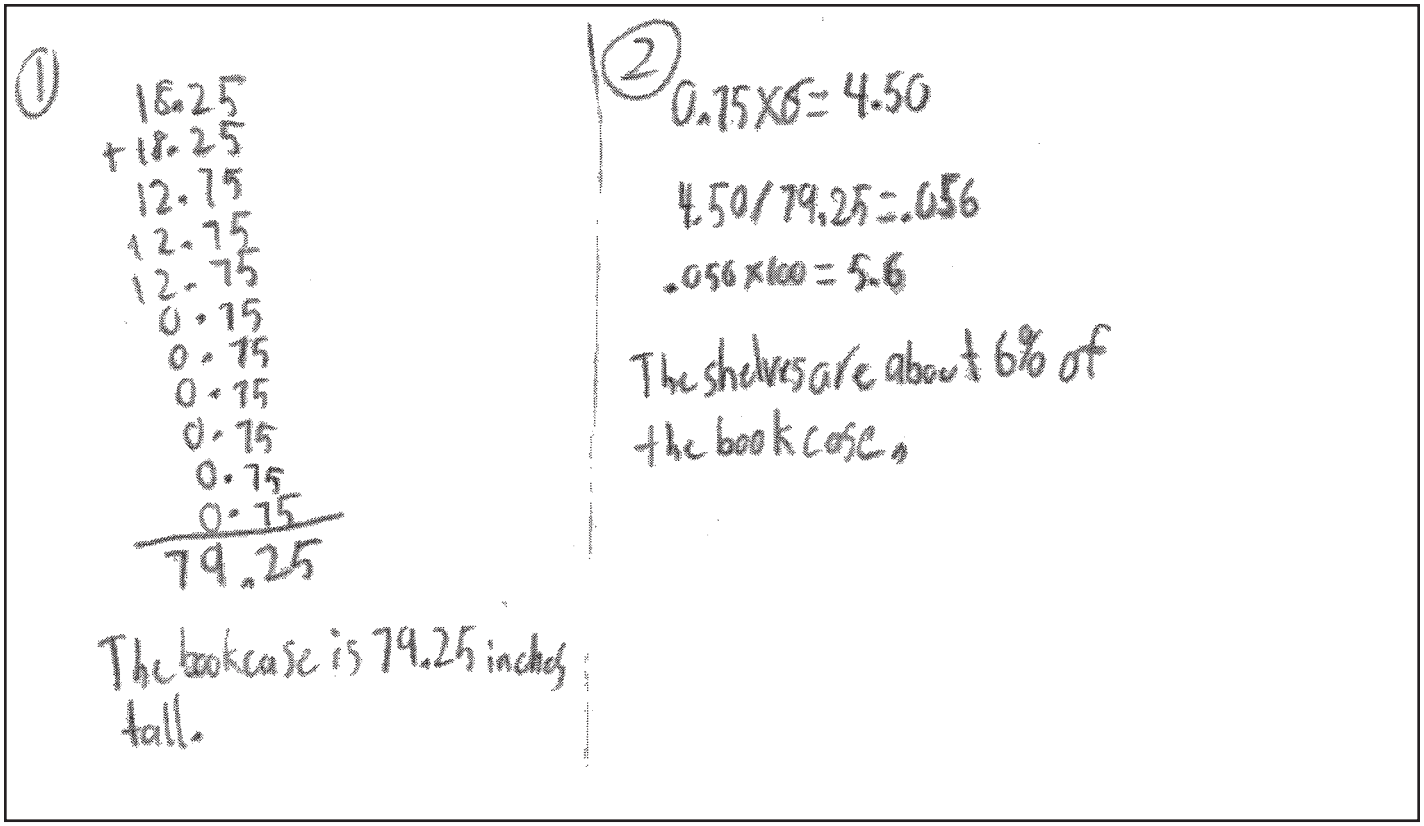
BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

MATHEMATICS ITEM B SCORING RUBRIC–2009 AUGMENTED BENCHMARK GRADE 7

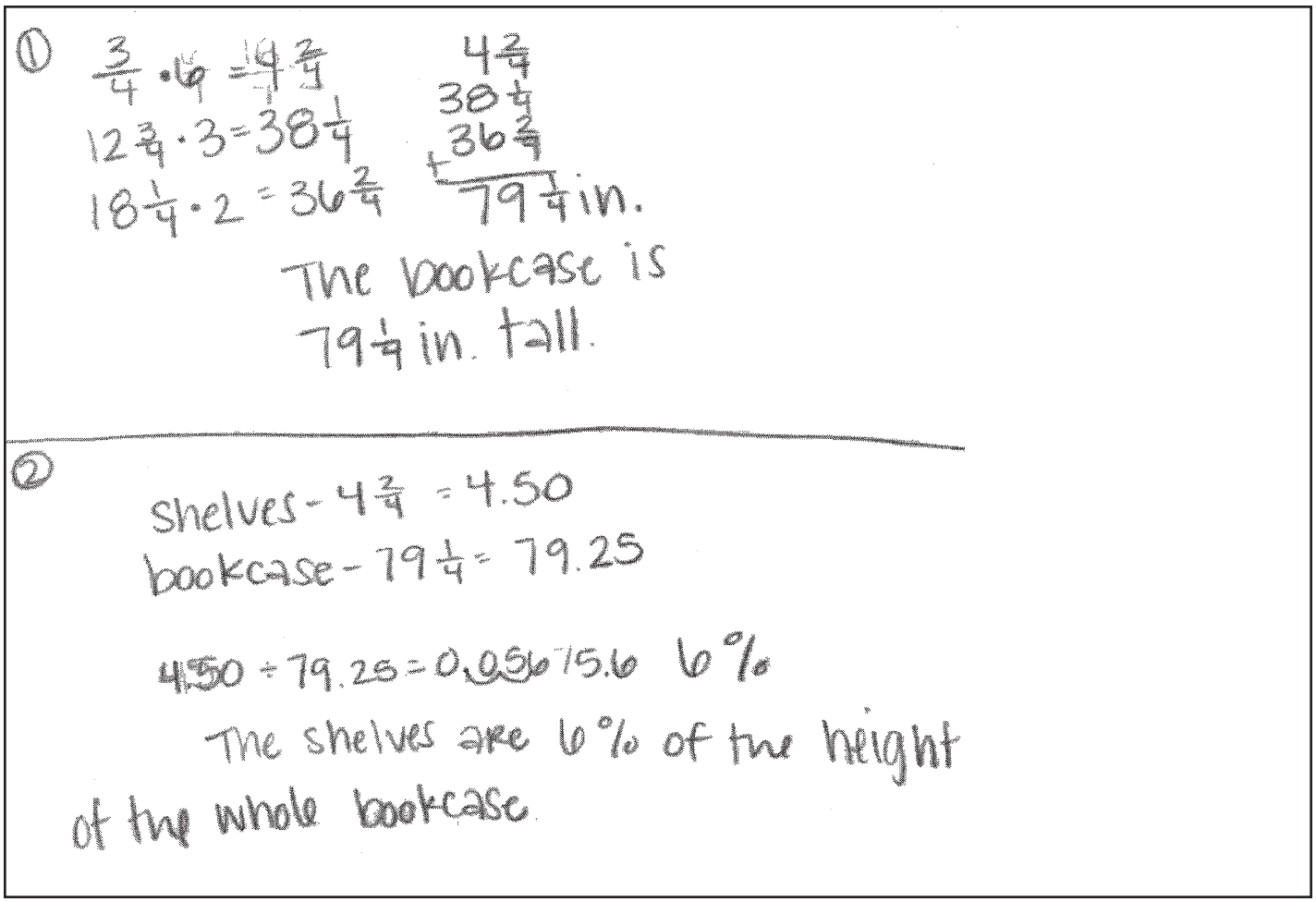
SCORE	DESCRIPTION
4	The student earns 4 points. The response contains no incorrect work.
3	The student earns 3 points.
2	The student earns 2 points.
1	The student earns 1 point, or some minimal understanding shown.
0	The student earns 0 points. No understanding is shown.
B	Blank–No Response. A score of "B" will be reported as "NA." (No attempt to answer the item. Score of "0" assigned for the item.)

Solution and Scoring

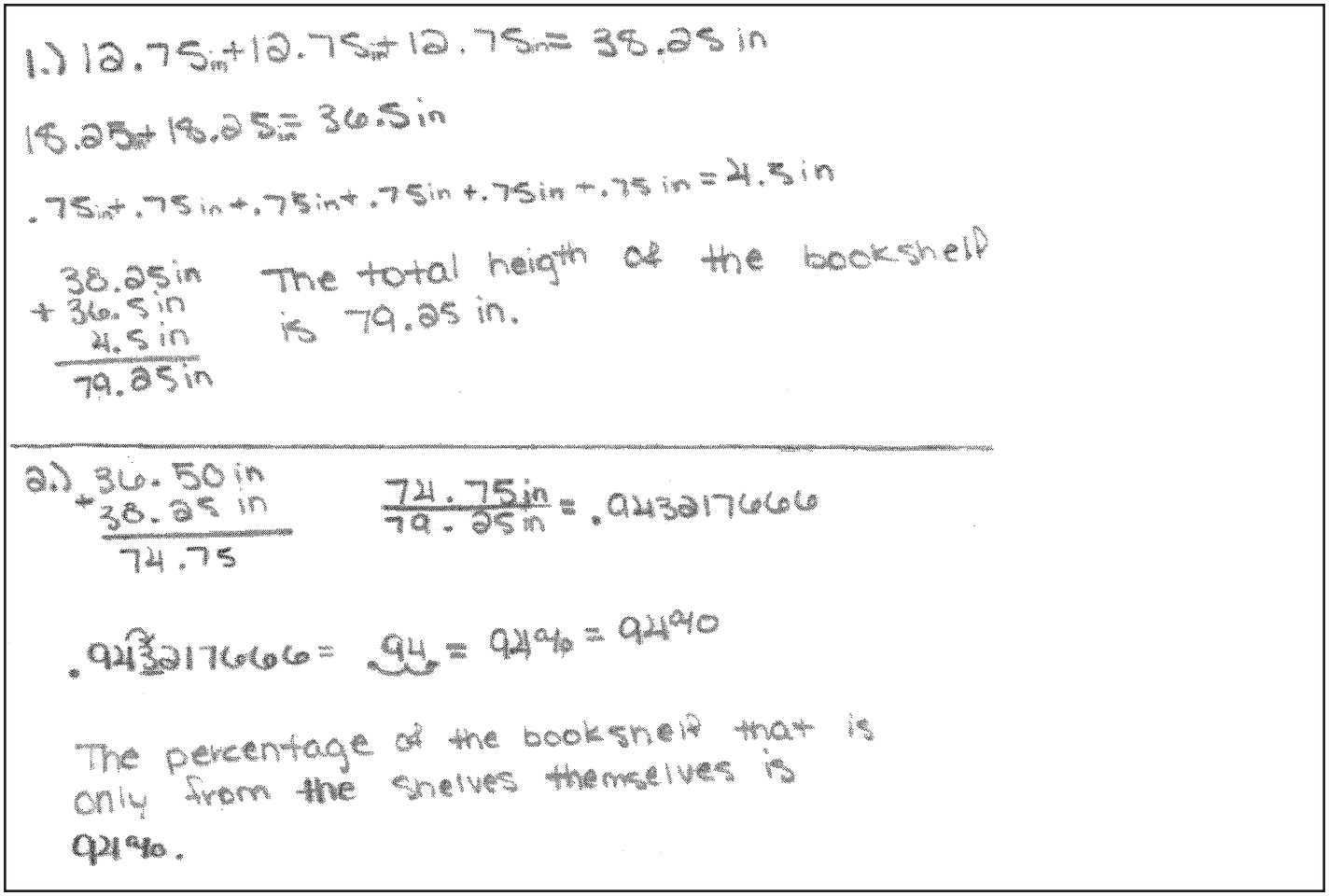
Part	Points
1	**2 Points Possible** 1 point: Correct answer: **79.25** (in.) Note: Label of "inches" is not required at any level. **AND** 1 point: Correct and complete procedure shown and/or explained Work may contain a calculation or copy error Give credit for the following or equivalent: • 3(12.75) + 2(18.75) + 6(.75) = or • $3(12\frac{3}{4}) + 2(18\frac{1}{4}) + 6(\frac{3}{4}) = \#$
2	**2 Points Possible** 1 point: Correct answer: **6** (%) or correct answer based on Part 1 response Note: Label of "%" is not required at any level. Note: If the work provided in Part 2 clearly indicates the correct answer of 6% is obtained as a result of an incorrect procedure, no points will be awarded for the correct answer. **AND** 1 point: Correct and complete procedure shown and/or explained Work may contain a calculation or copy error Give credit for the following or equivalent: • $\frac{4.5}{79.25} = .057$ or 6% or • $\frac{4\frac{1}{2}}{79\frac{1}{4}} = .057$



SCORE: 4		**Points**
Part 1, 2 pts:		
Correct Answer	*The bookcase is 79.25 inches tall.*	1
Correct and Complete Procedure	*18.25* *+ 18.25* *12.75* *12.75* *12.75* *0.75* *0.75* *0.75* *0.75* *0.75* *0.75* *79.25*	1
Part 2, 2 pts:		
Correct Answer	*The shelves are about 6% of the bookcase.*	1
Correct and Complete Procedure	*0.75 × 6 = 4.50* *4.5/79.25 = .056* *.056 × 100 = 5.6*	1
TOTAL POINTS		**4**



SCORE: 3		**Points**
Part 1, 2 pts:		
Incorrect Answer	*The bookcase is* $79\frac{1}{4}$ *in. tall* (not in decimal form)	0
Correct and Complete Procedure	$\frac{3}{4} \cdot 6 = 4\frac{2}{4}$ $12\frac{3}{4} \cdot 3 = 38\frac{1}{4}$ $18\frac{1}{4} \cdot 2 = 36\frac{2}{4}$ $4\frac{2}{4}$ $38\frac{1}{4}$ $+ 36\frac{2}{4}$ $79\frac{1}{4}$ *in.*	1
Part 2, 2 pts:		
Correct Answer	*The shelves are 6% of the height of the whole bookcase*	1
Correct and Complete Procedure	*shelves* $- 4\frac{2}{4} = 4.50$ *bookcase* $- 79\frac{1}{4} = 79.25$ $4.50 \div 79.25 = 0.056 \quad 5.6 \quad 6\%$	1
TOTAL POINTS		**3**



SCORE: 2 **Points**

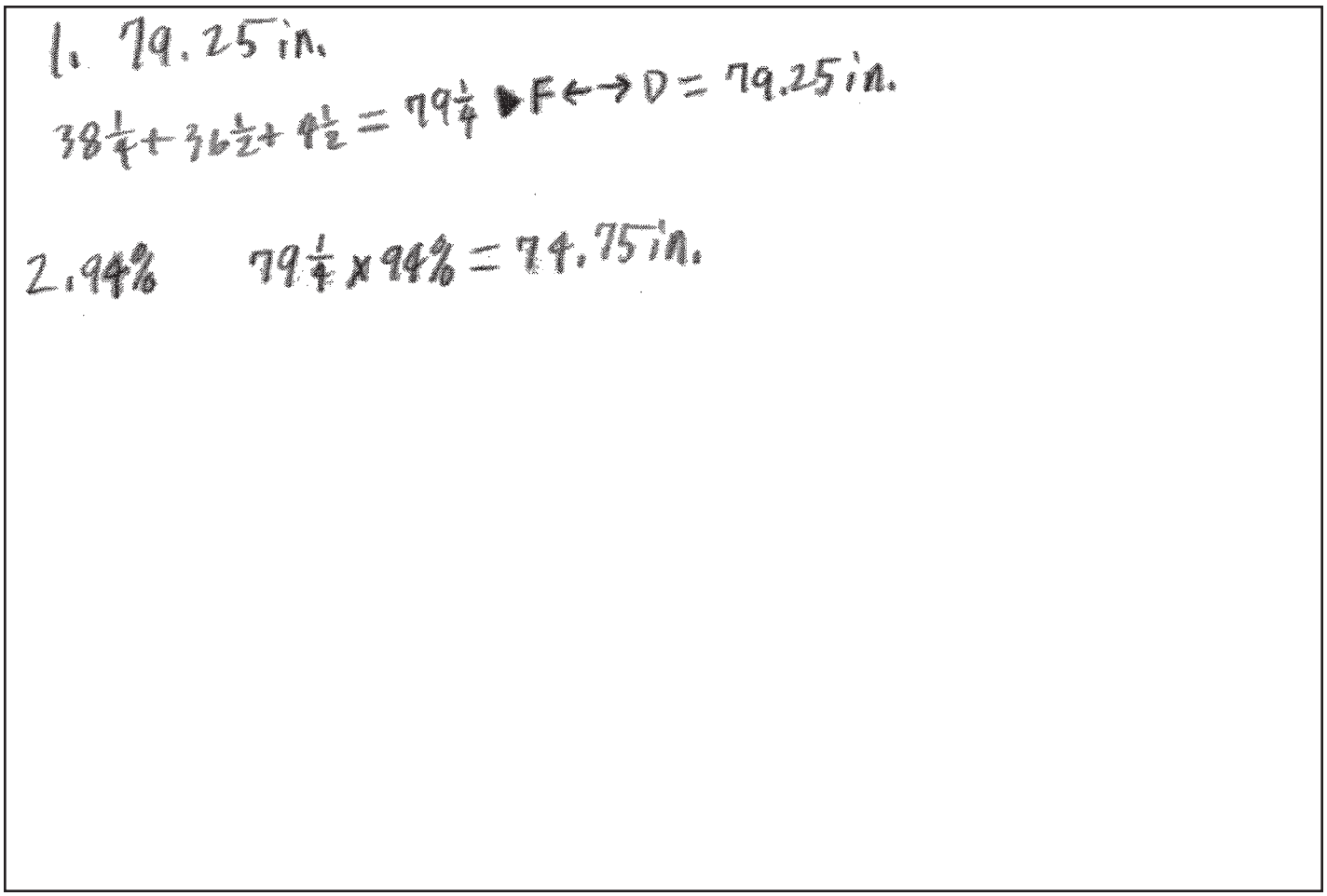
Part 1, 2 pts:

Correct Answer	*The total heigth of the bookshelf is 79.25 in.*	1
Correct and Complete Procedure	*12.75 in + 12.75 in + 12.75 in = 38.25 in* *18.25 in + 18.25 in + 36.5 in* *.75 in + .75 in + .75 in + .75 in + .75 in + .75 in = 4.5 in* *38.25 in* *+ 36.5 in* *4.5 in* *79.25 in*	1

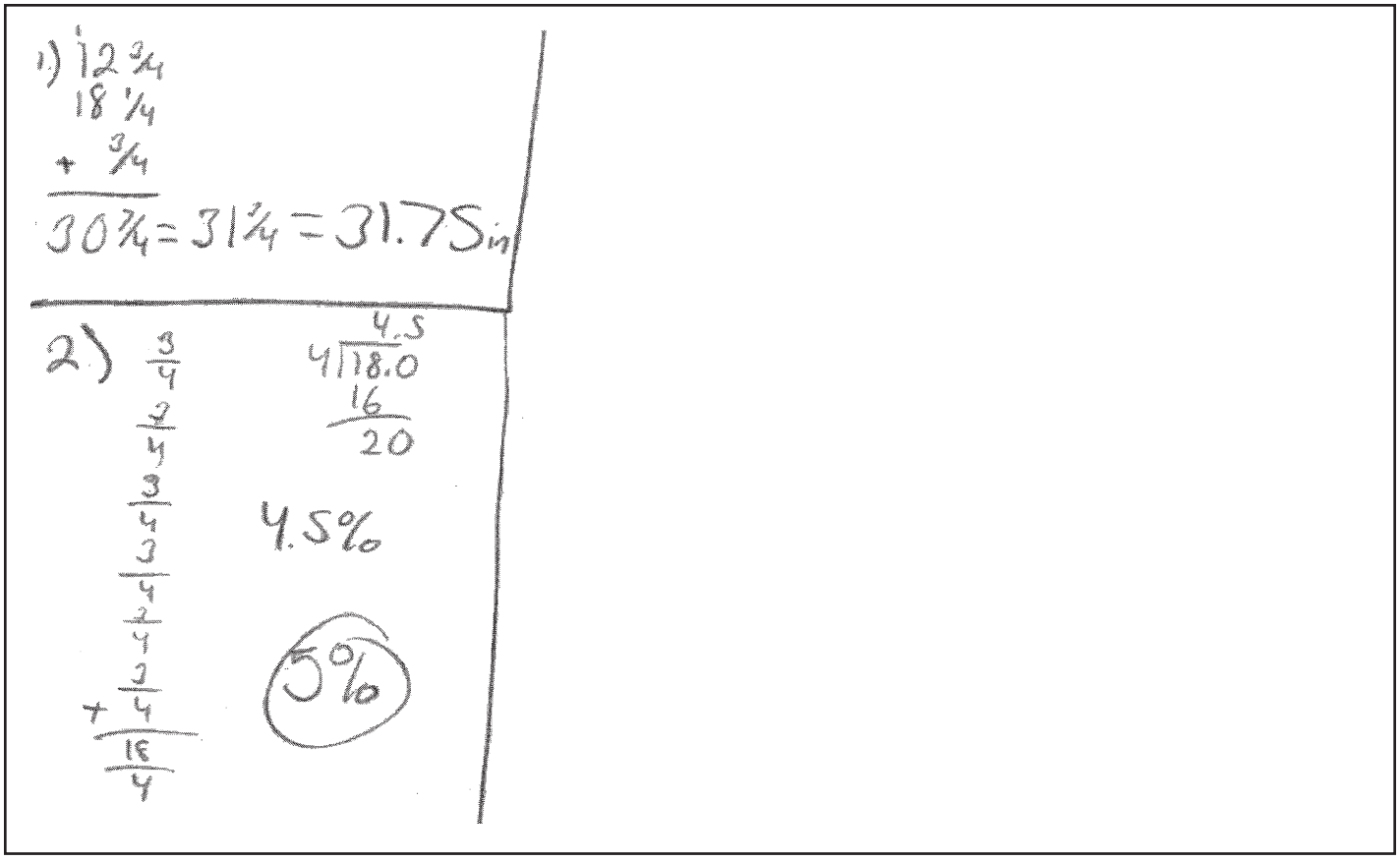
Part 2, 2 pts:

Incorrect Answer	*The percentage of the bookshelf that is only from the shelves themselves is 94%*	0
Incorrect Procedure	36.50 in + 38.25 in = 74.75 74.75 in / 79.25 in = .943217666 .943217666 = .94 = 94% = 94%	0

TOTAL POINTS **2**



SCORE: 1		**Points**
Part 1, 2 pts:		
Correct Answer	*79.25 in.*	1
Incomplete Procedure	$38\frac{1}{4} + 36\frac{1}{2} + 4\frac{1}{2}$ $F \leftrightarrow D = 79.25\ in$	0
Part 2, 2 pts:		
Incorrect Answer	*94%*	0
Incorrect Procedure	$79\frac{1}{4} \times 94\% = 74.75\ in$	0
TOTAL POINTS		**1**



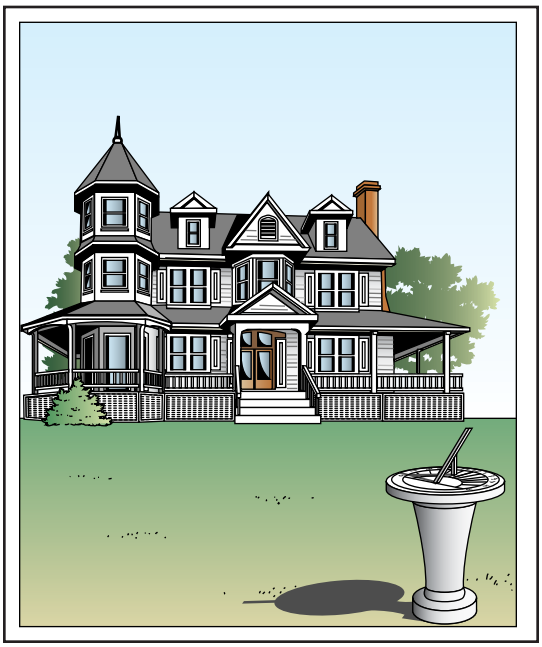
SCORE: 0		**Points**
Part 1, 2 pts:		
Incorrect Answer	*31.75 in*	0
Incorrect Procedure	$12\frac{3}{4}$ $18\frac{1}{4}$ $+\frac{3}{4}$ $30\frac{7}{4} = 31\frac{3}{4} = 31.75$ in	0
Part 2, 2 pts:		
Incorrect Answer	*5%*	0
Incorrect Procedure	$\frac{3}{4}$ $\frac{3}{4}$ $\frac{3}{4}$ $\frac{3}{4}$ $+\frac{3}{4}$ $\frac{18}{4}$	0
TOTAL POINTS		**0**

READING RESPONSES

Read the passage. Then answer multiple-choice questions 1 through 8 and open-response question A.

The Mystery in the Attic

by Jeanne B. Hargett



Staring at the ancient three-story house, I'd have changed places with just about anybody. It had turrets and bay windows and carvings as fancy as those on a fairy-tale castle. It had a sundial at one end of the garden and a fish pond at the other. Inside, we discovered that it also had peeling paint, mildew-stained walls, and a shortage of bathrooms.

"I love it," Mom said.

"I hate it," I said at the same instant.

Dad cleared his throat. "It was built almost a century ago. It'll be good for another hundred years when a few repairs are made."

My older brother, Greg, darted from doorway to doorway counting. "What a house—fifteen rooms if you include the attic. And maybe an extra room behind a secret panel, Molly. Bet I find it first!"

Greg led the way up the stairs, carrying a flashlight. But when he pushed open the attic door, we stood blinking at early afternoon sunlight streaming through three windows.

7 "Some attic," Greg said. "If it had a floor everywhere we could roller skate up here. Be careful to stay on the wooden beams, or you could crash into the rooms below." Stepping carefully, he went to raise a window. "Wow! We're as high as the moon. Come see how small the sundial looks from here."

8 "High places scare me, and you know it," I told him. "I'm not coming near a window." Instead I followed a bridge of creaky flooring till it ended at a chimney. I was standing on tiptoe to *trace* the chimney's exit through the roof when I saw the doll-sized trunk. It sat on a brick ledge. Layers of dust had woven a blanket over its rounded top.

"Greg, come here—I've found something!" I said. Both of us reached for it. The trunk slipped from our fingers and dust swirled around us. After our sneezing stopped, we crouched by the chimney to examine the doll clothes that had tumbled from the trunk. Green velvet jackets, dresses of yellowed satin, and beautifully made silk bonnets.

The trunk's lid had been lined with silk, too. Someone had cut a slit in the fabric and tucked in a thin sheet of notepaper.

I let Greg unfold the brittle paper. Then, squinting at the faded ink, I read aloud these words:

> "September 5, 1921. I, Hannah Forbes, must grow up. Mama says life in a new place will help us forget our trouble. But I cannot bear taking Samantha, Angenetta, and Cynthia from this home where my mother also grew up. The dolls belonged first to her, and she agrees. I shall leave them . . . resting under wooden rails, sheltered when the cold wind wails, hidden where the shadows flee, and sunbeams mark their place at three."

My voice trembled and trailed off. What long ago trouble had driven Hannah away? And how old was she then?

Greg interrupted my trance. "Molly—'Hidden where the shadows flee, and sunbeams mark their place at three.' It's clear as anything. They're buried near the sundial!"

We found shovels in the garage and raced out to the yard. After an hour of digging produced no results, I asked, "But what about the wooden rails?"

"There was probably a fence here then. Who knows what changes have been made in so many years? Keep digging!"

Finally Greg agreed to take a break. There was someone I wanted to see. "Miss Jamison at the library knows everything," I said. "As soon as I clean up I'm going to ask if she can tell us about the Forbes family."

Greg snorted. "And leave me with the dirty work? Nothing doing. I'm coming, too."

Miss Jamison's information set me shivering in spite of the afternoon heat. Hannah's father had been a president of a local bank and had been convicted of

embezzling thousands of dollars. Depending on which person you believed, he was either a shameless thief or a kind man too softhearted when folks needed money. He'd died shortly after being sent to prison. Like me, Hannah was eleven when she had had to change homes. I was glad we didn't share the same reason.

"Those dolls simply have to be found, Greg," I said as we walked back to the house.

"Five blisters prove I've been trying," he grumbled.

"It's more important now," I insisted. "I'll help dig. Just give me time to put their clothes away in the trunk."

Greg agreed and came back to the attic with me to shut the window. I finished folding the clothes, then picked up the fragile note. In the bright sunlight I saw two faded ink strokes I'd missed before.

"Greg," I yelped, "it says, 'resting under wooden TRAILS.' These walkways are Hannah's wooden trails. The dolls are here!" I soon got hot and dusty again trying to look under the boards, but Greg sat quietly by a window. "Aren't you going to help look?" I asked.

He pointed to a patch of sunlight on the floor near the window. "I told you the sundial had to be involved. Hannah looked at it out this window. How else did she know the sun touches here at three o'clock?"

As we lifted a loose plank in the sunlit spot, I didn't care who got credit for finding the bundle below.

The dolls' china faces were still rosy. Gently I touched one painted smile after another. Which was Samantha? Which Angenetta? Which Cynthia? It didn't matter. Somewhere, I was sure of it, Hannah was smiling, too.

Reading Item A–2009 Augmented Benchmark Grade 7

A

Explain what happens throughout the story that improves Molly's opinion of moving into the old house.

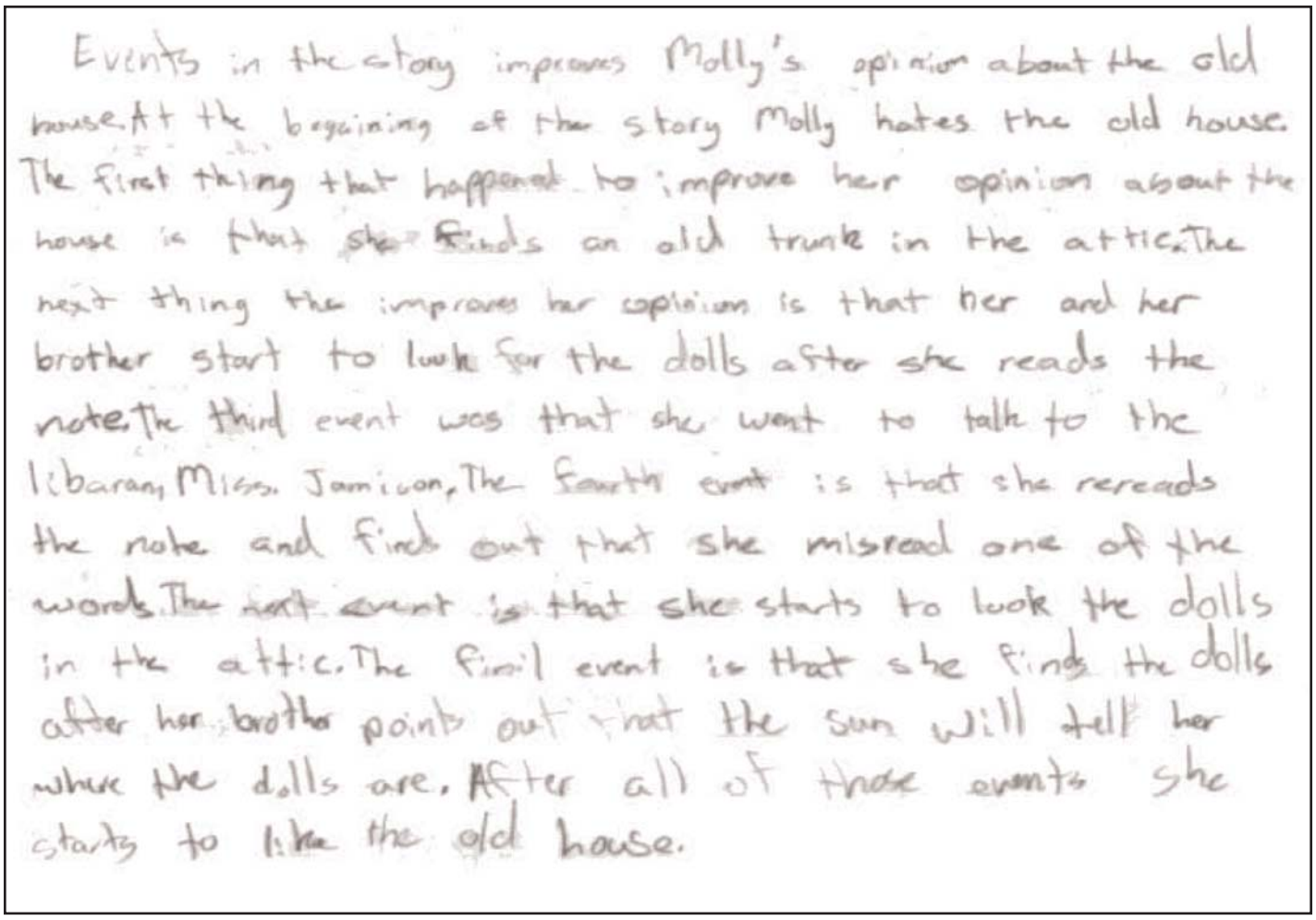
Use details from the passage to support your answer.

READING ITEM A SCORING RUBRIC–2009 AUGMENTED BENCHMARK GRADE 7

SCORE	DESCRIPTION
4	The response provides **four** details from the passage that demonstrate a change in her opinion of moving into the old house from the beginning to the end.
3	The response provides **three** details from the passage that demonstrate a change in her opinion of moving into the old house from the beginning to the end.
2	The response provides **two** details from the passage that demonstrate a change in her opinion of moving into the old house from the beginning to the end.
1	The response provides **one** detail from the passage that might explain why Molly's opinion of moving into the old house changes. **OR** The response demonstrates minimal understanding of the question.
0	The response is 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" assigned for the item.

Score Point: 4

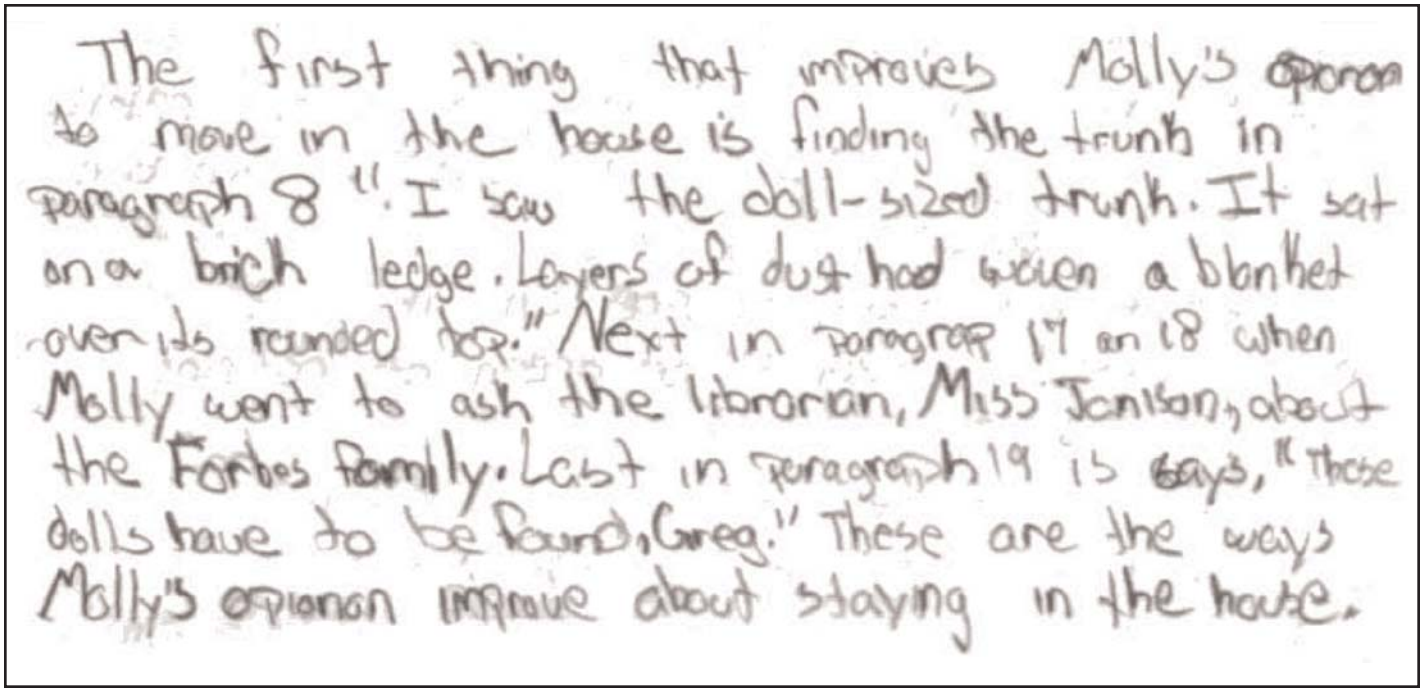
The response provides **seven** details from the passage that demonstrate a change in her opinion of moving into the old house from the beginning to the end: 1. *Molly hates the old house* 2. *She finds an old trunk in the attic* 3. *Her and her brother start to look for the dolls after she reads the note* 4. *She went to talk to the libaran, Miss Jamison* 5. *She rereads the note and find out that she misread one of the words* 6. *She starts to look the dolls in the attic* 7. *She finds the dolls after her brother points out that the sun will tell her where the dolls are*. Separate credit is not given for *"her and her brother start to look for the dolls after she reads the note"* because, the way the student has written the sentence, it is considered one idea.



Events in the story improves Molly's opinion about the old house. At the begaining of the story Molly hates the old house. The first thing that happens to improve her opinion about the house is that she finds an old trunk in the attic. The next thing the improves her opinion is that her and her brother start to look for the dolls after she reads the note. The third event was that she went to talk to the libaran, Miss. Jamison, The fourth event is that she rereads the note and finds out that she misread one of the words. The next event is that she starts to look the dolls in the attic. The finil event is that she finds the dolls after her brother points out that the sun will tell her where the dolls are. After all of those events she starts to like the old house.

Score Point: 3

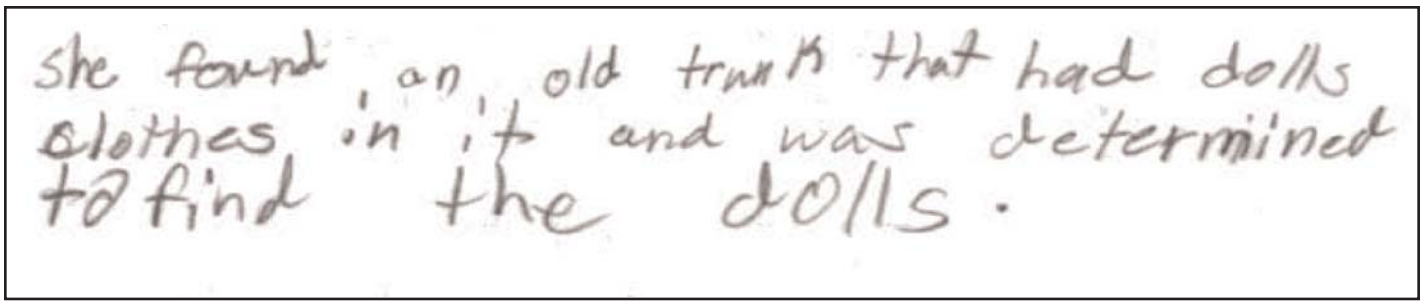
The response provides **three** details from the passage that demonstrate a change in her opinion of moving into the old house from the beginning to the end: 1. *Finding the trunk . . . . "I saw the doll-sized trunk. It sat on a brick ledge. Layers of dust had woven a blanket over its rounded top"* 2. *Molly went to ask the librarian, Miss Janison, about the Forbes family* 3. *"Those dolls have to be found, Greg."*



The first thing that improves Molly's opinon to move in the house is finding the trunk in paragraph 8 "I saw the doll-sized trunk. It sat on a brick ledge. Layers of dust had woven a blanket over its rounded top." Next in paragraph 17 an 18 when Molly went to ask the librarian, Miss Janison, about the Forbes family. Last in paragraph 19 is says, "Those dolls have to be found, Greg." These are the ways Molly's opinon improve about staying in the house.

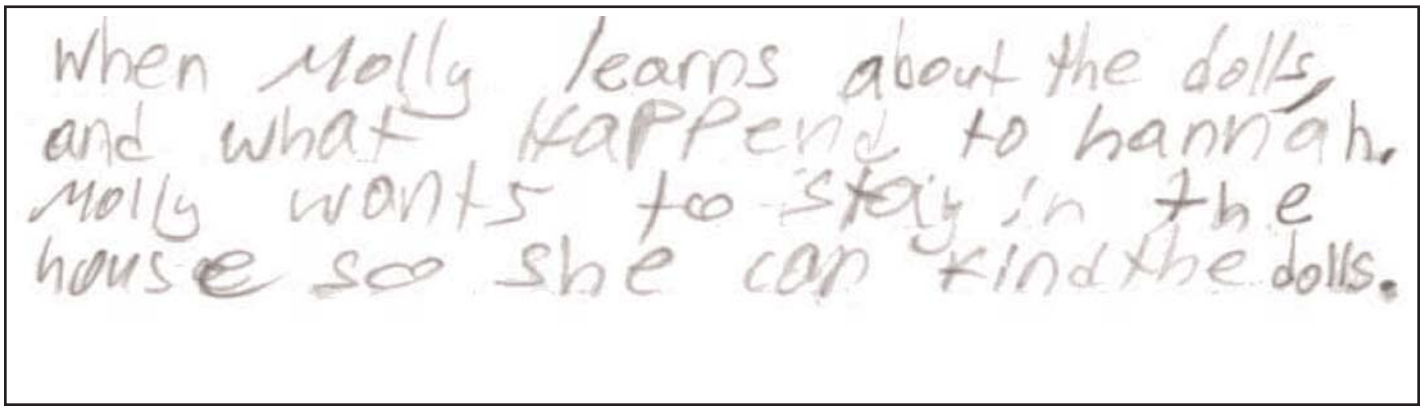
Score Point: 2

The response provides **two** details from the passage that demonstrate a change in her opinion of moving into the old house from the beginning to the end: 1. *Found an old trunk that had dolls clothes in it* 2. *Was determined to find the dolls*.



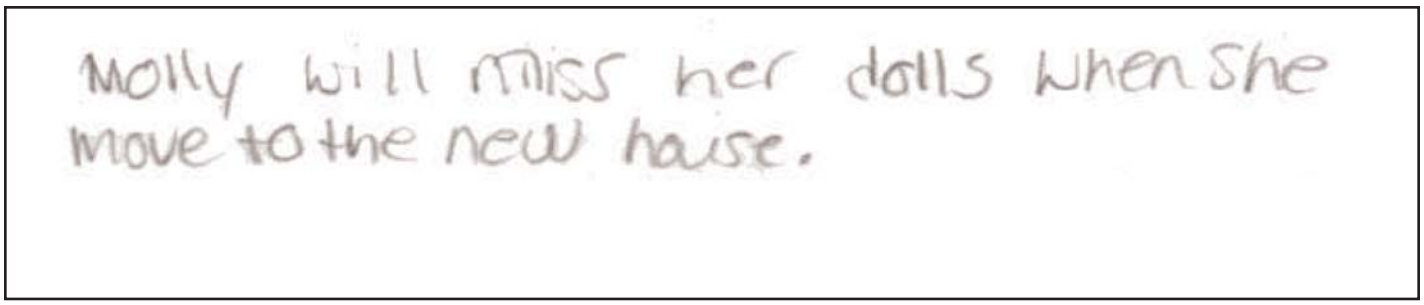
Score Point: 1

The response provides **one** detail from the passage that might explain why Molly's opinion of moving into the old house changes. 1. *So she can find the dolls.* No credit was given for *"Molloy learns about the dolls, and what happened to Hannah"* because it was considered too vague to establish a connection with finding/reading the note or learning about the Forbs family when she went to the library.



Score Point: 0

The response is inaccurate and shows no evidence that the student understands the task.



Read the article. Then answer multiple-choice questions 9 through 16 and open-response question B.

Gardens Under Glass

by Gail A. Wolfson

1 If you lived in Victorian London, you'd carry a black umbrella and have a house with dark furniture and wallpaper. Why? London was a city of smoky factories. Your black umbrella would protect you from soot-filled rain and wouldn't show the dirt. Your house's dark furnishings and walls would camouflage the dust from coal-fueled stoves. Like other Victorians, you'd love gardening and houseplants, but your plants couldn't *thrive* in the dirty city air—that is, until London surgeon Dr. Nathaniel Ward made an amazing discovery.

2 Ward, who loved plants and nature, decided to put a sphinx moth cocoon and some soil into a bottle and close the lid. Somehow, he misplaced the bottle, and found it only months later. To his surprise, a fern had *sprouted* in it—a fern that looked healthier than those growing in his London yard.

While experimenting with other bottle gardens, Ward built a large glass case, filled it with English ferns, sealed it, and sent it on a six-month voyage to Australia. The ferns flourished. In 1842, Ward published a book describing these gardens under glass. Soon, Wardian Cases, as they were called, became a fixture in drawing rooms.

The cases protected plants from coal dust and from the frigid nighttime temperatures in Victorian homes. Ward designed an elaborate garden under glass for his house with ferns, fish, a lizard, and a toad all living in it.

Wardian Cases were also used to ship exotic plants, such as orchids, to Britain. Victorians were enchanted with orchids, which have unique petals and colors and come in thousands of varieties. Queen Victoria created the position of royal orchid grower. Wealthy Victorians often collected these flowers, and some hired

hunters to find and ship them from tropical locations. Before Wardian Cases were invented, most orchids died from the salt spray and varying temperatures on the long sea voyage.

Terraria (plural of terrarium), as Wardian Cases were later called, are still popular. Although houseplants today don't need protection from coal dust or cold household temperatures, terrariums are perfect, low-maintenance, indoor gardens. Here's how you can make one.

Most supplies are available at garden centers. If you can't find a large glass jar at home, look in the houseware department at a discount store or ask a delicatessen if they have an empty one.

Plant selection:

- select small, slow-growing, nonflowering plants that grow in medium light and fit the size of your jar. Consider these:
- aluminum plant (Pilea)
- small ivies
- small ferns
- Ficus
- Peperomia
- prayer plant (Mimosa)

If your jar can hold several plants, an odd number is best, artistically speaking. Look for variety in the shapes and colors of leaves to add interest. Place the tallest plant in the middle.

Directions

1. Wash your jar. Rinse it several times with plain water. Dry it completely.
2. Wash and drain the pebbles. Pour pebbles into the jar to a depth of $\frac{1}{2}$ inch.
3. Use a funnel (or make one from paper) to add a thin layer of powdered charcoal on top of the pebbles.
4. Use a funnel to add 2 to 3 inches of sterile potting soil on top of the charcoal. Make an indentation for each plant in the soil. Unpot the plants and place them in the container. Pat the soil around them.

5. Add accessories, if desired.
6. Lightly water or mist the terrarium until the soil is moist, but not soggy. Close the lid. Place the terrarium in a room with medium, not direct, sunlight. Water only when the soil feels dry. Many terraria need watering only once a month.

Don't be surprised if your terrarium steams up in the morning. It'll clear by itself when the temperature inside and outside the jar becomes the same.

YOU NEED:

- clear glass jar (not plastic) with a lid and an opening wide enough for your hand
- small plants (see list)
- pebbles or gravel (for drainage)
- powdered charcoal (to absorb odors)
- sterile potting soil
- small stones (not pebbles or gravel), a small mirror, small ceramic animals (optional)

Reading Item B–2009 Augmented Benchmark Grade 7

B

Explain why the Wardian Case was important to the gardeners of Victorian London.

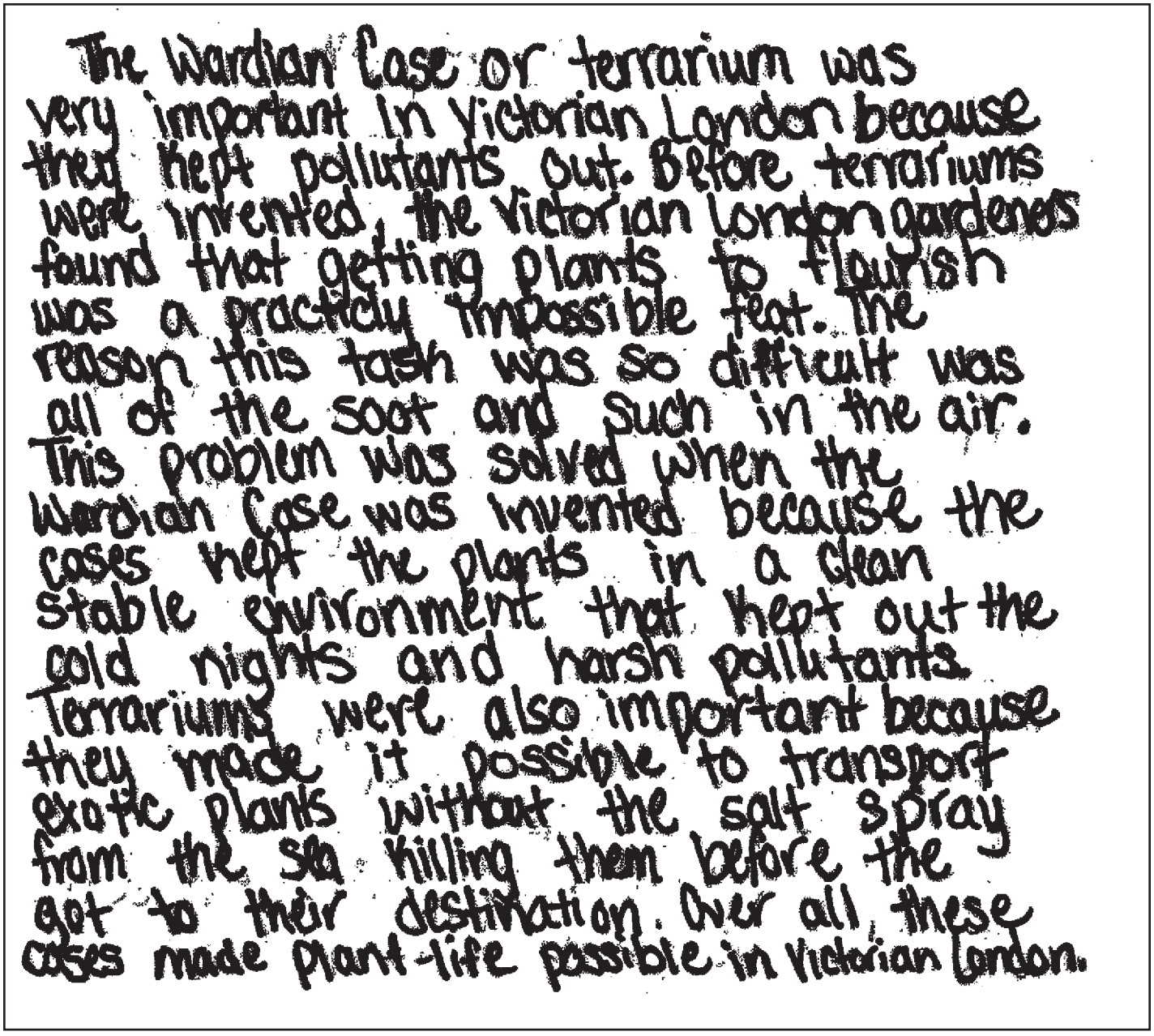
Use details from the article to support your answer.

READING ITEM B SCORING RUBRIC–2009 AUGMENTED BENCHMARK GRADE 7

SCORE	DESCRIPTION
4	The response explains why the Wardian Case was important to the gardeners of Victorian London **and** provides **three** accurate and relevant details from the passage to support the explanation. **OR** The response provides **four** relevant details that could explain why the Wardian Case was important to the gardeners of Victorian London.
3	The response explains why the Wardian Case was important to the gardeners of Victorian London **and** provides **two** accurate and relevant details from the passage to support the explanation. **OR** The response provides **three** relevant details that could explain why the Wardian Case was important to the gardeners of Victorian London.
2	The response explains why the Wardian Case was important to the gardeners of Victorian London **and** provides **one** accurate and relevant detail from the passage to support the explanation. **OR** The response provides **two** relevant details that could explain why the Wardian Case was important to the gardeners of Victorian London.
1	The response explains why the Wardian Case was important to the gardeners of Victorian London. **OR** The response provides **one** relevant detail that could explain why the Wardian Case was important to the gardeners of Victorian London. **OR** The response demonstrates minimal understanding of the question.
0	The response is 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" assigned for the item.

Score Point: 4

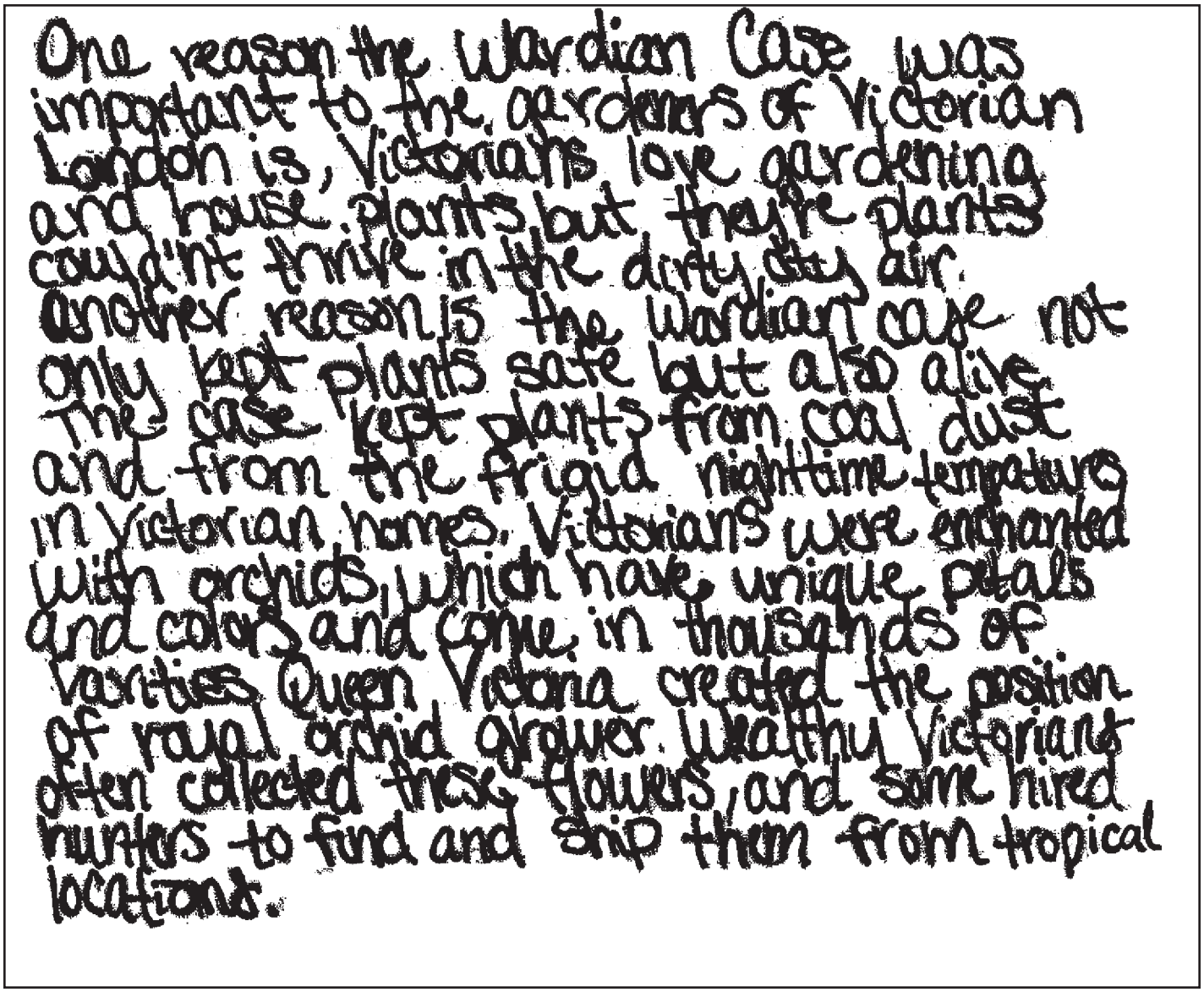
The response explains why the Wardian Case was important to the gardeners of Victorian London (*getting plants to flourish was a practicly impossible feat*) **and** provides **three** accurate and relevant details from the passage to support the explanation: 1. *They kept the pollutants out . . . soot and such in the air* 2. *Kept out the cold nights* 3. *Transport exotic plants without the salt spray from the sea killing them.*



The Wardian Case or terrarium was very important in Victorian London because they kept pollutants out. Before terrariums were invented, the Victorian London gardeners found that getting plants to flourish was a practicly impossible feat. The reason this task was so difficult was all of the soot and such in the air. This problem was solved when the Wardian Case was invented because the cases kept the plants in a clean stable environment that kept out the cold nights and harsh pollutants. Terrariums were also important because they made it possible to transport exotic plants without the salt spray from the sea killing them before the got to their destination. Over all these cases made plant-life possible in Victorian London.

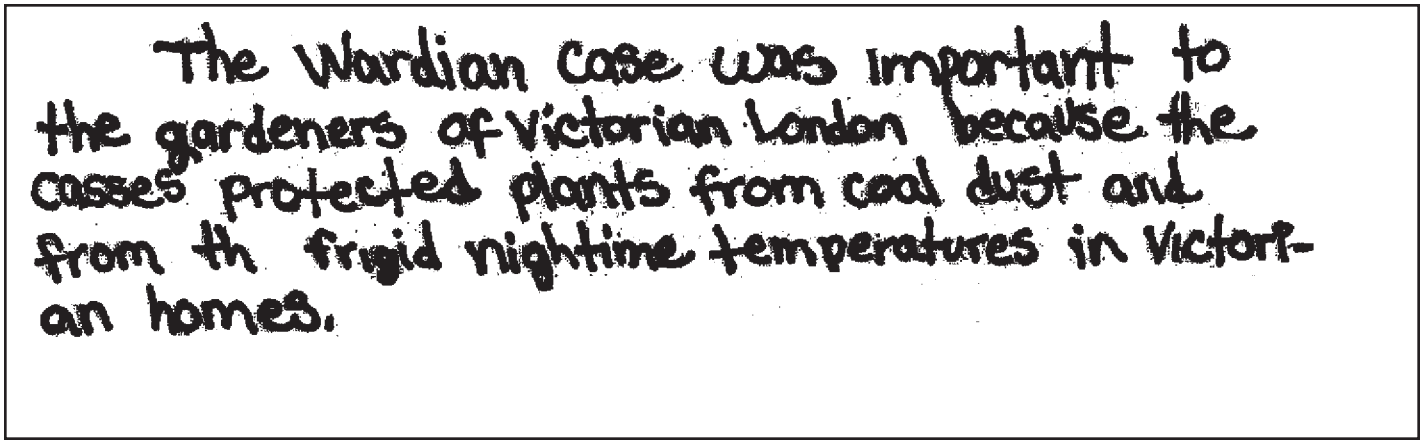
Score Point: 3

The response explains why the Wardian Case was important to the gardeners of Victorian London (*Victorians love gardening and house plants, but they're plant could'nt thrive in the dirty city air*) **and** provides **two** accurate and relevant details from the passage to support the explanation: 1. *The case kept plants from coal dust* 2. [Kept plants] *from the frigid nighttime temperature.* In the context written, the explanation is considered one idea and is further elaborated with the details given. No credit is given for the reference to Victorians being enchanted with orchids or Queen Victoria creating the position of royal orchid grower because it is not relevant to why the Wardian Case was important to gardeners.


One reason the Wardian Case was important to the gardeners of Victorian London is, Victorians love gardening and house plants but they're plants could'nt thrive in the dirty city air. Another reason is the Wardian case not only kept plants safe but also alive. The case kept plants from coal dust and from the frigid nighttime temperatures in Victorian homes. Victorians were enchanted with orchids, which have unique petals and colors and come in thousands of varities. Queen Victoria created the position of royal orchid grower. Wealthy Victorians often collected these flowers, and some hired hunters to find and ship them from tropical locations.

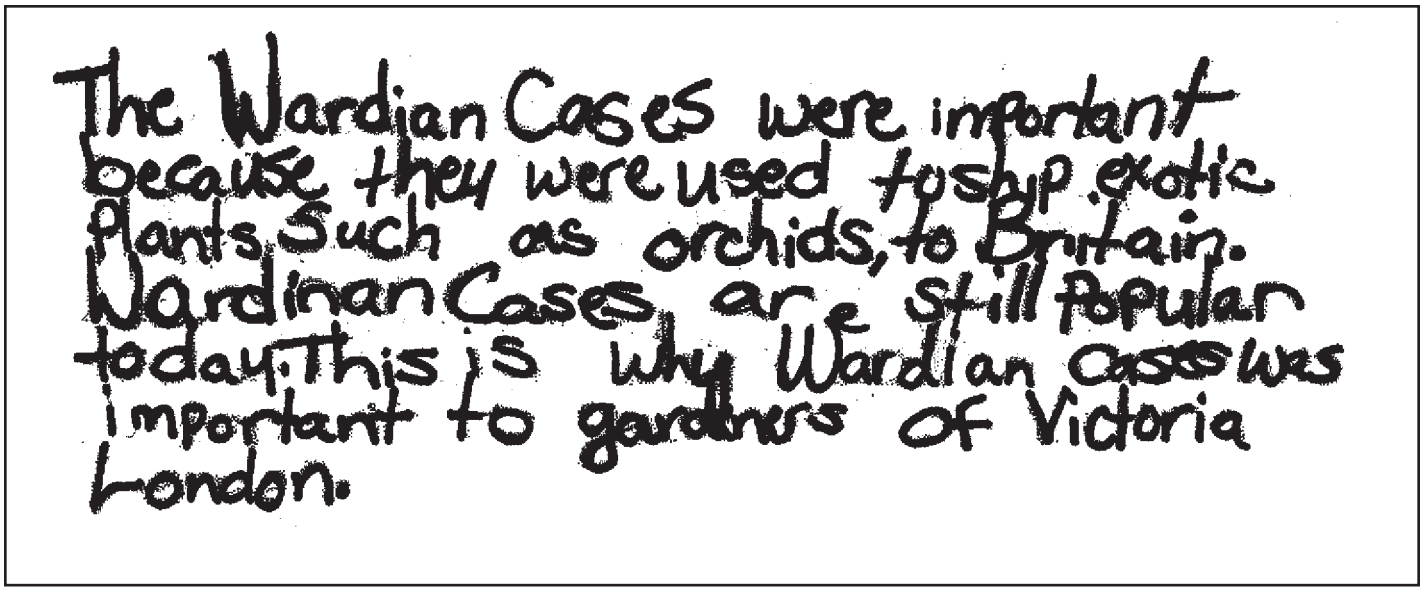
Score Point: 2

The response provides **two** relevant details that could explain why the Wardian Case was important to the gardeners of Victorian London: 1. *Protected plants from coal dust* 2. *Protected plants . . . from th frigid nightime temperatures in Victorian homes.*


The Wardian Case was important to the gardeners of Victorian London because the casses protected plants from coal dust and from th frigid nightime temperatures in Victorian homes.

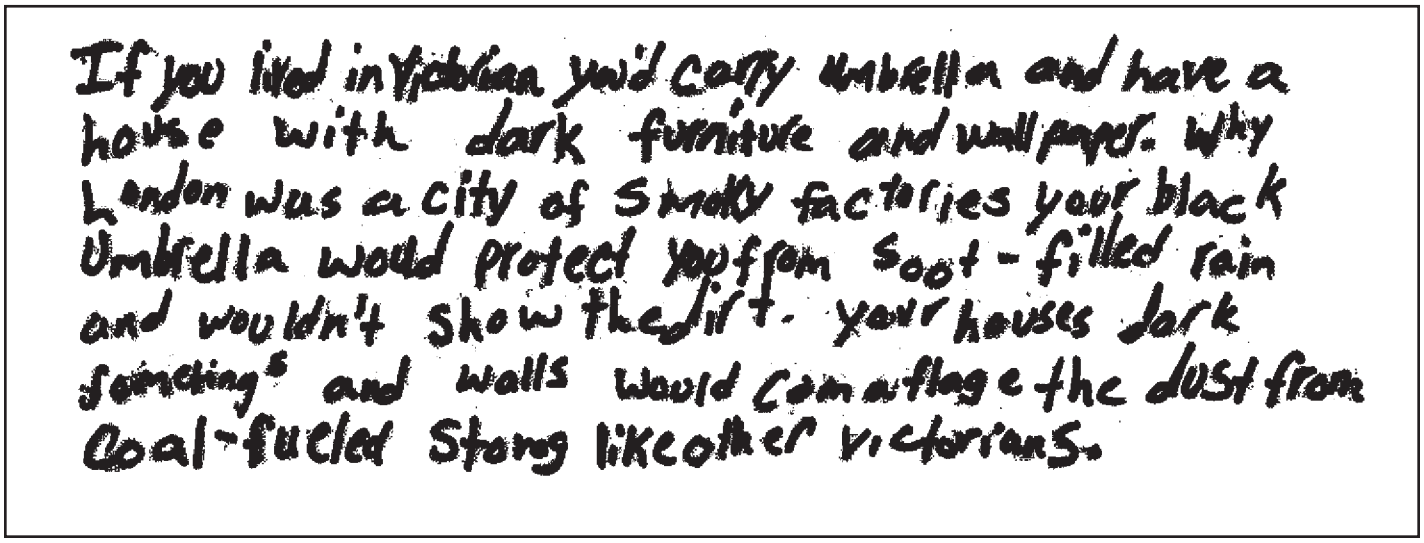
Score Point: 1

The response provides **one** relevant detail that could explain why the Wardian Case was important to the gardeners of Victorian London: 1. *They were used to ship exotic Plants, such as orchids, to Britain.*


The Wardian Cases were important because they were used to ship exotic plants such as orchids, to Britain. Wardian Cases are still popular today. This is why Wardian Cases was important to gardners of Victoria London.

Score Point: 0

The response uses irrelevant information that does not relate to how the Wardian Case was important to Victorian London.



WRITING RESPONSES

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 a third time by a Team Leader or the Scoring Director 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.

Non-scoreable and Blank Papers
Compositions are scored, unless they are off-topic, illegible, incoherent, refusals to respond, written in a language other than English, or too brief to assess. A score of "NA" indicates that the student's writing entry was non-scoreable and that entry will receive a score of "0."

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
- Tone
- Selected information
- Voice
- Sentence variety

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

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

Writing Prompt—2009 Augmented Benchmark Grade 7

C

Your class has been discussing this idea:

"Television has made America a nation of watchers, not doers."

Before you begin to write, think about what this statement means. Has television made Americans less active? Do you agree or disagree?

Now write an essay about whether or not you agree that television has made America a nation of watchers. Give specific reasons explaining why you think the way you do.

Writer's Checklist

1. Look at the ideas in your response.

   — Have you focused on one main idea?
   — Have you used enough details 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 variety in 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?

I will have to disagree.

I like the tv but I do other thing like play sports and fun games. The things I like to do the most are swiming and bowling because they are fun and you can go with freinds to the pool and to the bowling alley and you have to look the rules to make it better so you don't get hurt at the places you like going to. I have a fun time going and I don't when we sit at home and watch tv.

Writing Annotation for Sample Response 1—2009 Augmented Benchmark Grade 7

Content: 2
Although this response provides a central idea, the elaboration is minimal and is list-like in nature (*I like the tv . . . play sports and fun games; . . . swimming and bowling because they are fun*). Organization is somewhat random. There is inconsistent control of the Content domain.

Style: 2
This response tells rather than shows (*you can go with friends to the pool and to the bowling ally*). There is little variety in sentences, producing a somewhat dim voice. There is inconsistent control of the Style domain.

Sentence Formation: 2
There are some correct sentences and one rather long run-on (*The things I like to do the most . . . places you like going to*). There is inconsistent control of the Sentence Formation domain.

Usage: 3
There is one error in inflections (*I do other thing*) and some awkward use of words (*foolw the rules to make it better . . . you like going to.*). There is reasonable control of the Usage domain.

Mechanics: 3
There are some minor spelling errors (*foolw, ally*), capitalization errors (*tv*), and punctuation errors. Overall, there is reasonable control of the Mechanics domain.

Yes, I do agree that television has made Amuricans less active. I feel very strongly about this issue. The statement: "Television has made America a nation of watchers, not doers." is absolutely, 100% true to me.

First of all, alot of people spend most of their free time watching t.v. It is okay to watch a little television a day but not as much as some people do! Watching a lot of it makes you, way less active. It is not healthy for you either. All of that television can't be good for your body or your brain!

When you watch t.v. you are not being active and that is what alot of Amuricans are strugling with right now. Instead of spending most of your free time sitting, watching t.v., go outside, get fresh air, sports, excersise. There is much better things in the world then television!

And now, to my last point. Some of the things on t.v. are amazing. People sometimes wish that they can do something or be like someone they saw on television. Instead of everyone waiting and wishing, go out and do it. Life is way more fun without

television.
So, as you can tell, I do agree that television has made America a nation of watchers!

Writing Annotation for Sample Response 2—2009 Augmented Benchmark Grade 7

Content: 3
This response provides a central idea and some elaboration (*It is not healthy . . . can't be good for your brain*), but the ideas are not fully developed. There is reasonable control of the Content domain.

Style: 3
There is some use of vivid vocabulary (*Americans are struggling; things on t.v. are amazing*), but it is not sustained throughout the response. There is reasonable control of the Style domain.

Sentence Formation: 4
Most sentences are correct and the response includes simple, compound, and complex sentences. There is consistent control of the Sentence Formation domain.

Usage: 4
Although there is one error in tense (*There is much better things in the world then television*), the use of inflections and agreement both show consistent control of the Usage domain.

Mechanics: 4
There is consistent control of the Mechanics domain.

What inspires a little girl to become a movie star? What makes a young boy want to become a great basketball player? I think it's seeing their heroes on television. I think it is watching their idols win awards or hit a game winning homerun!

Television has created dreams for many people. It isn't just an entertainment device, it is a piece of technology that has stirred the minds of people everywhere. It makes dreams closer to reality.

I know T.V. makes me want to get up and do something myself. When a basketball game ends, I can't help but grab a ball and play around a little in my backyard, re-playing the big moments in my head as I shoot. I watch a big football game as the final crazy moments tick down and a star is born when a player catches a touchdown pass to win. I have to grab a ball and act out the play like I was the one making the play. I fall onto my bed while catching the ball at an amazing angle. I can't help it! T.V. makes me want to jump up and do it myself!

I'm sure I'm not the only one. Television has to have the same effect on other people as it has on me. Television helps me dream big; and I know it makes others dream big too.

Writing Annotation for Sample Response 3—2009 Augmented Benchmark Grade 7

Content: 4
This response provides full elaboration of ideas, clear organization, and a presence of closure. There is consistent control of the Content domain.

Style: 4
The writer engages the reader with vivid, precise vocabulary, which helps to shape the piece (*It isn't just an entertainment device . . . stirred the minds of people everywhere*). There is sentence variety and a strong voice throughout the essay. There is consistent control of the Style domain.

Sentence Formation: 4
Most sentences are correct and include simple, compound, and complex sentences. There is consistent control of the Sentence Formation domain.

Usage: 4
The use of inflections, tenses, and agreement all show consistent control. There is consistent control of the Usage domain.

Mechanics: 4
There is consistent control of the Mechanics domain.

SCIENCE RESPONSES

Science Item A–2009 Augmented Benchmark Grade 7

A

A student is given the following question to answer: Is global warming affected by how much people enjoy using fossil fuels?

1. What is wrong with the wording of the question above? Rewrite the question so that it can be answered through scientific inquiry.

2. When conducting an experiment to answer your question from Part 1, what two things should be analyzed?

BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

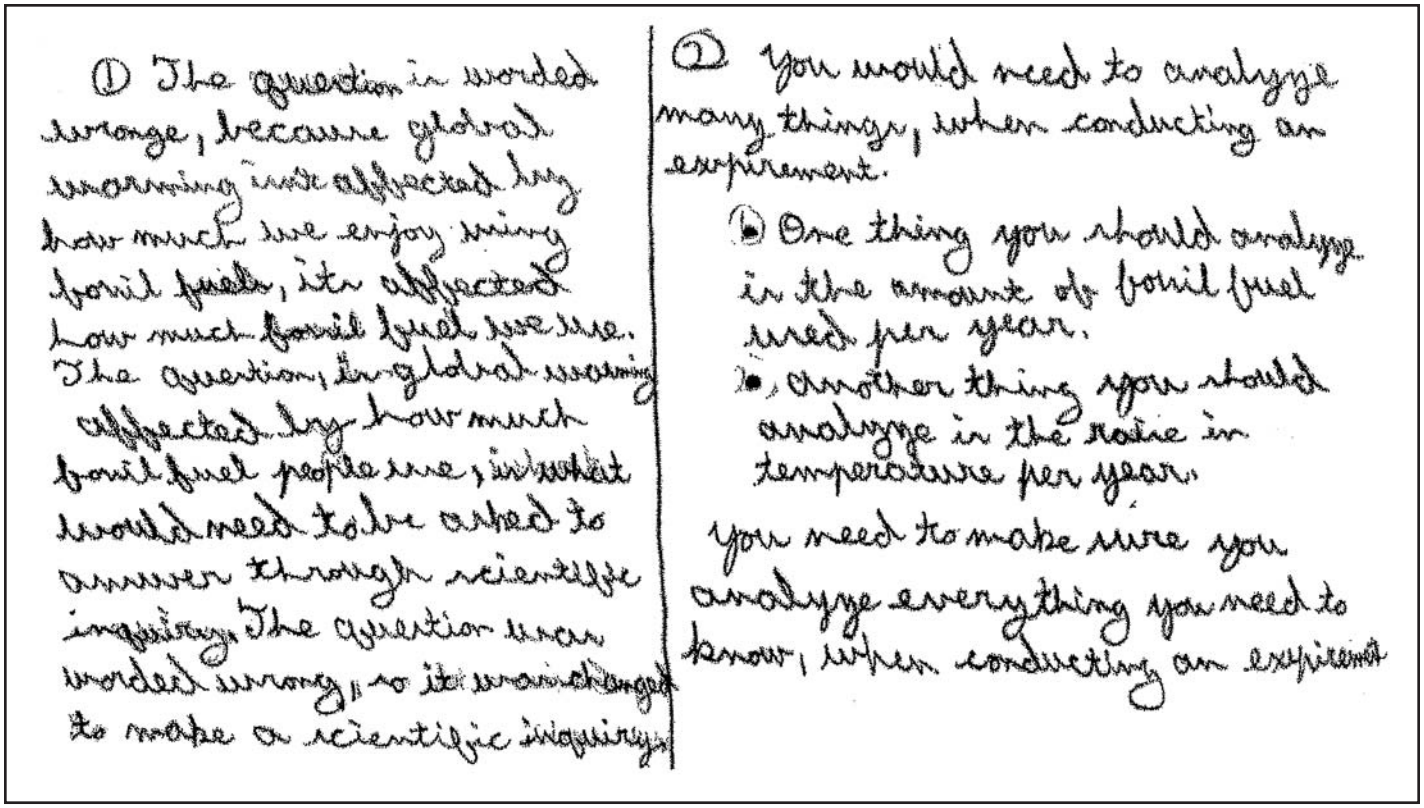
SCIENCE ITEM A SCORING RUBRIC–2009 AUGMENTED BENCHMARK GRADE 7

SCORE	DESCRIPTION
4	Response shows a *complete understanding* of the problem's essential scientific concepts. The student presents all procedures correctly and responds to all parts of the task.
3	Response shows a *nearly complete understanding* of the problem's essential scientific concepts. The student presents nearly all procedures correctly and responds to all parts of the task. The response may contain minor errors.
2	Response shows a *limited understanding* of the problem's essential scientific concepts. The student presents some procedures correctly and responds correctly to most parts of the task. The response may contain a major error.
1	Response shows a *minimum understanding* of the problem's essential scientific concepts. The student presents some correct work that contributes to a correct solution. The response contains incomplete procedures and major errors.
0	Response shows *insufficient understanding* of the problem's essential scientific concepts. The procedures, if any, contain major errors. There may be no explanation of the solution, 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.

Solution and Scoring

Part	Points
1	**2 Points Possible** 1 point: Identifies that the word "enjoy" is not scientifically testable and is not proper word choice for scientific inquiry. 1 point: Gives a new question that can be answered scientifically.
2	**2 Points Possible** 1 point: Determines that fossil fuel consumption should be measured. 1 point: Determines that Earth's temperature should be analyzed to draw a comparison Attribute Note #1 - Listing only "fossil fuels" and/or "global warming" with insufficient or no elaboration earns 1/2 point for each phrase.

Science Item A Sample Responses and Annotations–
2009 Augmented Benchmark Grade 7


① The question is worded wronge, because global warming isn't affected by how much we enjoy using fossil fuels, it's affected how much fossil fuel we use. The question, is global warming affected by how much fossil fuel people use, is what would need to be asked to answer through scientific inquiry. The question was worded wrong, so it was changed to make a scientific inquiry.

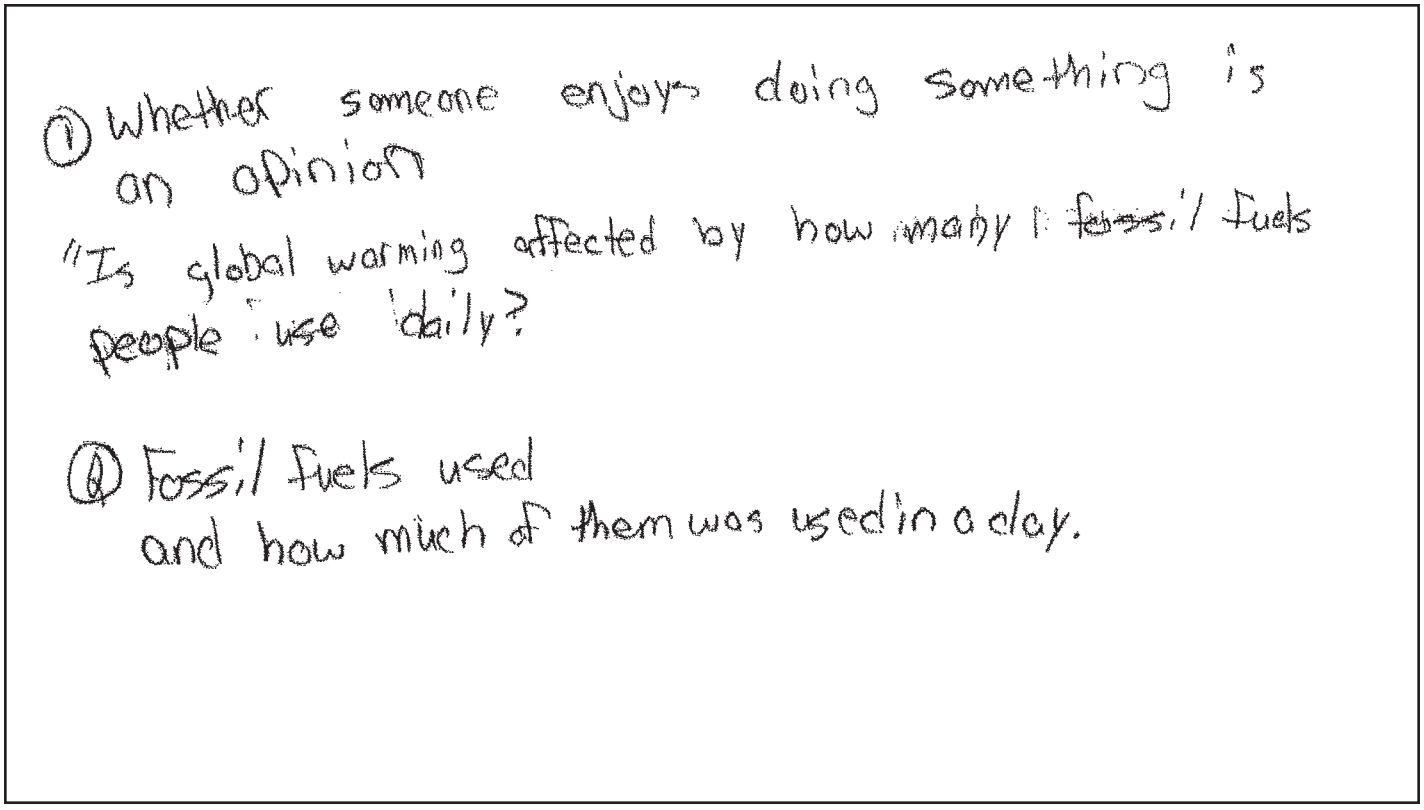
② You would need to analyze many things, when conducting an experiment.

• One thing you should analyze is the amount of fossil fuel used per year.

• Another thing you should analyze is the raise in temperature per year.

You need to make sure you analyze everything you need to know, when conducting an experiment.

SCORE: 4	**Points**
Part 1, 2 pts:	
Correctly identifies the word "enjoy" as not scientifically testable and is not the proper word choice for scientific inquiry.	1
The question is worded wronge, because global warming isn't affected by how much we enjoy using fossil fuels . . . so it was changed to make a scientific inquiry	
Gives a new question that can be answered scientifically.	1
The question, is global warming affected by how much fossil fuel people use, is what would need to be asked to answer through scientific inquiry.	
Part 2, 2 pts:	
Determines that fossil fuel consumption should be measured.	1
One thing you should analyze is the amount of fossil fuel used per year.	
Determines that Earth's temperature should be measured over time.	1
Another thing you should analyze is the raise in temperature per year.	
TOTAL POINTS	**4**

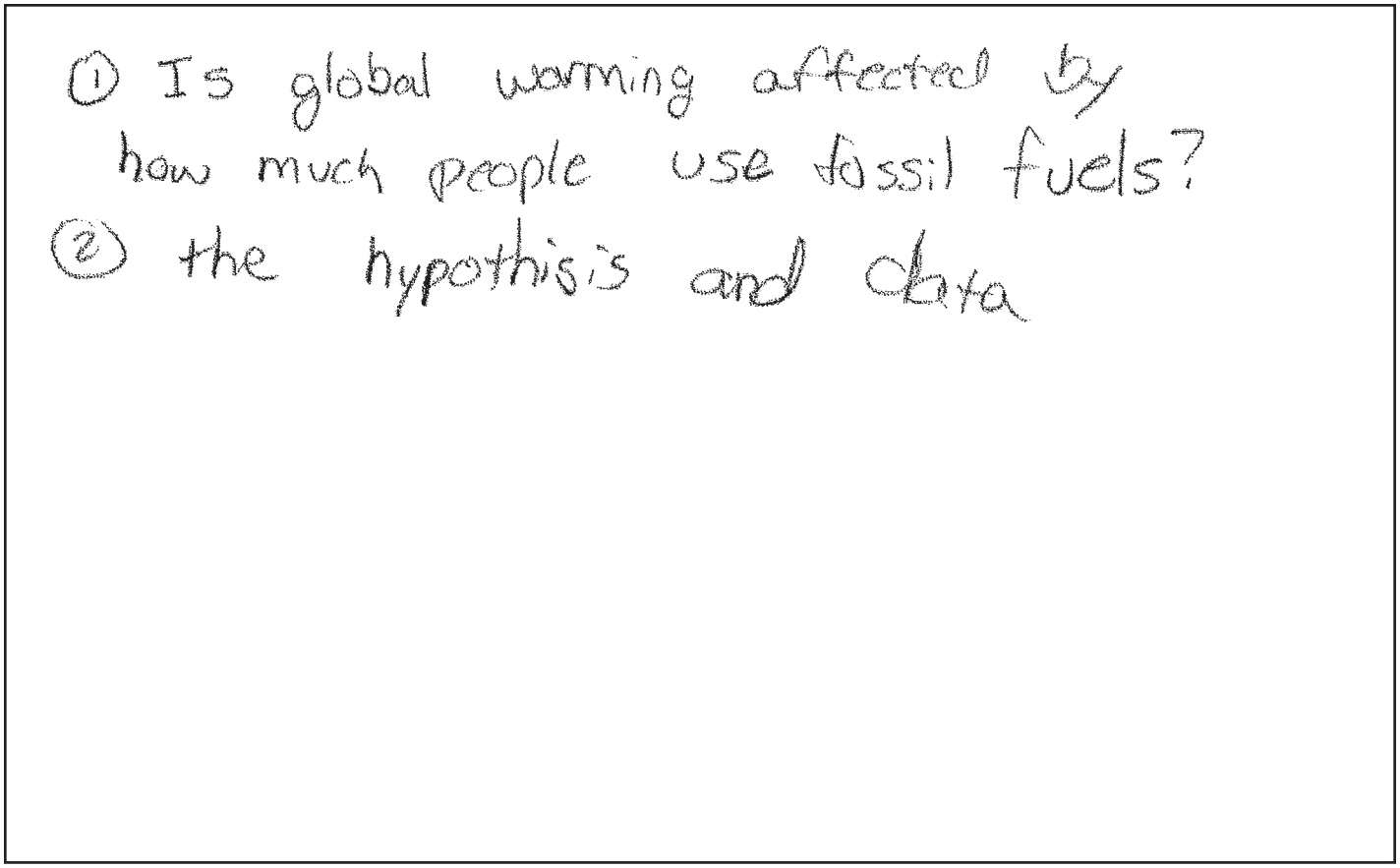


SCORE: 3	**Points**
Part 1, 2 pts:	
Correctly identifies the word "enjoy" as not scientifically testable and is not the proper word choice for scientific inquiry.	1
Whether someone enjoys doing something is an opinion	
Gives a new question that can be answered scientifically.	1
Is global warming affected by how many fossil fuels people use daily?	
Part 2, 2 pts:	
Determines that fossil fuel consumption should be measured.	1
Fossil fuels used and how much of them was used in a day.	
Fails to address the measurement of Earth's temperature over time.	0
TOTAL POINTS	**3**

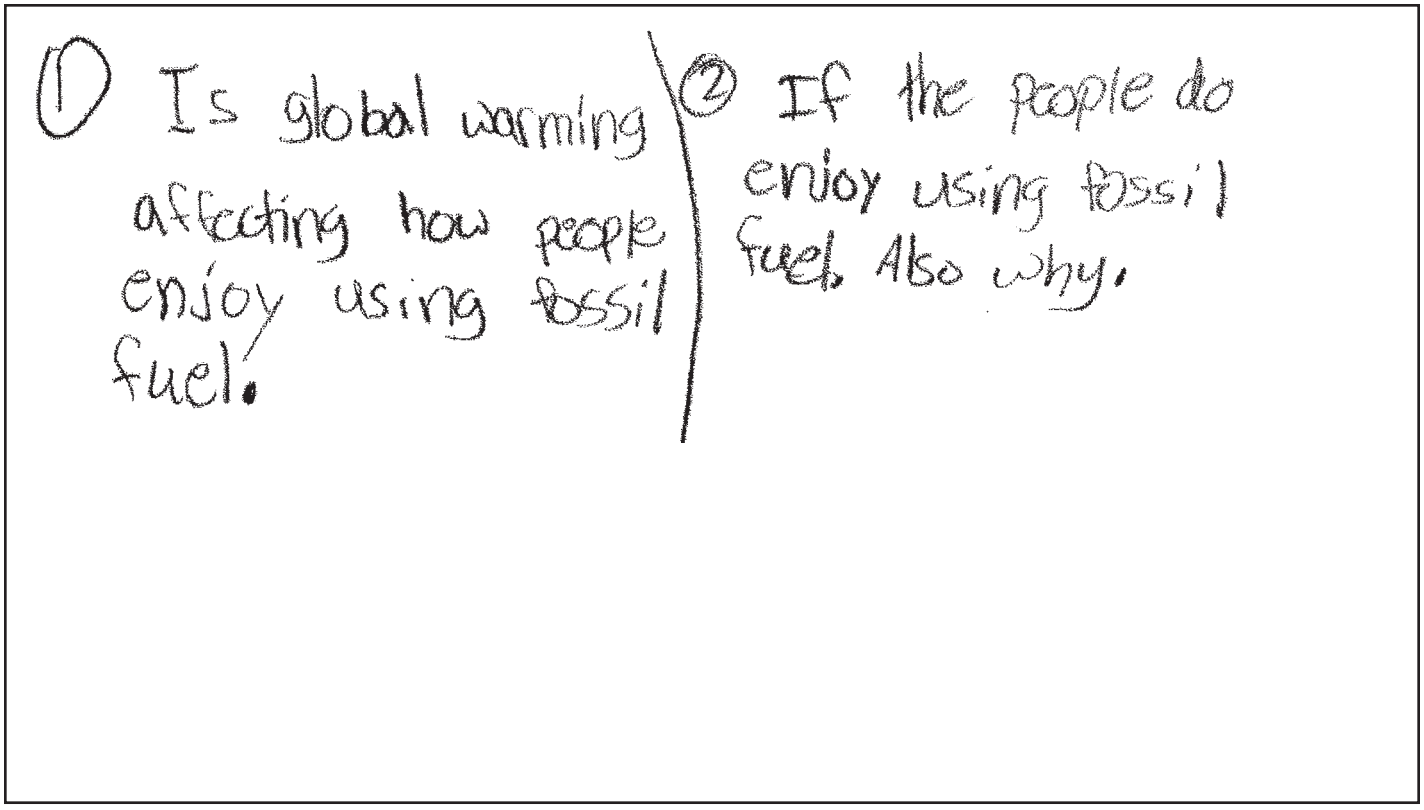
1. It is not using scientific words.
Is it true that fossil fuel affect global warming and explain your answer with scientficly words.

2. Make sure you checked everything that it is right and that you ask if you are going the right direction or not.

SCORE: 2	**Points**
Part 1, 2 pts:	
Correctly identifies the word "enjoy" as not scientifically testable and is not the proper word choice for scientific inquiry. *It is not using scientific words.*	1
Gives a new question that can be answered scientifically. *Is it true that fossil fuel affect global warming . . .*	1
Part 2, 2 pts:	
Fails to address fossil fuel consumption AND Earth's temperature over time. *Make sure you checked everything that it is right and that you ask if you are going the right direction or not.*	0
TOTAL POINTS	**2**



SCORE: 1	**Points**
Part 1, 2 pts:	
Fails to identify the word "enjoy" as not scientifically testable and is not the proper word choice for scientific inquiry.	0
There is no response given for this portion of the prompt.	
Gives a new question that can be answered scientifically.	1
Is global warming affected by how much people use fossil fuels?	
Part 2, 2 pts:	
Fails to address fossil fuel consumption AND Earth's temperature over time.	0
The hypothisis and data	
TOTAL POINTS	**1**



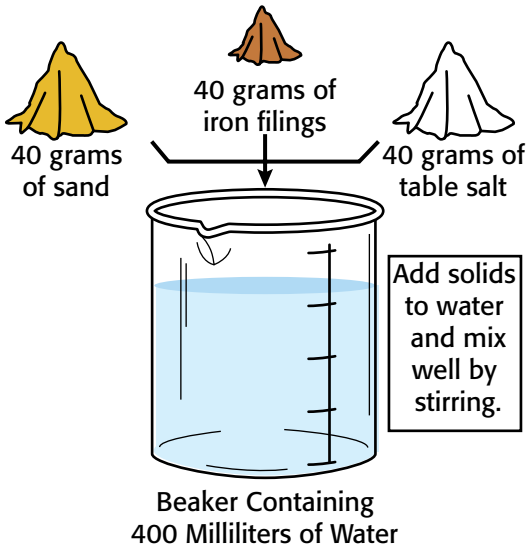
SCORE: 0	Points
Part 1, 2 pts:	
Fails to identify the word "enjoy" as not scientifically testable and is not the proper word choice for scientific inquiry. *There is no response given for this portion of the prompt.*	0
Fails to give a new question that can be answered scientifically. *Is global warming affecting how people enjoy using fossil fuel.* **The question given still relates to people's enjoyment of using fossil fuels.**	0
Part 2, 2 pts:	
Fails to address fossil fuel consumption AND Earth's temperature over time. *If people do enjoy using fossil fuel and why* **Nothing is specified to be measured.**	0
TOTAL POINTS	**0**

B

Mr. Henson gave each group of students in his science class the following substances:

- 40 grams of table salt
- 40 grams of iron filings
- 40 grams of sand
- 400 milliliters of water

The substances were mixed together, as illustrated in the drawing.



Mr. Henson wants the students to separate the salt, sand, and iron filings from the water. The water can then be discarded.

1. Describe each of the three processes needed to separate the mixture into its original components.

2. Explain why separating the water from the salt would be the last step.

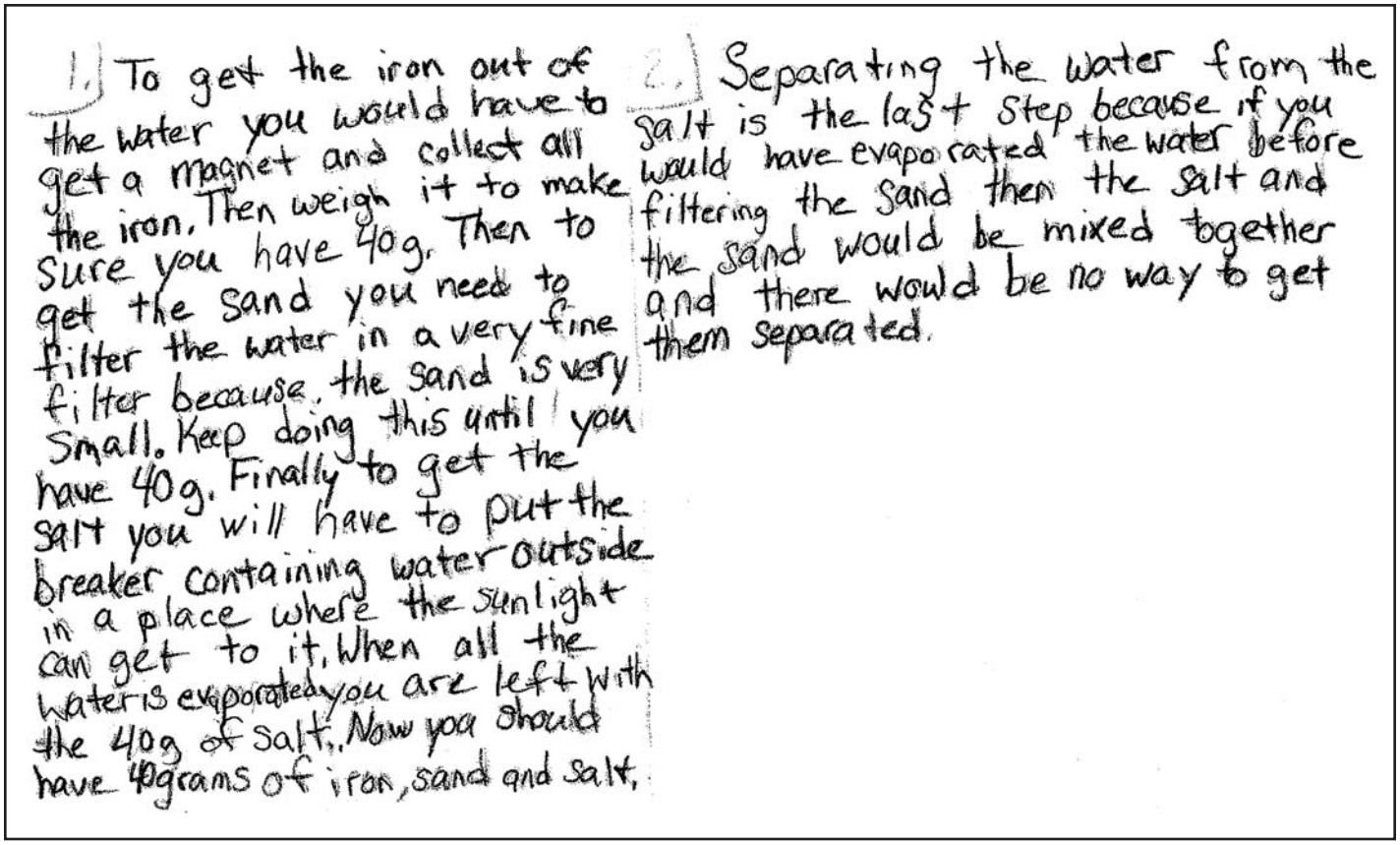
BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

SCIENCE ITEM B SCORING RUBRIC–2009 AUGMENTED BENCHMARK GRADE 7

SCORE	DESCRIPTION
4	Response shows a *complete understanding* of the problem's essential scientific concepts. The student presents all procedures correctly and responds to all parts of the task.
3	Response shows a *nearly complete understanding* of the problem's essential scientific concepts. The student presents nearly all procedures correctly and responds to all parts of the task. The response may contain minor errors.
2	Response shows a *limited understanding* of the problem's essential scientific concepts. The student presents some procedures correctly and responds correctly to most parts of the task. The response may contain a major error.
1	Response shows a *minimum understanding* of the problem's essential scientific concepts. The student presents some correct work that contributes to a correct solution. The response contains incomplete procedures and major errors.
0	Response shows *insufficient understanding* of the problem's essential scientific concepts. The procedures, if any, contain major errors. There may be no explanation of the solution, 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.

Solution and Scoring

Part	Points
1	**3 Points Possible** 1 point: Separate the iron filings with a magnet 1 point: Separate the sand with a filter. 1 point: Separate the salt by evaporating the water.
2	**1 Point Possible** 1 point: If iron filings or sand are present during evaporation, salt will adhere (stick) to them, making further separation difficult.


1. To get the iron out of the water you would have to get a magnet and collect all the iron. Then weigh it to make sure you have 40g. Then to get the sand you need to filter the water in a very fine filter because the sand is very small. Keep doing this until you have 40g. Finally to get the salt you will have to put the breaker containing water outside in a place where the sunlight can get to it. When all the water is evaporated you are left with the 40g of salt. Now you should have 40grams of iron, sand and salt.

2. Separating the water from the salt is the last step because if you would have evaporated the water before filtering the sand then the salt and the sand would be mixed together and there would be no way to get them separated.

SCORE: 4 **Points**

Part 1, 3 pts:

Describes separating the iron filings with a magnet. 1

To get the iron out of the water you would have to get a magnet and collect . . .

Describes separating the sand with a filter. 1

Then to get the sand you need to filter the water . . .

Describes separating the salt by evaporating the water. 1

. . . the salt you will put the breaker containing the water . . . where the sunlight can get to it. When all the water is evaporated you are left with . . . salt.

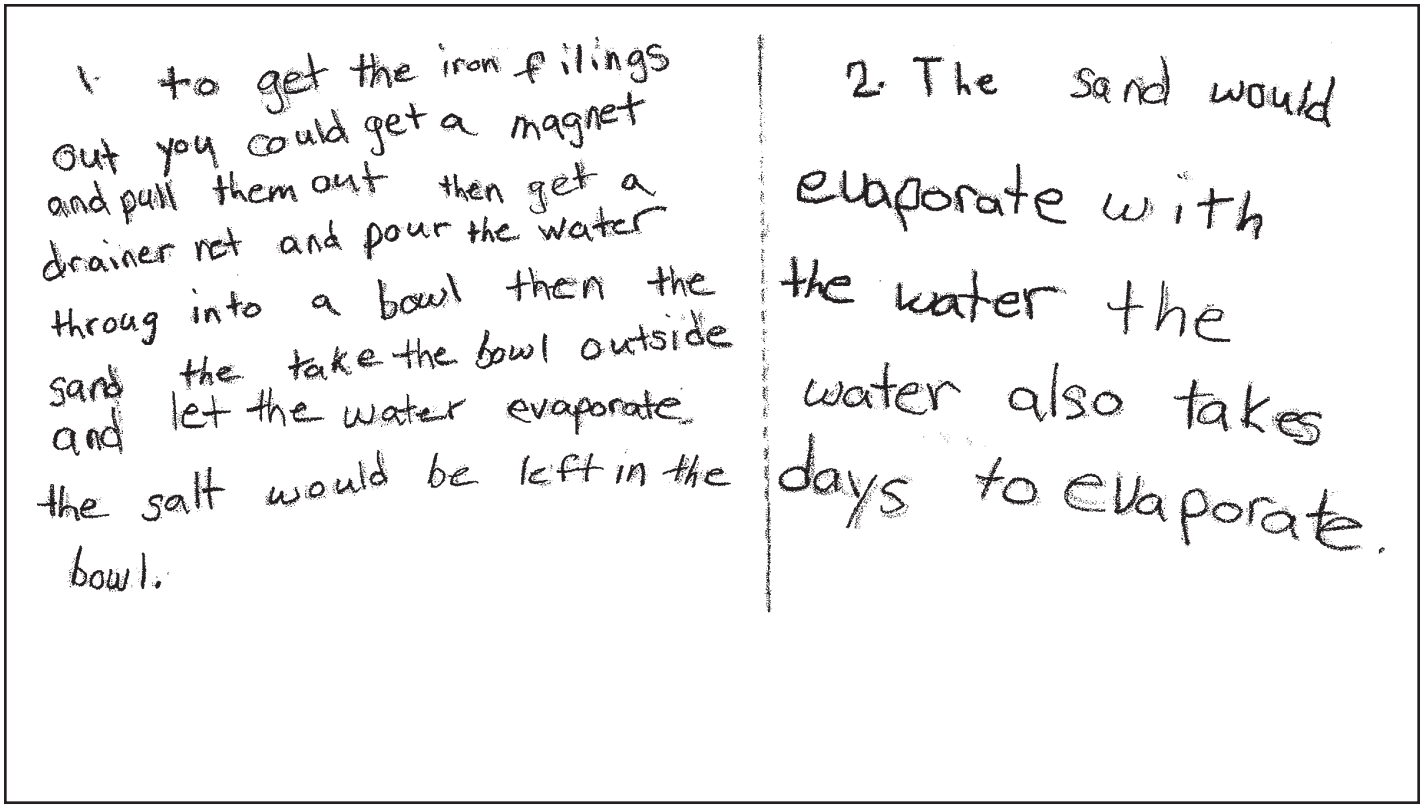
Part 2, 1 pt:

Describes that if iron filings or sand remain in the water during evaporation, salt could adhere to them, making separation difficult. 1

. . . the salt and the sand would be mixed together and there would be no way to get the separated.

The student recognized that if the sand and iron filings were not extracted before the salt, the substances would remain mixed and difficult to separate.

TOTAL POINTS **4**

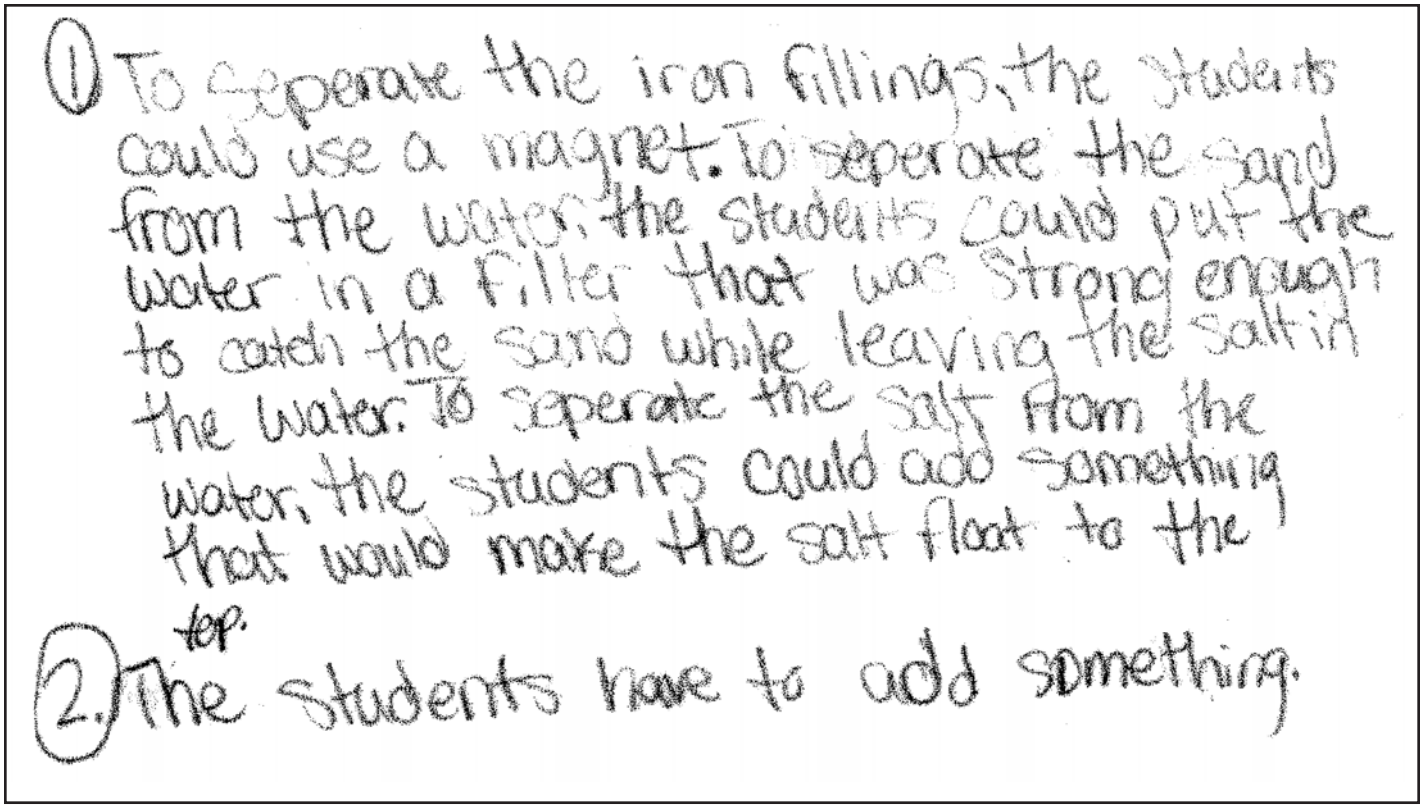


SCORE: 3 **Points**

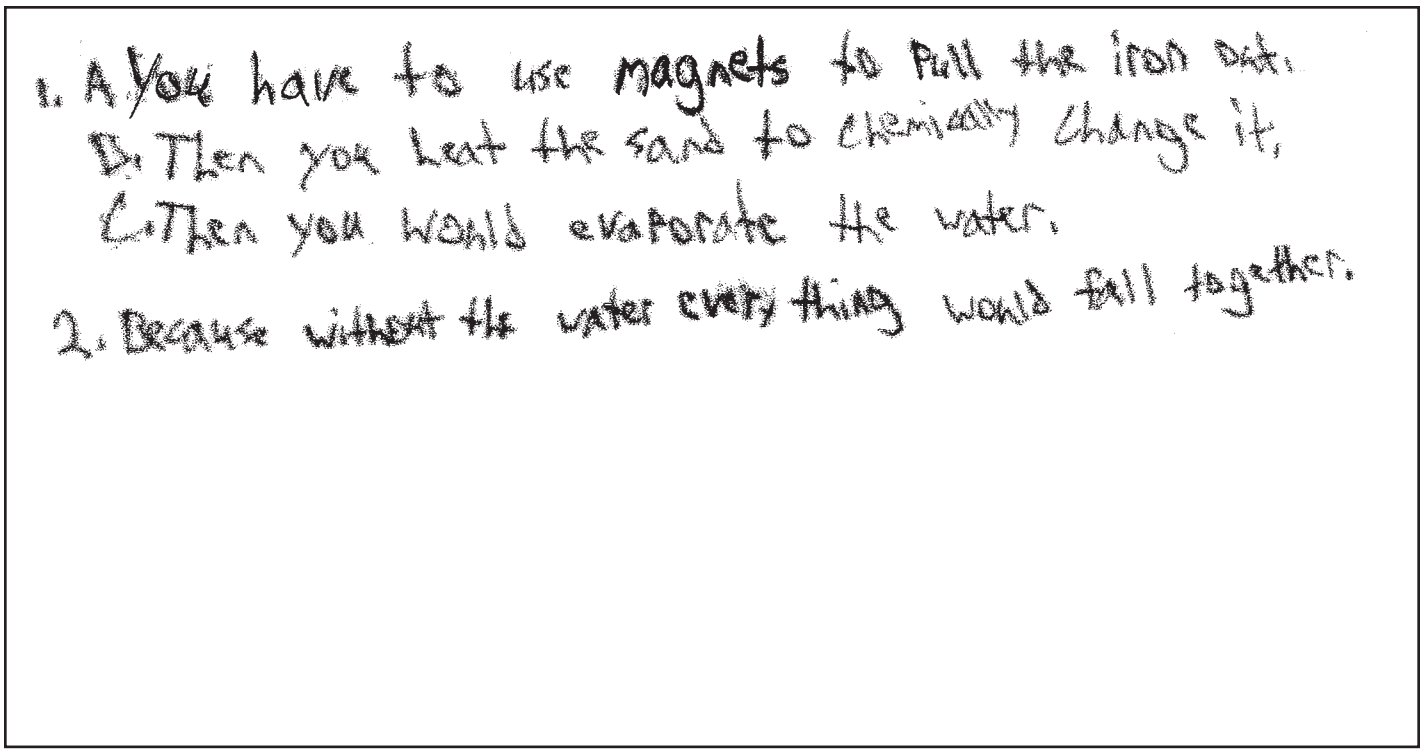
Part 1, 3 pts:
Describes separating the iron filings with a magnet. 1
To get the iron filings out you could get a magnet and pull them out
Describes separating the sand with a filter. 1
. . . get a drainer net and pour the water throug into a bowl then the sand . . .
Describes separating the salt by evaporating the water. 1
. . . take a bowl outside and let the water evaporate. the salt would be left . . .

Part 2, 1 pt:
Incorrect, incomplete, or missing response describing that if iron filings or sand remain in the water during evaporation, salt could adhere to them, making separation difficult. 0
The sand would evaporate with the water . . .
This is an incorrect response as the sand would not evaporate with the water.

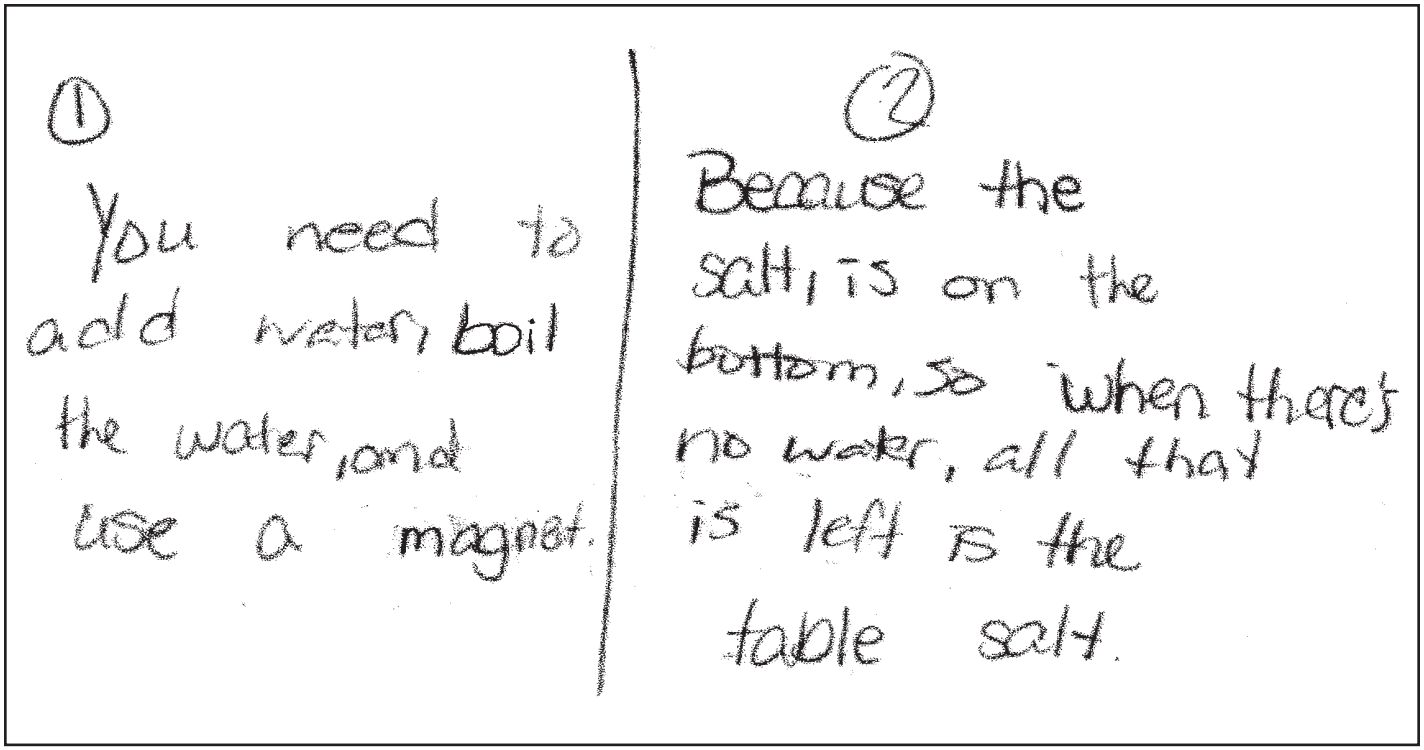
TOTAL POINTS **3**



SCORE: 2	**Points**
Part 1, 3 pts:	
Describes separating the iron filings with a magnet. *To separate the iron filings, the students could use a magnet.*	1
Describes separating the sand with a filter. *To separate the sand from the water, the students could put the water in a filter . . . to catch the sand . . .*	1
Incorrect, incomplete, or missing the description of separating the salt. *To seperate the salt from the water, the students could add something that would make the salt float . . .* Salt does not float in water . . . no credit.	0
Part 2, 1 pt:	
Incorrect, incomplete, or missing response describing that if iron filings or sand remain in the water during evaporation, salt could adhere to them, making separation difficult. *The students have to add something.* There is no substance the students could add to make separation of the 3 materials possible . . . no credit.	0
TOTAL POINTS	**2**



SCORE: 1	**Points**
Part 1, 3 pts:	
Describes separating the iron filings with a magnet. *You have to use magnets to pull the iron out.*	1
Incorrect, incomplete, or missing the description of separating the sand. *Then you heat the sand to chemically change it.* This is an incorrect response as sand cannot be separated from water by heating the sand to change its chemistry.	0
Incorrect, incomplete, or missing the description of separating the salt. *Then you would evaporate the water.* This is an incomplete response, as the student didn't mention collecting the salt after evaporating the water.	0
Part 2, 1 pt:	
Incorrect, incomplete, or missing response describing that if iron filings or sand remain in the water during evaporation, salt could adhere to them, making separation difficult. *Because without the water everything would fall together.* This is an incorrect and incomplete description of the difficulty separating the sand, iron filings, and salt from each other if the water was evaporated first instead of last.	0
TOTAL POINTS	**1**



SCORE: 0	**Points**
Part 1, 3 pts:	
Incorrect, incomplete, or missing the description of separating the iron filings. *You need to add water, boil the water, and use a magnet* is an incomplete description for separating the 3 materials.	0
Incorrect, incomplete, or missing the description of separating the sand. *You need to add water, boil the water, and use a magnet* is an incomplete description for separating the 3 materials.	0
Incorrect, incomplete, or missing the description of separating the salt. *You need to add water, boil the water, and use a magnet.* This is an incomplete description for separating the 3 materials.	0
Part 2, 1 pt:	
Incorrect, incomplete, or missing response describing that if iron filings or sand remain in the water during evaporation, salt could adhere to them, making separation difficult. *. . . the salt is on the bottom, so when there's no water, all that is left is the table salt.* The is an incorrect description of the difficulty separating the sand, iron filings, and salt from each other if the water was evaporated first instead of last. Sand and iron filings would also be left.	0
TOTAL POINTS	**0**

Arkansas Comprehensive Testing, Assessment, and Accountability Program