

ACTAAP

Arkansas Comprehensive Testing, Assessment, and Accountability Program

Teacher Handbook

Arkansas Augmented
Benchmark Examination

**APRIL 2010
ADMINISTRATION**

GRADE

7

Arkansas Department of Education

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Teacher Handbook—2010 Augmented Benchmark Grade 7

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Introduction—2010 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—2010 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—2010 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.

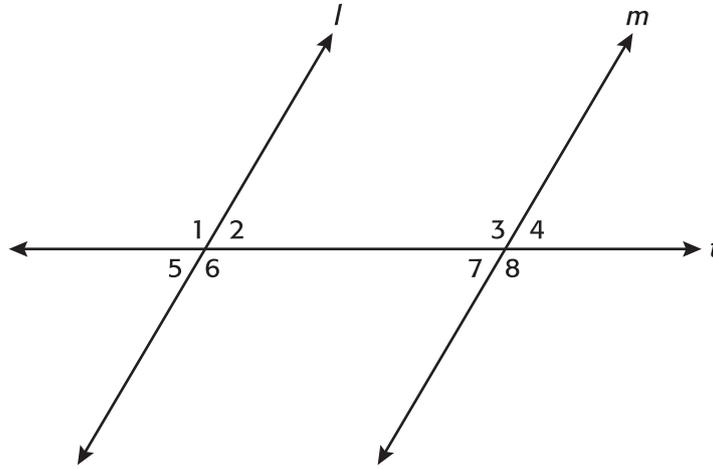
This Teacher Handbook includes the Mathematics open-response items, the Reading passages with their open-response items, and the Science open-response items as they appeared in this year’s test. The specific scoring rubric for each item and annotated response for each score point of the rubric follow. 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

Mathematics Item A–2010 Augmented Benchmark Grade 7

A

Angles 1 through 8 in the diagram below are made by parallel lines l and m cut by transversal t .



1. List each pair of vertical angles in the diagram above.
2. List each pair of alternate interior angles in the diagram above.
3. What is one pair of supplementary angles in the diagram above? Explain why the pair of angles you chose are supplementary.

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

MATHEMATICS ITEM A SCORING RUBRIC–2010 AUGMENTED BENCHMARK GRADE 7

SCORE	DESCRIPTION
4	The student earns 6 points. The response contains no incorrect work.
3	The student earns 4–5 points.
2	The student earns 3 points, or the student earns 2 points if points are earned in different parts.
1	The student earns 2 points if points are earned in the same part, or 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.

Mathematics Item A Solution and Scoring—2010 Augmented Benchmark Grade 7

Solution and Scoring

Part	Points
1	<p>2 Points Possible</p> <p>2 points: All 4 pairs of vertical angles are given: $\angle 1$ and $\angle 6$; $\angle 2$ and $\angle 5$; $\angle 3$ and $\angle 8$; $\angle 4$ and $\angle 7$ OR 1, 6 and 2, 5 and 3, 8 and 4, 7, or equivalent.</p> <p>1 point: 1 or 2 pairs are incorrect or missing. OR More than the 4 correct pairs are given.</p>
2	<p>2 Points Possible</p> <p>2 points: Both pairs of alternate interior angles are given: $\angle 2$ and $\angle 7$; $\angle 3$ and $\angle 6$ OR 2, 7 and 3, 6, or equivalent.</p> <p>1 point: 1 pair is incorrect or missing. OR More than the 2 correct pairs are given.</p>
3	<p>2 Points Possible</p> <p>2 points: One pair of supplementary angles is given with a complete and correct explanation of why they are supplementary; any of the following pairs of angles: $\angle 1$ and $\angle 2$; $\angle 1$ and $\angle 5$; $\angle 1$ and $\angle 7$; $\angle 1$ and $\angle 4$; $\angle 6$ and $\angle 2$; $\angle 6$ and $\angle 5$; $\angle 6$ and $\angle 7$; $\angle 6$ and $\angle 4$; $\angle 3$ and $\angle 2$; $\angle 3$ and $\angle 5$; $\angle 3$ and $\angle 7$; $\angle 3$ and $\angle 4$; $\angle 8$ and $\angle 2$; $\angle 8$ and $\angle 5$; $\angle 8$ and $\angle 7$; $\angle 8$ and $\angle 4$. OR 1 and 2; 1 and 5; 1 and 7; 1 and 4; 6 and 2; 6 and 5; 6 and 7; 6 and 4; 3 and 2; 3 and 5; 3 and 7; 3 and 4; 8 and 2; 8 and 5; 8 and 7; 8 and 4; or equivalent. AND <i>t</i> (<i>l</i> or <i>m</i>) a line which is a straight line and 180°. Combining the angles given makes that line, and then combining the angles is 180°, which makes the supplementary angles, or equivalent.</p> <p>1 point: One pair of supplementary angles is given but minimal, no, or incorrect explanation is given. OR Correct explanation is given, but no or incorrect pair of supplementary angles are given.</p>

**Mathematics Item A Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

①. The pairs of vertical angles in this diagram are;
1 and 6
2 and 5
3 and 8
4 and 7

②. The pairs of alternate interior angles in the diagram are;
2 and 7
3 and 6

③. One pair of supplementary angles in this diagram are 1 and 2. They are supplementary because when you add each of their angle measurements together you get 180° angle

SCORE: 4

Points

Part 1, 2 pts:

All 4 pairs of vertical angles are given	<i>1 and 6</i>	2
	<i>2 and 5</i>	
	<i>3 and 8</i>	
	<i>4 and 7</i>	

Part 2, 2 pts:

Both pairs of alternate interior angles are given	<i>2 and 7</i>	2
	<i>3 and 6</i>	

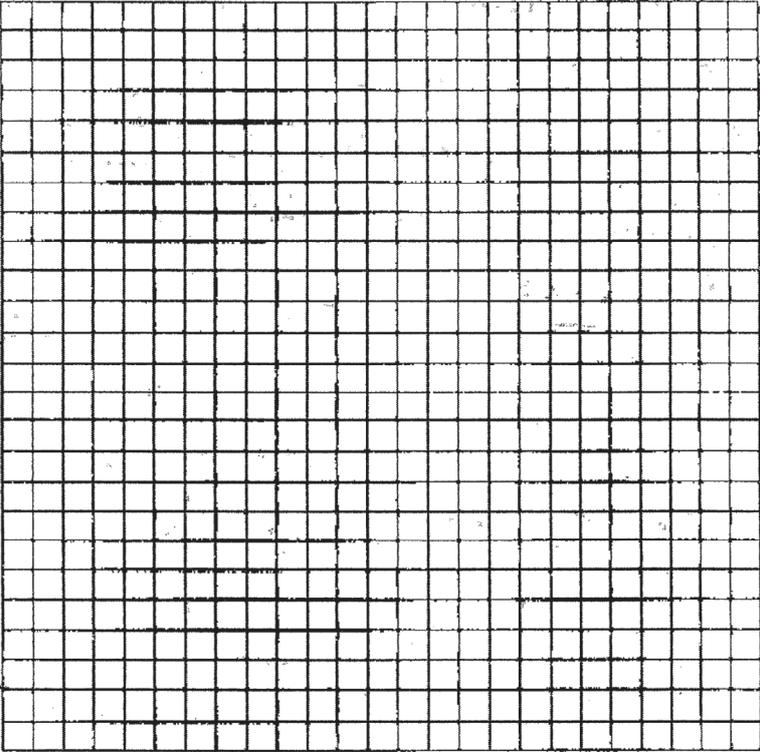
Part 3, 2 pts:

One pair of supplementary angles is given	<i>1 and 2</i>	1
Correct explanation of why they are supplementary	<i>They are supplementary because when you add each of their angle measurements together you get 180° angle</i>	1

TOTAL POINTS

6

**Mathematics Item A Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

<p>1. </p> <p>Vertical angles =</p> <p>$\angle 1, 6$ $\angle 3, 8$</p> <p>$\angle 2, 5$ $\angle 4, 7$</p>	
<p>2. Alternate interior Angles =</p> <p>$\angle 1, 8$ $\angle 2, 7$</p> <p>$\angle 5, 4$ $\angle 6, 3$</p>	
<p>3. $\angle 3$ and $\angle 4$ are supplementary because they equal 180° or a straight line.</p>	

SCORE: 3

Points

Part 1, 2 pts:

All 4 pairs of vertical angles are given	$\angle 1, 6$ $\angle 3, 8$ $\angle 2, 5$ $\angle 4, 7$	2
--	--	---

Part 2, 2 pts:

More than the 2 correct pairs of alternate interior angles are given	$\angle 1, 8$ $\angle 2, 7$ $\angle 5, 4$ $\angle 6, 3$	1
--	--	---

Part 3, 2 pts:

One pair of supplementary angles is given	$\angle 3$ and $\angle 4$	1
Correct explanation of why they are supplementary	because they equal 180° or a straight line.	1

TOTAL POINTS

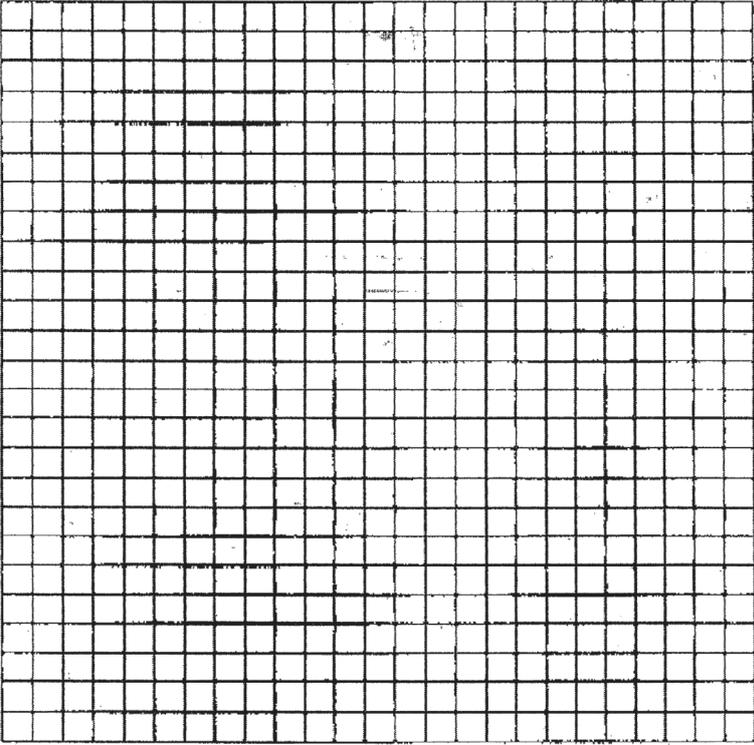
5

**Mathematics Item A Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

① 1+6
5+2
6+8
4+7

② 5+8
2+3
7+6
4+1

③ 7+3
These angles are
supplimentary
because if you add
the measures of
their angles together,
they will equal 180.
A strait line.



SCORE: 2

Points

Part 1, 2 pts:

One pair of vertical angles is incorrect	1 & 6 5 & 2 6 & 8 4 & 7	1
Note: 6 & 8 is incorrect.		

Part 2, 2 pts:

No pairs of alternate interior angles are given	5 & 8 2 & 3 7 & 6 4 & 1	0
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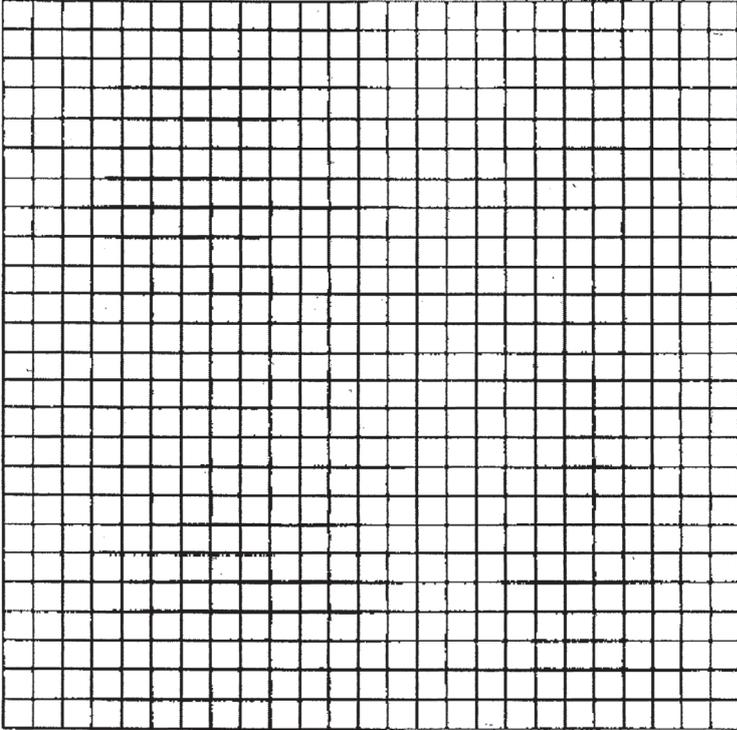
Part 3, 2 pts:

One pair of supplementary angles is given	7 & 3	1
Correct explanation of why they are supplementary	<i>because if you add the measures of their angles together, they will equal 180. A strait line.</i>	1

TOTAL POINTS

3

**Mathematics Item A Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

<p>1. angles 1, 6, 3, and 8</p> <p>2. angles 2, 5, 4, 7</p> <p>3. angles 4 and 2 because both of them are congruent angels.</p>	
---	--

SCORE: 1

Points

Part 1, 2 pts:

Two pairs of vertical angles are missing	<i>angles 1, 6, 3, and 8</i>	1
	<i>Note: 2, 5 and 4, 7 are missing</i>	

Part 2, 2 pts:

No pairs of alternate interior angles are given	<i>angles 2, 5, 4, 7</i>	0
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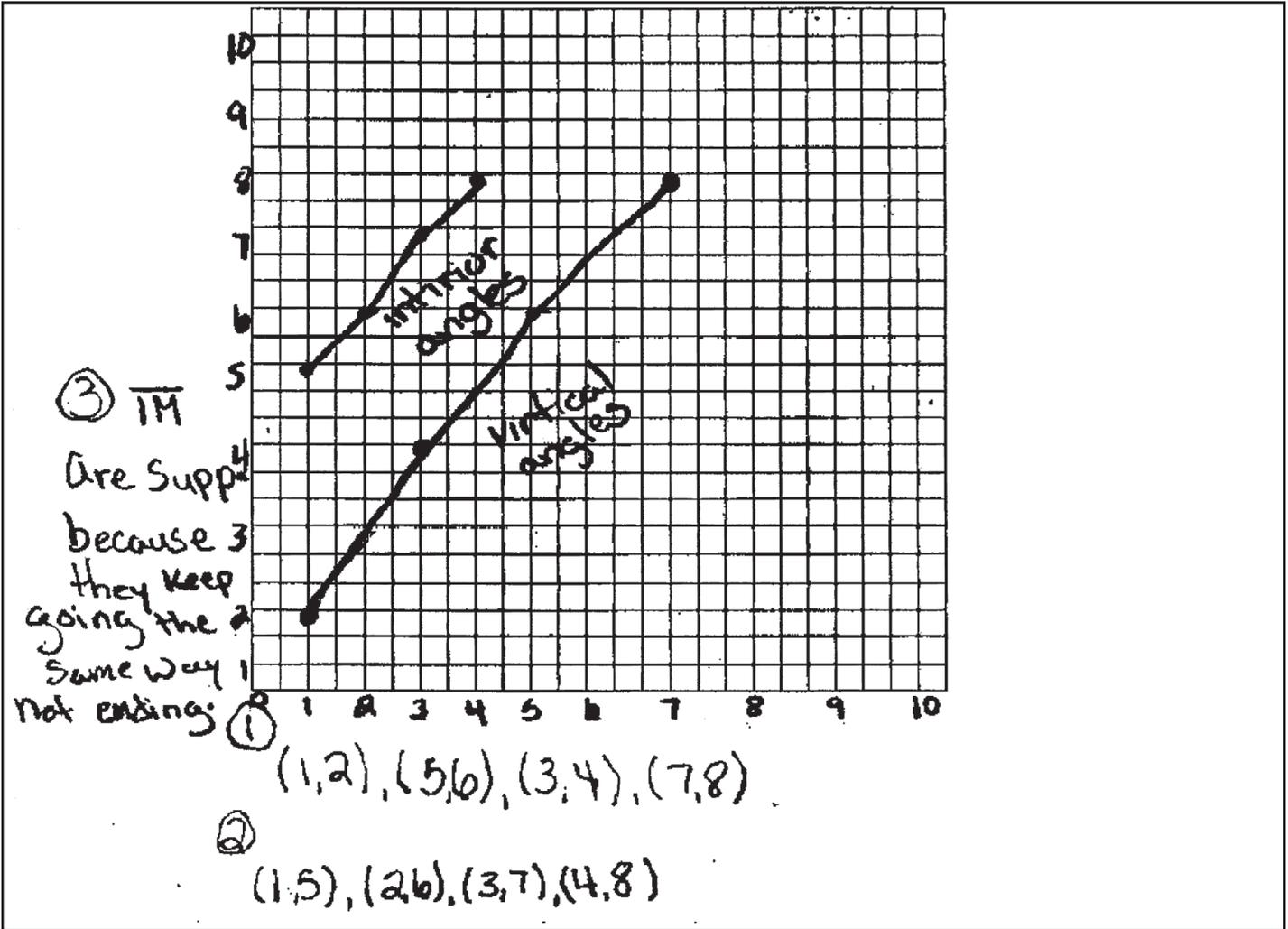
Part 3, 2 pts:

No pair of supplementary angles is given	<i>angles 4 and 2</i>	0
Incorrect explanation of why they are supplementary	<i>because both of them are congruent angels.</i>	0

TOTAL POINTS

1

**Mathematics Item A Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**



SCORE: 0

Points

Part 1, 2 pts:

No correct pairs of vertical angles are given (1,2), (5,6), (3,4), (7,8)

0

Part 2, 2 pts:

No pairs of alternate interior angles are given (1,5), (2,6), (3,7), (4,8)

0

Part 3, 2 pts:

No pair of supplementary angles is given \overline{TM}

0

Incorrect explanation of why they are supplementary because they keep going the same way not ending.

0

TOTAL POINTS

0

Mathematics Item B–2010 Augmented Benchmark Grade 7

B

1. Sketch a rectangle that has a width of 61 millimeters and a length of $1\frac{5}{16}$ inches.

Be sure to label the width and length of your rectangle.

2. Sketch a square that has side lengths of 3.2 centimeters.

BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

MATHEMATICS ITEM B SCORING RUBRIC–2010 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.

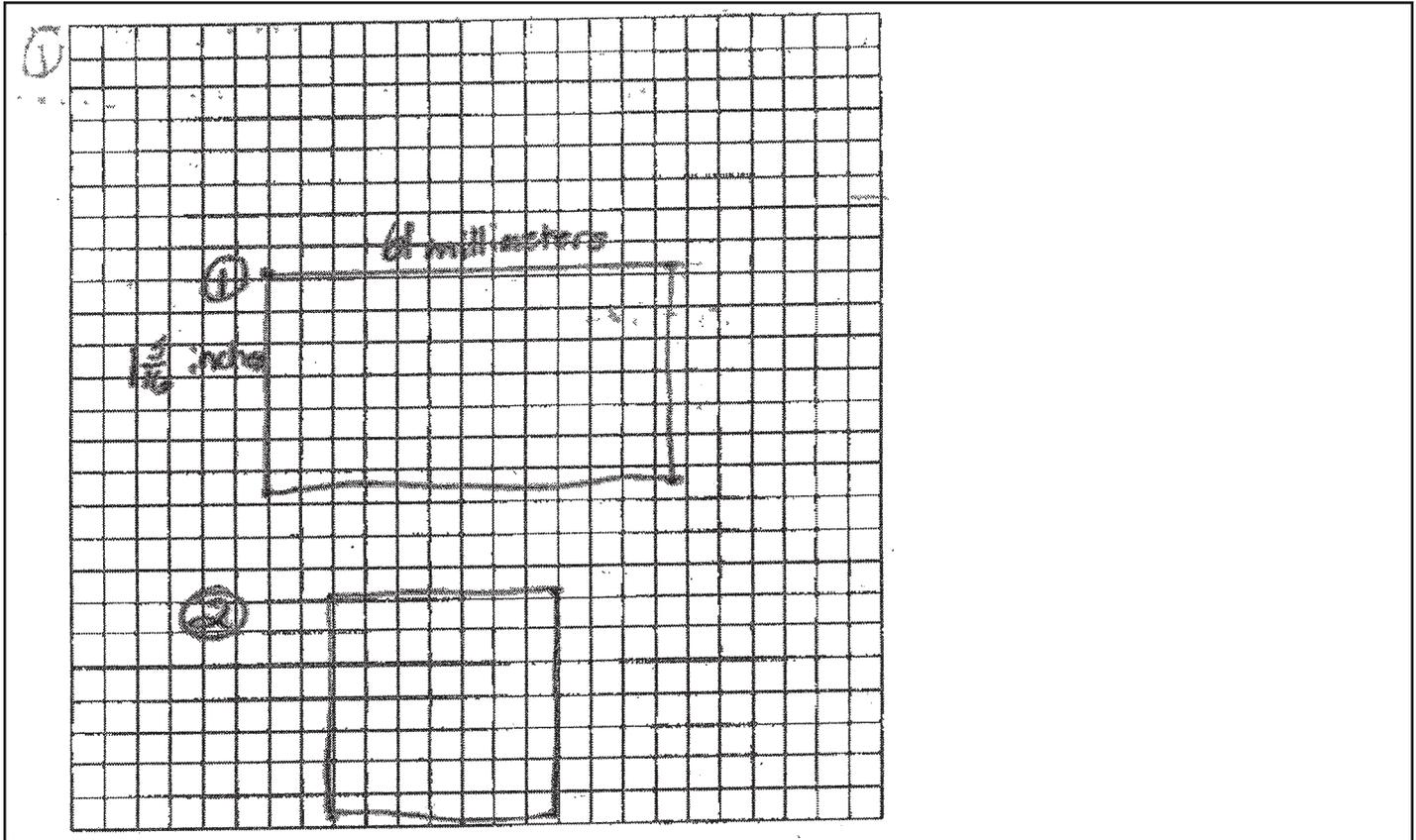
Mathematics Item B Solution and Scoring—2010 Augmented Benchmark Grade 7

Solution and Scoring

Part	Points
1	2 Points Possible 2 points: A correct drawing of a rectangle with the long side labeled 61 mm (or width) and the short side labeled $1\frac{5}{16}$ in. (or length), or equivalent. OR 1 point: A correct drawing of a rectangle with a missing or incorrect label(s). This includes correct conversions of inch to millimeter or millimeter to inch labels. OR 1 point: An incorrect drawing of a rectangle and either the length or the width is correctly measured and labeled.
2	2 Points Possible 2 points: A correct drawing of a 3.2 cm square; labels are not required.

Note: All measurement tolerances are ± 2 mm or $\frac{1}{16}$ inch.

**Mathematics Item B Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**



SCORE: 4

Points

Part 1, 2 pts:

Correct drawing and labels

Correct drawing of a rectangle with correct width label, *61 millimeters*, and length label, $1 \frac{5}{16}$ inches.

2

Part 2, 2 pts:

Correct drawing

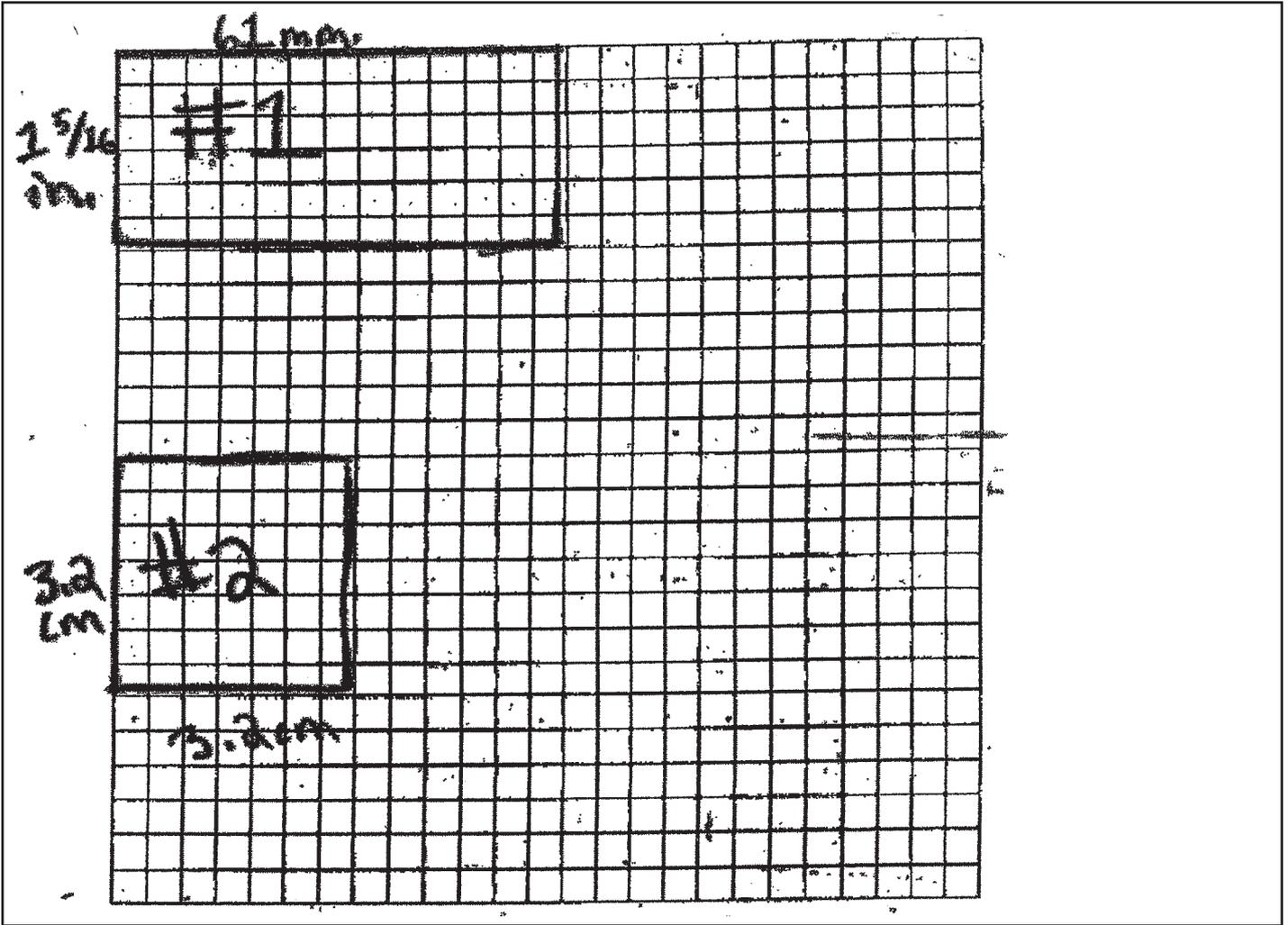
Correct drawing of a 3.2 cm square.

2

TOTAL POINTS

4

**Mathematics Item B Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**



SCORE: 3

Points

Part 1, 2 pts:

One correct side with label	Width of rectangle, <i>61 mm</i> , is correctly measured and labeled. Length is incorrect.	1
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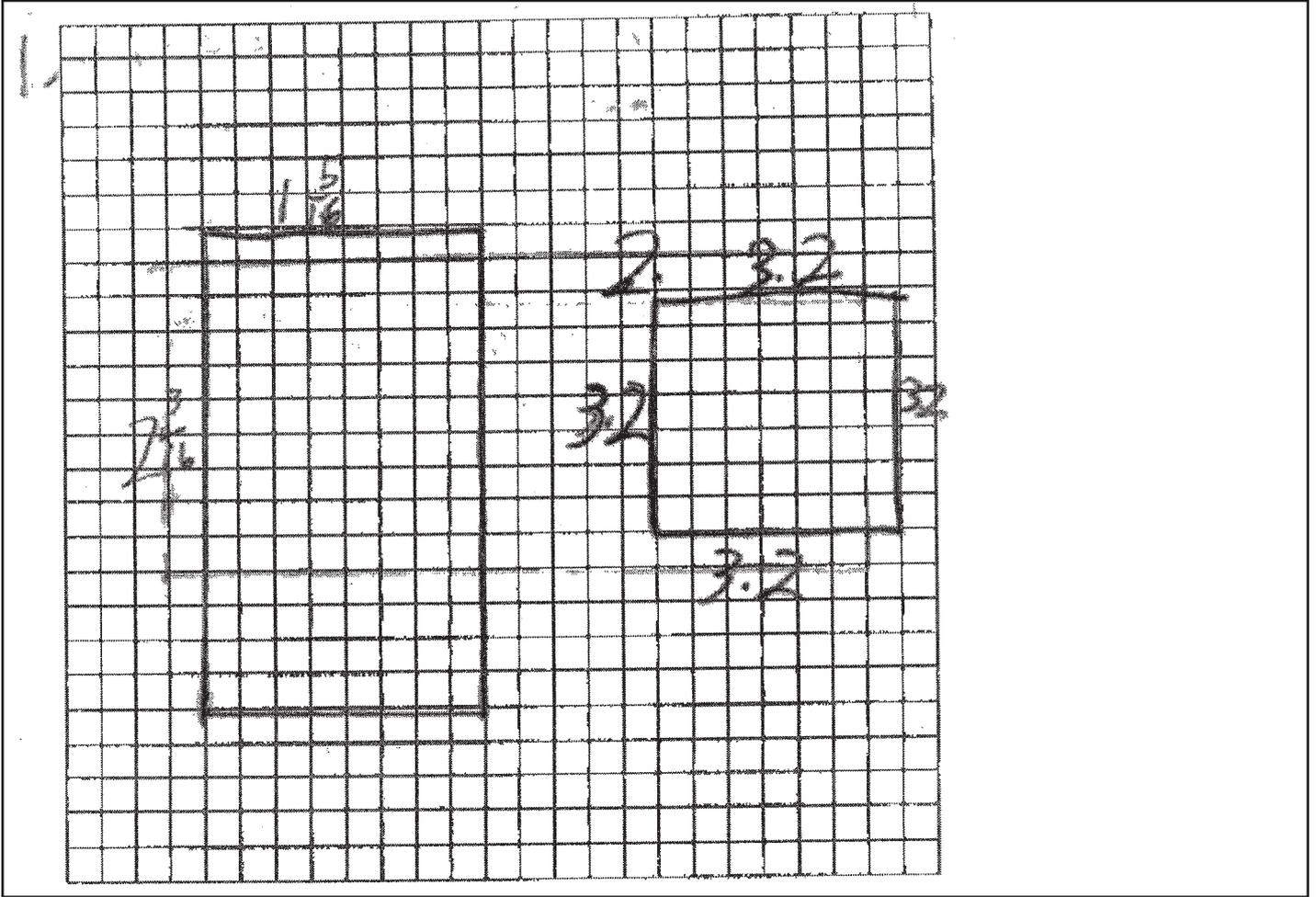
Part 2, 2 pts:

Correct drawing	Correct drawing of a 3.2 cm square.	2
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TOTAL POINTS

3

**Mathematics Item B Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**



SCORE: 2

Points

Part 1, 2 pts:

Incorrect drawing

Both width and length measures are incorrect. Label for width, $2\frac{3}{16}$, is incorrect and neither label includes units, mm or inches.

0

Part 2, 2 pts:

Correct drawing

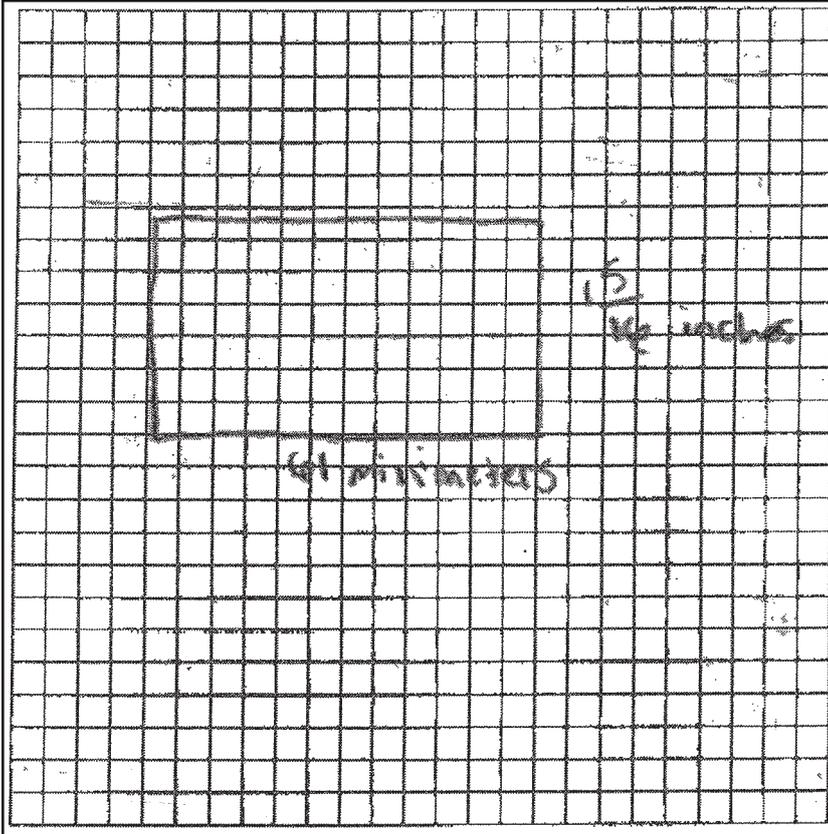
Correct drawing of a 3.2 cm square.
Note: Label is not required so missing units, cm, will not affect score.

2

TOTAL POINTS

2

**Mathematics Item B Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**



SCORE: 1

Points

Part 1, 2 pts:

One correct side with label	Length of rectangle, $1 \frac{5}{16}$ inches, is correctly measured and labeled. Width is incorrect.	1
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Part 2, 2 pts:

Missing drawing	Square is not drawn.	0
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TOTAL POINTS

1

**Mathematics Item B Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

1. the rectangle should be a lot bigger if you are going to use it for something.

2. the square is going to be bigger than I think it would be but if you put

3. $3.2 \times 10 = 32$
Because if you take one centimeter you get 10 millimeters and when you put the ~~together~~ you should get 32cm.

SCORE: 0

Points

Part 1, 2 pts:

Incorrect drawing	Incorrect drawing of a rectangle; both width and length are incorrect. <u>Note:</u> Label, <i>61mm</i> , inside the rectangle is area measurement notation.	0
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Part 2, 2 pts:

Incorrect drawing	Incorrect drawing of a 3.2 cm square.	0
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TOTAL POINTS

0

READING RESPONSES

Read the following passage about a man who works with gorillas. Then answer multiple-choice questions 1 through 8 and open-response question A.

Nina the Gorilla

by John V. Eickhoff

Nina the gorilla was seven years old when I met her and her companions, Kiki and one other male. When I began working with them, I was doing a research project. My main job was to write down what each gorilla did at a particular time.

Nina seemed to like me. When I stood outside the cage window, she ambled over to sit beside me. She looked over my shoulder as I wrote. She followed me around.

3 The research I did helped me understand the kinds of behavior that are acceptable in a gorilla troop. Gorillas behave differently toward one another, depending on whether the other animal is higher or lower in rank. The troop is led by the highest-ranking male, who is respected by the other gorillas. In the wild, he is responsible for the safety and well-being of the troop.

Leader

Kiki was leader of the gorilla troop that lived at the Woodland Park Zoo in Seattle, Washington. Almost from the beginning, he resented my presence.

When he noticed me, he stiffened his arms and legs to make himself taller. He lifted his head and pressed his lips tightly together. He then strutted back and forth, his hair standing up. All of these behaviors are signals of aggression in gorillas.

If this didn't drive me away, he charged and hit the heavy glass that separated us. That is about as aggressive as a gorilla ever gets. This behavior is the same as that of a wild gorilla who is challenged by the actions of another male. Kiki seemed to think I was challenging his position, probably because I am a big man and because of the way Nina reacted to me.

I tried to ease the tension between us by saying, in gorilla body language, "I recognize your dominance over me." I did this by avoiding eye contact, turning my face away when he looked at me, and trying to make myself smaller when he approached.

Gorilla Language

Gorillas communicate using body posture, facial expressions, and gestures. They can't

Reading Passage A—2010 Augmented Benchmark Grade 7

speak as we do, partly because their lips, tongues, and vocal cords cannot make many of the sounds of human speech.

They can make some sounds, about twenty, each of which has a different meaning. For example, a short grunt means, “I am content.” But most of their communication is not by sounds.

By watching the gorillas closely and spending a lot of time “talking” to them, I found we could communicate on a simple level. I could give them the idea of what I wanted them to do, such as take their vitamin pills or move from one cage to another.

I learned to tell when they were feeling irritable, content, happy, sad or playful. The gorillas learned that by gesturing they could ask to go outside or tell me that they wanted a certain food.

It was a crude way to communicate, but it was all we needed.

Big News

After working at the zoo for about six years, I moved to another city but continued to visit. One day, I read in the newspaper that Nina had given birth to her fourth baby. This was exciting news because gorilla births in zoos are fairly rare.

I was anxious to see Nina and her baby, but it was several months before I got the chance. It had been nearly a year since I had visited the gorillas. I wondered if they would remember me after such a long time.

As I entered the viewing area, I saw the gorillas foraging for food in their large, brushy yard. Nina was eating about a hundred feet away. As I approached the glass that separated us, she glanced in my direction and immediately froze in mid-chew.

She tilted her head as if she wanted to confirm that I was really there. She then made the gesture that we had used as our greeting signal—a jerk of her head while pursing her lips, as though throwing a kiss.

She was showing me she recognized me. I was surprised she still remembered me, but a bigger surprise was yet to come.

Nina’s Baby

I returned her greeting, and she immediately began searching through the tall grass nearby. She soon found what she was looking for.

Reaching behind a log, she picked up a small bundle of black fur. Placing it on her back, where it clung tightly, she began walking toward me. She glanced up occasionally to make sure I was still there. She smacked her lips in excitement.

She stopped next to me and sat down. Reaching behind her, she removed her baby from her back and held it toward me. Then she cradled it in her arms, patting it gently on the head.

She looked at me questioningly and I clapped my hands in approval. The questioning look disappeared, and she

Reading Passage A—2010 Augmented Benchmark Grade 7

seemed content. Through the glass I could hear a grunt of satisfaction.

She then began to play with the baby, holding up its hands and feet and pointing to its fingers and toes. It was as if she were proudly showing me that it had the right parts.

Now, each time I see any kind of ape portrayed as a monster, I remember Nina gently showing me her baby's fingers and toes.



Nina munches on spinach while Zuri sleeps.

"Nina the Gorilla" by John V. Eickhoff. Images by Carol Beach, Woodland Park Zoo Educational Department. Copyright © 1998 by Highlights for Children, Inc., Columbus, Ohio.

Reading Item A–2010 Augmented Benchmark Grade 7

A

Use at least **four** examples from the passage to show how the author’s word choice portrays Kiki as an aggressive male gorilla.

READING ITEM A SCORING RUBRIC–2010 AUGMENTED BENCHMARK GRADE 7

SCORE	DESCRIPTION
4	The response <i>shows</i> how the author’s word choice portrays Kiki as an aggressive gorilla by providing <i>at least four</i> accurate and relevant examples from the passage.
3	The response <i>shows</i> how the author’s word choice portrays Kiki as an aggressive gorilla by providing three accurate and relevant examples from the passage.
2	The response <i>shows</i> how the author’s word choice portrays Kiki as an aggressive gorilla by providing two accurate and relevant examples from the passage.
1	The response <i>shows</i> how the author’s word choice portrays Kiki as an aggressive gorilla by providing one accurate and relevant example from the passage. OR The response demonstrates minimal understanding of the question.
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” assigned for the item.

Reading Item A Sample Responses and Annotations—2010 Augmented Benchmark Grade 7

Score Point: 4

The response shows how the author's word choice portrays Kiki as an aggressive male gorilla by providing **eight** accurate and relevant examples from the passage. 1. He resented my presence. 2. Stiffened his arms and legs to make himself taller. 3. Pressed his lips together. 4. Strutted back and forth. 5. Hair standing up. 6. Charged and hit the heavy glass that separated us. 7. Seemed to think I was challenging him. 8. I tried to ease tension. . . . "I recognize your dominance over me." Credit can be given for either "stiffened his arms and legs" or "make himself taller," but together these ideas only receive credit once. Although the student writes "lifted his head and pressed his lips together," credit is given only for "pressed his lips together" because "lifted his head" alone does not show aggression. Credit is given to "challenging him" because this indicates a general aggressive attitude on the part of Kiki toward the author. The actions of the author, "ease tension" or "recognize your dominance over me," receive credit because the word choice shows Kiki's aggressive stance toward the author.

The author's word choice portrays Kiki as an aggressive male gorilla.

Sentence/Word	How It Portrays Kiki As Aggressive
1. Kiki was <u>leader</u> of a gorilla troop. Almost from the beginning, he <u>resented</u> my presence.	Usually, <u>resented</u> means "doesn't like," and <u>resentment</u> is likely to result in aggression. Kiki was a <u>leader</u> , and only male gorillas can be <u>troop</u> leaders.
2. He <u>stiffened</u> his arms and legs to make himself taller. He <u>lifted</u> his head and <u>pressed</u> his lips together. He <u>strutted</u> back and forth, hair standing up.	He <u>stiffened</u> , ^{which usually means} bracing for a fight or being angry. Kiki <u>lifted</u> his head and <u>strutted</u> , which means walking back and forth with pride and <u>dominance</u>
3. If this didn't drive me away, he <u>charged</u> and <u>hit</u> the heavy glass that separated us.	Kiki's aggression is shown with the words, ' <u>charged</u> ' and ' <u>hit</u> '. This means that Kiki rammed the glass, aiming to hurt the author.
4. Kiki seemed to think I was <u>challenging</u> him, probably because I'm a big one and that Nina (another gorilla) likes me. I tried to <u>ease</u> tension by <u>communicating</u> with body gestures. I recognize your <u>dominance</u> over me.	Further aggression is hinted at when the author realizes that Kiki thinks he's <u>challenging</u> him. To ease the aggression, the author submits to Kiki's <u>dominance</u> , which means that Kiki wants to be looked at as <u>the</u> author's leader.

Reading Item A Sample Responses and Annotations—2010 Augmented Benchmark Grade 7

Score Point: 3

The response shows how the author's word choice portrays Kiki as an aggressive male gorilla by providing **three** accurate and relevant examples from the passage. 1. *Stiffened his arms and legs to make himself taller*. 2. *Pressed his lips tightly together*. 3. *Strutted back and forth*. No credit is given to "lifted his head" because it does not clearly show aggression.

The gorilla Kiki didn't seem to like the author to much. Here are four examples Kiki shows to the author to prove he doesn't like him.

① He stiffened his arms and legs to make himself taller.

② He lifted his head

③ Pressed his lips tightly together.

④ He strutted back and forth.

The author says in the text: All of these behaviors are signs of aggression in gorillas.

Reading Item A Sample Responses and Annotations—2010 Augmented Benchmark Grade 7

Score Point: 2

The response shows how the author's word choice portrays Kiki as an aggressive male gorilla by providing **two** accurate and relevant examples from the passage. 1. *Stiffened his arms and legs to look taller.* 2. *Charged and hit the heavy glass that separated us.* No credit is given for "facial expressions" because it does not state a specific expression Kiki displayed, such as "pressing his lips together."

The first thing the author does to portray Kiki as an aggressive male is he described how the gorilla stiffened his arms and legs to look taller. The next thing the author does is describe his facial expressions. Then he said "All of these behaviors are signals of aggression in gorillas. Also another thing he says is "If this didn't drive me crazy, he charged and hit the heavy glass that separated us. Finally the last author says "That is about as aggressive gorillas ever get?"

Reading Item A Sample Responses and Annotations—2010 Augmented Benchmark Grade 7

Score Point: 1

The response shows how the author's word choice portrays Kiki as an aggressive male gorilla by providing **one** accurate and relevant example from the passage. 1. *Stiffened there arms and legs to make them look taller.* The author's actions, "avoiding eye contact," help to explain how the **author** eased the tension and showed Kiki's dominance. However, these actions would not receive credit because they do not contain word choices that show **Kiki's** aggressive behavior.

Use at least 4 examples the 4 examples
from the passage

1) Kiki as an aggressive male gorilla. behave differently toward one another depending on whether the other ani mal.

- The troop is led by the highest rank male, who is respected by other gorillas.
- stiffened there arms and legs to make them look taller.
- by avoiding eye contact.

Score Point: 0

The response is irrelevant and shows no evidence that the student understands the task. The response refers to gorilla communication rather than Kiki's aggressive behavior. Also, the behaviors provided, although attributed to Kiki, are actually examples of Nina's behavior.

Kiki loves communicating with humans that he is close to. he has good memory. He's very playful and like to play with his baby. He is very adventurous person. He likes to use sign language. He should be he would be a very interesting gorilla.

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

Wild Things

by Polly Sparling

Planning a hike? Pack these important tips along with your trail mix.

Hiking in parks, forests, and wilderness areas is a favorite activity in the United States. More than 81 million people, or more than one-third of the country's population, hit the trail in 2004, according to the National Survey on Recreation and the Environment.

Spending a day in the woods is fun, but it can also be dangerous. Here are some tips to keep you safe on your next outdoor adventure.

Make a Plan

Safety on the trail starts before you walk out the door. *Current Health* asked the sixth-grade members of Girl Scout Junior Troop 132 in Dutchess County, N.Y., to explain how they get ready for a day hike. Their most important tip? "Take a partner, probably an adult, with you," advises Stephanie. Hiking with others is safer than venturing into the woods alone, and kids should always have a buddy along for the adventure.

Even if you have a partner, "Tell someone where you're going, when you're leaving, and when you think you'll be back," adds Nicole.

If you haven't hiked in the area before, take a compass (be sure you know how to use it), a map and a guidebook.

Dress for Success

Be sure to check the forecast so you'll know what type of weather to expect. Wearing the right clothing can make the difference between an enjoyable day and a miserable one. "Dress for the environment and the weather that you might have to deal with if you don't make it home at night," says Doug Ritter, the publisher and editor of *Equipped to Survive* (www.equipped.org), a Web site that evaluates hiking gear. It's best to "dress like an onion": Wear several layers of clothing that you can peel off or put on depending on how warm or cold you feel.

"I wear long socks, with my pants tucked inside, so I don't get tick bites," says Nicole. (Ticks can carry the bacteria that cause Lyme disease and other illnesses.)

Your Crucial Camping Checklist

Be prepared for an emergency. Carrying a back pack with essential supplies could help save your life. "Everybody expects to go out for a short hike of one or two hours," says Ritter. "But if something unexpected

Reading Passage B—2010 Augmented Benchmark Grade 7

happens, you should be prepared for the worst.” Here’s a list of things no hiker should be without.

- Adequate food, sunscreen and bug spray, and enough water to prevent dehydration.
- A large plastic trash bag. You can use it as a shelter against rain and cold.
- A poncho. You never know when the weather might change.
- A whistle. You can use this to signal others if you are lost or hurt or to scare away dangerous animals.
- Medical information. Wear an ID bracelet or carry a card that explains any health problems you have.
- A flashlight with extra batteries. Darkness can confuse even seasoned hikers.

Try to take only the items you really need. First-time hikers often pack extra creature comforts, such as CD players, but carrying a heavy pack for several hours turns a fun outing into hard work.

Hatti Langsford, a park interpreter at Minnewaska State Park Preserve in New Paltz, N.Y., also recommends taking a first-aid kit. “If the first-aid kit is packed in a ziplock bag, you can use the bag to hold water if you need to.” Be sure to put “something bright” in it, such as a bandanna. If you get lost, you can tie the bandanna to a tree branch before taking shelter under a nearby tree or rock ledge. The marker will help searchers locate you more easily.

A Little Too Close to Nature?

Seeing animals in the wild is one of the most exciting things about hiking. But what

should you do if you spot a bear, a wolf, or another dangerous creature? “Never run,” Ritter cautions. “Most animals are color-blind. They see only motion and contrast. If you don’t move, they won’t see you. If an animal approaches you, blow your whistle for all you’re worth. I can’t think of an animal that will stick around for that!”

If You Get Lost

What should you do if you get lost in the woods? Stay where you are. “The biggest mistake people make when they are lost is that they continue moving,” Ritter says. “This makes the searchers’ job more difficult.”

Think of the word *stop* if you get lost.

S—Stop: Stay put, and don’t panic.

T—Think: “Your most important asset is your brain,” says Ritter.

O—Observe: “Look around and figure out what you can use to improve your situation,” Ritter continues. Maybe you can use leaves and branches to make a bed, or you can find shelter under a tree or a rock ledge.

P—Plan: Keeping yourself warm and dry is important. How can you do that? Is there some way you can let others know where you are? Make a plan, and stick to it.

Of course, the best way to deal with getting lost is to “stay out of trouble in the first place,” says Langsford. “Stay on the trail, and never separate from your buddy.”

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Reading Item B—2010 Augmented Benchmark Grade 7

B

Explain why Hatti Langsford’s suggestions about a first-aid kit are helpful to hikers.

Use at least **two** details from the passage to support your answer.

READING ITEM B SCORING RUBRIC—2010 AUGMENTED BENCHMARK GRADE 7

SCORE	DESCRIPTION
4	The response explains why Hatti Langsford’s suggestions about a first-aid kit are helpful to hikers, and provides two <i>accurate and relevant</i> details from the passage for support.
3	The response explains why Hatti Langsford’s suggestions about a first-aid kit are helpful to hikers, and provides one <i>accurate and relevant</i> detail from the passage for support. OR The response provides two <i>accurate and relevant</i> details from the passage but does not explain why Hatti Langsford’s suggestions are helpful to hikers.
2	The response explains why Hatti Langsford’s suggestions about a first-aid kit are helpful to hikers. OR The response provides one <i>accurate and relevant</i> detail from the passage but does not explain why Hatti Langsford’s suggestions are helpful to hikers.
1	The response demonstrates minimal understanding of the question.
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” assigned for the item.

Scoring Note: Minimal understanding can be given when a student provides an explanation, but shows through their response that this is explaining something other than Hatti Langsford’s suggestions.

Reading Item B Sample Responses and Annotations—2010 Augmented Benchmark Grade 7

Score Point: 4

The response explains why Hatti Langsford's suggestions about a first-aid kit are helpful to hikers (*helps them stay safe*), **and** provides **two** accurate and relevant details from the passage for support. 1. *Packing the first aid kit in a zip lock bag . . . you can use the bag to hold water in.* 2. *Putting a bright bandana in . . . packing a bright bandana helps hikers if they get lost, they can tie it to a tree branch to signal for help.*

Hatti Langsford's suggestions about a first aid kit are helpful to hikers because it helps them stay safe. Some tips from Hatti are; pack the kit in a ziplock bag, and putting a bright bandana in the kit.

Packing the first aid kit in a ziplock bag is a good tip, because later on, you can use the bag to hold water in. Also packing a bright bandana helps hikers if they get lost, they can tie it to a tree branch to signal for help.

Hatti's suggestions are very helpful to hikers, and will help them stay safe and have fun camping!

Score Point: 3

The response explains why Hatti Langford's suggestions about a first-aid kit are helpful to hikers (*it is a safety kit; "preparation for emergencies are essential"; can keep you safe*), and provides **one** accurate and relevant detail from the passage for support. 1. *Put the safety kit in a plastic bag. You could use that bag for water if needed.*

First Aid Kits!

Hatti Langford's suggestions about first aid kits were very helpful. Especially to a seasoned hiker. First of all it is a safety kit. In the passage it says "preparation for emergencies are essential." First aid kits can keep you safe and if you do get hurt use the safety kit to heal yourself or your buddy.

Secondly you can put the safety kit in a plastic bag. You could use that bag for water if needed. It would be best to just bring water but if you dehydrate that plastic bag could be what saves your life. It talks about that in the passage. I believe it could really help just to have a first-aid kit when you go hiking, and Hatti Langford would agree.

Reading Item B Sample Responses and Annotations—2010 Augmented Benchmark Grade 7

Score Point: 2

The response provides **one** accurate and relevant detail from the passage, but does not explain why Hatti Langsford's suggestions are helpful to hikers. 1. *If it's packed in a zip lock bag then you can hold water if you need it.*

Explain why Hatti Langsford's suggestions about a first-aid kit are helpful to hikers. . . . Hatti recommends taking a first-aid kit if it's packed in a zip lock bag then you can hold water if you need it.

Score Point: 1

The response demonstrates minimal understanding of the question because the student provides an explanation (. . . *for when something unexpected could happen*), but shows through the remainder of the response that this is explaining something other than Hatti Langsford's suggestions (refer to Scoring Note on rubric).

The first-aid-kit is for when something unexpected could happen. When a brayer scratches you and you start to bleed.

Reading Item B Sample Responses and Annotations—2010 Augmented Benchmark Grade 7

Score Point: 0

The response is irrelevant and shows no evidence that the student understands the task. The response addresses what to do if lost, not Hatti Langsford's suggestions.

• What should you do if you get lost in the woods?
Stay where you are. "The biggest mistake people make when they are lost is that they continue moving," Ritter says. "This makes the searchers' job more difficult."

• Of course, the best way to deal with getting lost is to "stay out of trouble in the first place," says Langsford. "Stay on the trail and never separate from your buddy."

If You Get Lost!

WRITING RESPONSES

Scoring Student Responses to Writing Prompts—2010 Augmented Benchmark Grade 7

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."

Writing Domains and Definitions—2010 Augmented Benchmark Grade 7

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–2010 Augmented Benchmark Grade 7

C

Your teacher has asked you to write an essay about a time you helped someone younger.

Before you begin to write, think about a time you helped someone younger. It could be a time you taught a younger person how to do something or a time you offered a young person advice. It can be anytime you helped a person younger than you.

Now write an essay telling about the time you helped someone younger. 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 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?

One sunny afternoon I was at my aunt's house. She had bought a large, blue, refreshing swimming pool. I was so excited. My younger brother, L. J., my younger cousin, M. J., and I all went swimming.

That summer my brother had learned how to swim, but my cousin didn't have the slightest clue how to. While I was swimming with my little brother, M. J. was with my aunt in a life ring. We were having a lot of fun. After 3½ hours or so we got out and ate some lunch. We had a humongous lunch, made up of turkey, ham, cheese, deviled eggs, chips, and many other things. It made my aunt and younger brother very tired.

My 2 year old cousin and I were still wanting to swim so we went back outside and swam for another hour. I was getting tired by then and wanted to get out. I hoisted M. J. up on the deck and then pulled my tired body out. While I was drying off my cousin came out and said, "Look! M. J. is swimming!" To my surprise, M. J. had slipped into the water. I saw her poor innocent face under water and I jumped in as quick as I could.

As she rose out of the water she coughed gasping for a breath of air. Soon after that I came

up to. I pushed the small child upon to the deck. I ran into the house carrying M , yelling for someone to help. As much as it scared me it scared her even more.

I started patting her back and she was crying and coughing. Soon she settled down and gave me a great big hug. I was so happy my cousin had said that to me, or my cousin wouldn't be here today.

Writing Annotation for Sample Response 1–2010 Augmented Benchmark Grade 7

Content: 4

This response has a clear central idea (saving the cousin) fully elaborated with details that support the central idea (*That summer my brother had learned how to swim . . . clue how to*), (*. . . with my aunt in a life ring*), and (*We had a humongus lunch . . . many other things. It made my aunt and younger brother very tired*). There is clear organization and a presence of closure. Overall, there is consistent control of the features of the Content domain demonstrated throughout the response.

Style: 4

There is purposefully chosen information and vivid, precise vocabulary selected to affect the reader throughout the response (*large, blue, refreshing swimming pool; slightest clue; life ring; humongus; hoisted; pulled my tired body out; slipped into the water; poor innocent face; As she rose out of the water; gasping for a breath*). Sentences vary in beginnings and length, which creates interest, and as a result, a strong voice emerges. This response demonstrates consistent control of the Style domain.

Sentence Formation: 4

There are correct simple and many complex sentences throughout this response, which shows consistent control of the Sentence Formation domain.

Usage: 4

There is one minor usage error (*Soon after that I came up to.*) but there is consistent use of correct inflections, tenses, and verb agreement throughout the response, which demonstrates consistent control of Usage.

Mechanics: 4

Correct formatting and capitalization are shown throughout the response. There is one minor spelling error (humongus), but overall, consistent control is demonstrated in the Mechanics domain.

The first time I really felt great about helping someone younger than me was when I helped my little cousin in school. I helped him with his spelling words. Because I seen him with a bad grade in spelling. I asked where his spelling words were he showed me them and then I just sat down and helped him study a couple days later he came over to my house and showed me his spelling test and said he had a better score than last time after that he started getting A's on almost every spelling test he took and I began to think he got better grade in spelling because of me. I thought wow I actually helped someone All in All I was really happy to know I helped someone

Writing Annotation for Sample Response 2—2010 Augmented Benchmark Grade 7

Content: 2

This response has a central idea (. . . *I helped my little cousin in school*). Due to the lack of elaboration, the attempts at details are more of 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

The information in this response is general and the vocabulary is functional. Many sentences begin the same way (*I helped, I asked, I Thought*) and the voice is dim. The response tells rather than shows how the writer helped the cousin (*I helped him with his spelling words. I asked where his spelling words were . . . helped him study . . . showed me his spelling Test*). Overall, inconsistent control of the Style domain is demonstrated.

Sentence Formation: 2

The response has a fragment (*Because I seen him with a bad grade in spelling.*) and the majority of the response is comprised of a run-on (*I asked where . . . he got better grade in spelling because of me*). There are more sentences with errors than without. This demonstrates inconsistent control of the Sentence Formation domain.

Usage: 4

There is one inflection error (*he got better grade*) and one minor usage error (. . . *I seen him with a bad grade . . .*) which demonstrates consistent control of the Usage domain.

Mechanics: 3

The response is formatted correctly, but some end punctuation is missing (*I Thought wow I actually helped someone*) and (*All in All I was really happy To know I helped someone*). There is only one spelling error (*eyery*). However, there are issues with capitalization (*I Just sat, All in All*) along with the consistent capitalization of the letter “T” when it appears at the beginning of a word. These errors within this abbreviated response show a reasonable control of the Mechanics domain.

Someone younger

Onetime I was 11 I had to teach my little sister and Brother how to ride a Bike with out traping wheel. it tok aBout two to three days But it tok my Brother a long time it was Harder than I thot. I rember when I help my cusce off a Small Swing a Baby Swing it was Foney the way she was looking at me. I had to get than two people to help me. To Belive she was even Big she was Smaller than me.

Writing Annotation for Sample Response 3–2010 Augmented Benchmark Grade 7

Content: 1

This response has more than one central idea (. . . *I had to teach my little sister and Brother how to ride a Bike with out traning wheel*) and (. . . *I help my cusce off a Small Swing*). There is an attempt to provide details and elaboration, but they are minimal (*it tok aBout two to three days . . . tok my Brother a long time it was Harder than I thot*) and confusing in places (*To Belive she was even Big she was Smaller than me*). Organization is minimal. Overall, there is little or no control of the features of the Content domain.

Style: 1

Vocabulary is general and basic throughout. Due to the lack of precise, vivid vocabulary, the voice is flat. Sentence problems detract from style. This response demonstrates little or no control of the Style domain.

Sentence Formation: 2

There are many errors in the formation of the sentences. Missing words (*onetime [when] I was 11*) and (*I had to get [more] than two people*), and a run-on (*I rember . . . looking at me*). There is inconsistent control of the Sentence Formation domain.

Usage: 4

There is one inflection error (*I help my cusce*), a word usage error (*than for those*), and one tense error (*traning wheel*). Overall, there is consistent control of the Usage domain.

Mechanics: 2

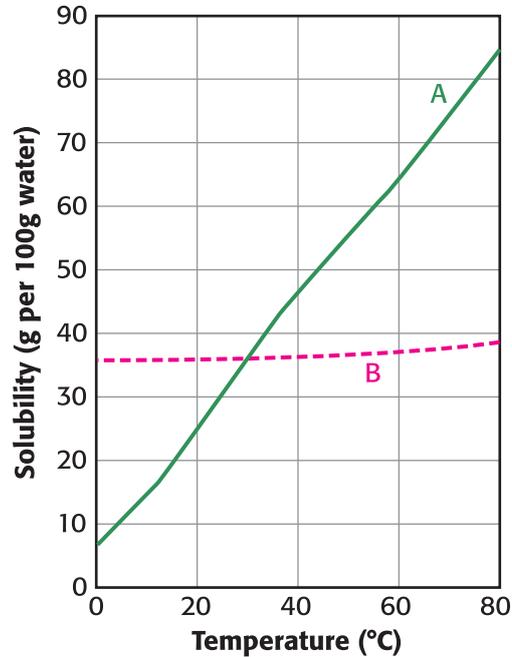
Although the response is correctly formatted, there are many errors in capitalization (*onetime, Brother, Bike, it, aBout, Harder, Small, Swing, Baby, Belive, Big, Smaller*), spelling (*onetime, traning, tok, thot, cusce, funey*) and punctuation. There is inconsistent control of the Mechanics domain.

SCIENCE RESPONSES

A

The graph shows how two substances dissolve in water.

Solubility for Two Substances in Water



1. Which substance or substances show an increase in solubility as temperature rises? Explain how the graph shows this.
2. A student attempted to dissolve 10 grams of each substance in 100 grams of water at 20 °C. Based on the graph, explain why both substances dissolved completely.
3. If 48 grams of substance A will dissolve at 40 °C, how many grams of substance A will dissolve at 60 °C?

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

Science Item A Solution and Scoring—2010 Augmented Benchmark Grade 7

SCIENCE ITEM A SCORING RUBRIC—2010 AUGMENTED BENCHMARK GRADE 7

SCORE	DESCRIPTION
4	Response shows a <i>complete understanding</i> 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 <i>nearly complete understanding</i> 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 <i>limited understanding</i> 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 <i>minimum understanding</i> 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 <i>insufficient understanding</i> 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	<p>2 Points Possible</p> <p>1 point: Both substances increase.</p> <p>1 point: The curves rise from left to right.</p>
2	<p>1 Point Possible</p> <p>1 point: 10 grams was less than the maximum for each substance at that temperature.</p>
3	<p>1 Point Possible</p> <p>1 point: About 65 grams will dissolve. (Any number in the range of 63 to 67 should receive credit.)</p>

**Science Item A Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

① Both substances increase as temperature does. The graph shows this because as the substance's line goes to the right (higher temperature), it also goes up (more solubility).

② Both substances dissolved completely because both substances' solubility at 20° C were higher than 10 grams per 100 g of water.

③ At 60° C, in 100 g of water, about 65 g of substance A will be dissolved as shown in the graph.

SCORE: 4

Points

Part 1, 2 pts:

States both substances A and B increase in solubility.

1

Both substances increase . . .

States both substances solubility curves rise from left to right.

1

. . . as the substance's line goes to the right (higher temperature), it also goes up (more solubility).

Part 2, 1 pt:

States that 10 grams was less than the amount of maximum solubility for each substance at that temperature.

1

Both substances dissolved completely because both substances' solubility at 20° C were higher than 10 grams per 100 g of water.

This response shows understanding that 10 grams of substance was less than the maximum that could dissolve at that temperature.

Part 3, 1 pt:

States that about 65 grams will dissolve. (Any number in the range of 63 to 67 will receive credit.)

1

. . . 65 g of substance . . .

TOTAL POINTS

4

**Science Item A Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

1.) both a & b substances increase.
the graph shows this by both
of the lines going at an incline
upwards.

2.) because it was the same
amount and the same amount of
water and the temp. so they
both dissolved completely.

3.) about 64 or 65 grams.

SCORE: 3	Points
Part 1, 2 pts: States both substances A and B increase in solubility. <i>both a & b substances increase.</i>	1
States both substances solubility curves rise from left to right. <i>the graph show's this by both of the lines going at an incline upwards.</i>	1
Part 2, 1 pt: Does not state that 10 grams was less than the amount of maximum solubility for each substance at that temperature. <i>because it was the same amount and the same amount of water and the temp. so they both dissolved completely.</i> The same amount of water and the same temperature for each substance is given in the prompt and does not address why 10 grams was less than the amount of maximum solubility for each substance.	0
Part 3, 1 pt: States that about 65 grams will dissolve. (Any number in the range of 63 to 67 will receive credit.) <i>about 64 or 65 grams.</i>	1
TOTAL POINTS	3

**Science Item A Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

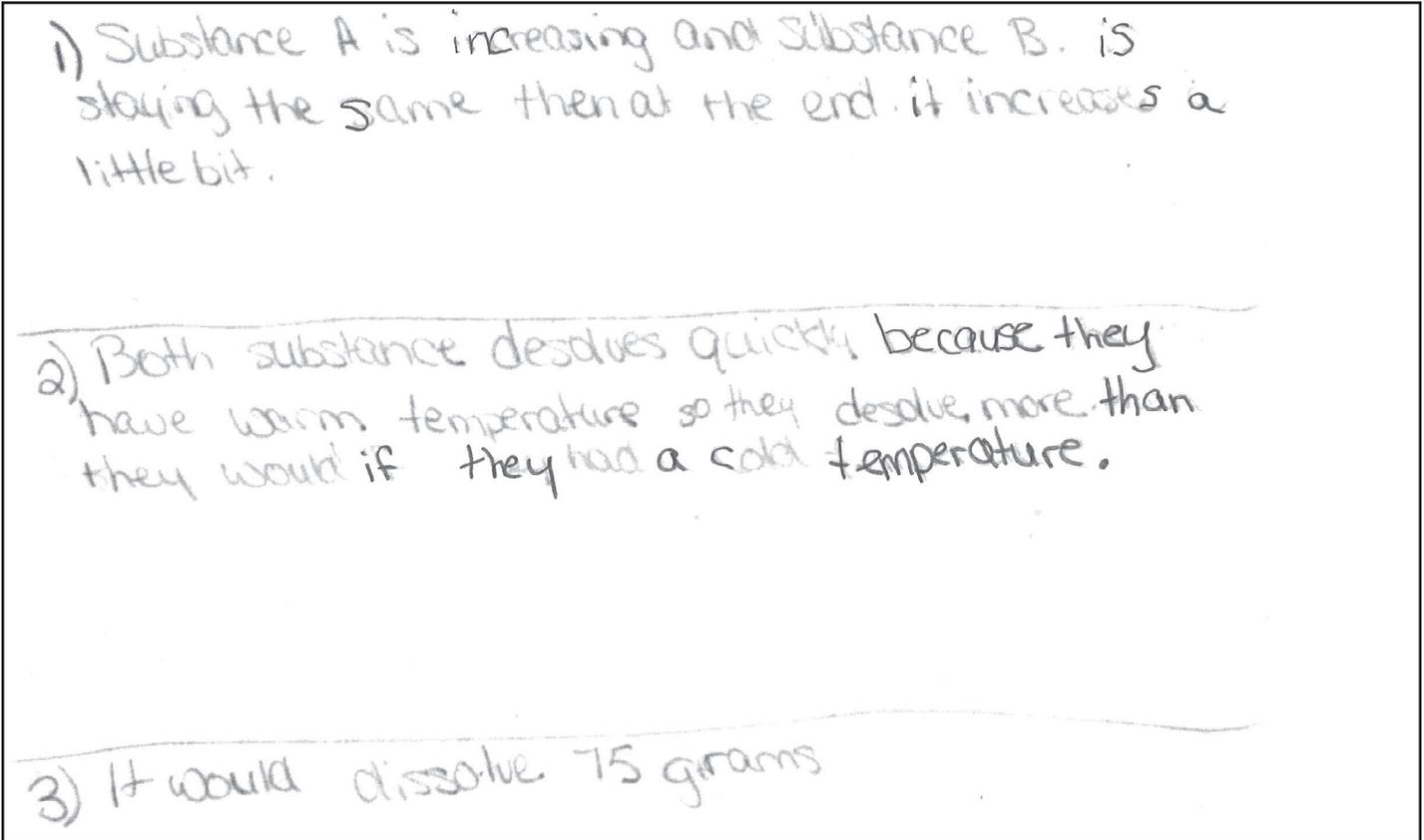
① Both substance A and substance B show increase in solubility as the temperature rises. The way the graph shows this is the higher the temperature the higher the solubility. The graph is positive.

② Both dissolved completely because there is less substance than water and the temperature is high.

③ 45 grams of substance A will dissolve at 60°C according to the graph.

SCORE: 2	Points
Part 1, 2 pts: States both substances A and B increase in solubility. <i>Both substance A and substance B show increase . . .</i>	1
States both substances solubility curves rise from left to right. <i>The graph is positive.</i> When a graph is positive the curve rises from left to right.	1
Part 2, 1 pt: Does not state that 10 grams was less than the amount of maximum solubility for each substance at that temperature. <i>. . . because there is less substance than water and the temperature is high.</i> The temperature of the water or less substance than water are not reasons why 10 grams of each substance was less than the amount of maximum solubility.	0
Part 3, 1 pt: Does not state that about 65 grams will dissolve. (Any number in the range of 63 to 67 will receive credit.) <i>45 grams of substance . . .</i>	0
TOTAL POINTS	2

**Science Item A Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**



SCORE: 1	Points
Part 1, 2 pts: States both substances A and B increase in solubility. <i>Substance A is increasing and substance B . . . increases a little bit.</i>	1
Does not state that both substances solubility curves rise from left to right. No response is given.	0
Part 2, 1 pt: Does not state that 10 grams was less than the amount of maximum solubility for each substance at that temperature. <i>. . . because they have warm temperature . . .</i> The temperature of the water is not a specific enough reason why 10 grams of each substance was less than the amount of maximum solubility.	0
Part 3, 1 pt: Does not state that about 65 grams will dissolve. (Any number in the range of 63 to 67 will receive credit.) <i>. . . 75 grams</i>	0
TOTAL POINTS	1

**Science Item A Sample Responses and Annotations--
2010 Augmented Benchmark Grade 7**

1. Substances A

2. because the temperature is raising up

3. it will dissolve 35

SCORE: 0	Points
Part 1, 2 pts:	
Does not state that both substances A and B increase in solubility.	0
<i>Substances A</i>	
Substance B was not mentioned.	
Does not state both substances solubility curves rise from left to right.	0
No response is given.	
Part 2, 1 pt:	
Does not state that 10 grams was less than the amount of maximum solubility for each substance at that temperature.	0
<i>because the temperature is raising up</i>	
The temperature of the water is not a specific enough reason why 10 grams of each substance was less than the amount of maximum solubility.	
Part 3, 1 pt:	
Does not state that about 65 grams will dissolve. (Any number in the range of 63 to 67 will receive credit.)	0
<i>it will dissolve 35</i>	
TOTAL POINTS	0

Science Item B–2010 Augmented Benchmark Grade 7

B

Many different devices are used to give scientists information about the weather.

List four **different** weather measurement devices that could be used during a weather investigation. Provide an accurate description of what each instrument measures.

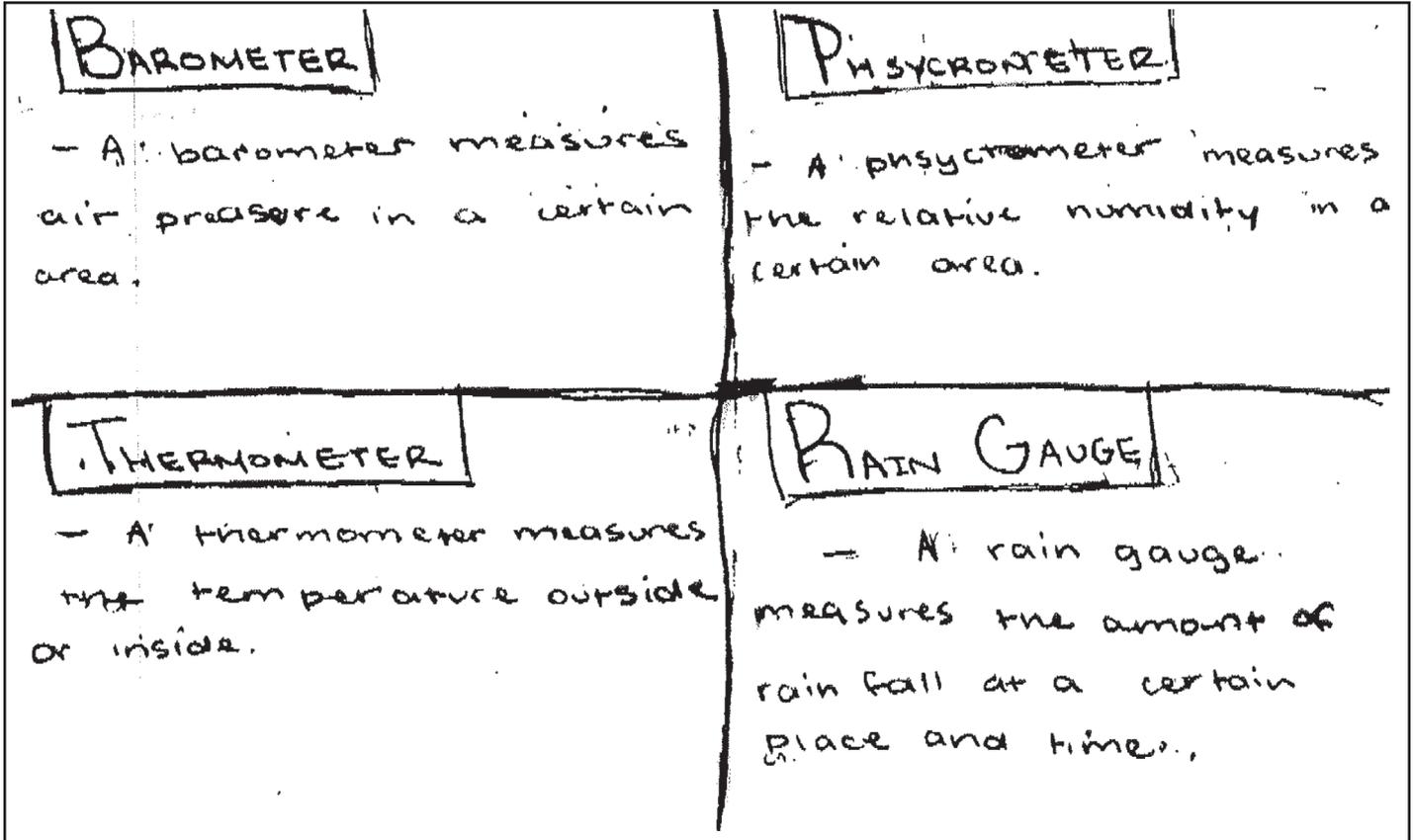
SCIENCE ITEM B SCORING RUBRIC–2010 AUGMENTED BENCHMARK GRADE 7

SCORE	DESCRIPTION
4	Response shows a <i>complete understanding</i> 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 <i>nearly complete understanding</i> 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 <i>limited understanding</i> 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 <i>minimum understanding</i> 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 <i>insufficient understanding</i> 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	<p>4 Points Possible</p> <p>1 point: Names and describes one device.</p>

**Science Item B Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**



SCORE: 4

Points

Part 1, 4 pts:

Names and describes one weather measurement device.

1

Barometer; A barometer measures air pressure in a certain area.

Names and describes one weather measurement device.

1

Psychrometer; A psychrometer measures the relative humidity in a certain area.

Names and describes one weather measurement device.

1

Thermometer; A thermometer measures the temperature outside or inside.

Names and describes one weather measurement device.

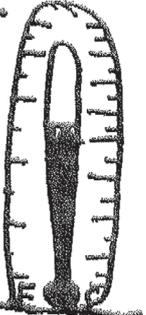
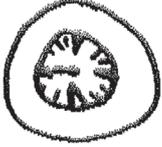
1

Rain Gauge; A rain gauge measures the amount of rain fall at a certain place and time.

TOTAL POINTS

4

**Science Item B Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

<p>1. rain gauge is used to measure how much rain falls. It can be measured in inches and centimeters!</p> 	<p>2. thermometer is used to measure the temperature of the air. It can be measured in Celsius or Fahrenheit!</p> 
<p>3. Barometer is used to measure the air pressure it is measured in inches only!</p> 	<p>4. Sling psychrometer is used to measure wind temperature. It can be measured in degrees Fahrenheit or degrees Celsius.</p> 

SCORE: 3

Points

Part 1, 4 pts:

Names and describes one weather measurement device. 1
rain gauge is used to measure how much rain falls. It can be measured in inches and centimeters!

Names and describes one weather measurement device. 1
thermometer is used to measure the temperature of the air. It can be measured in Celsius or Fahrenheit!

Names and describes one weather measurement device. 1
Barometer is used to measure the air pressure

Names, but incorrectly describes, one weather measurement device. 0
Sling Sycrometer is used to measure wind temperature. It can be measured in degrees Fahrenheit or degrees Celsius.
A sling psychrometer is used to measure relative humidity in the air.

TOTAL POINTS **3**

**Science Item B Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

Barometer - to see if it is fair weather

anemometer - measures wind speed

sling sycromiter - measures how cold or warm

thermometer - measures air temperature

SCORE: 2	Points
<hr/>	
Part 1, 4 pts:	
Names one weather measurement device, but the description is too vague to receive credit.	0
<i>Barometer - to see if it is fair weather</i>	
A barometer measures atmospheric pressure.	
Names and describes one weather measurement device.	1
<i>anemometer - measures wind speed</i>	
Names, but incorrectly describes, one weather measurement device.	0
<i>sling sycromiter - measures how cold or warm</i>	
A sling psychrometer is used to measure relative humidity in the air	
Names and describes one weather measurement device.	1
<i>thermometer - measures air temperature</i>	
<hr/>	
TOTAL POINTS	2

**Science Item B Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

The thermometer measures the temperature.
The barometer measures wind speed
An anometer measures wind pressure
A tracking devise measures where the weather is coming from.

SCORE: 1

Points

Part 1, 4 pts:

Names and describes one weather measurement device.

1

The thermometer measures the temperature.

Names, but incorrectly describes, one weather measurement device.

0

The barometer measures wind speed

A barometer measures atmospheric pressure.

Names, but incorrectly describes, one weather measurement device.

0

An anometer measures wind pressure

An anemometer measures wind speed.

Incorrectly names and describes one weather measurement device.

0

A tracking devise measures where the weather is coming from.

TOTAL POINTS

1

**Science Item B Sample Responses and Annotations—
2010 Augmented Benchmark Grade 7**

There are many different devices used to measure weather

1. Weather machine - it tells what the weather is outside.
2. Weather antenna - it swing this way & that to tell where the wind it is blowing.
3. telopromter - it tells weather if it is raining snowing, clear, nothing.
4. weather man - can go outside and see what is like outside

SCORE: 0

Points

Part 1, 4 pts:

Incorrectly names and describes one weather measurement device. 0

Weather Machine – it tells what the weather is outside.

Students will sometimes invent fanciful instrument names and then describe what the fanciful instrument measures.

Incorrectly names and describes one weather measurement device. 0

Weather antana – it swing this way & that to tell wher the wind is blowing.

Students will sometimes invent fanciful instrument names and then describe what the fanciful instrument measures.

Incorrectly names and describes one weather measurement device. 0

telopromter – it tells weather it is raining snowing, clear, nothing.

A teleprompter displays weather-related information, but does not take weather measurements.

Incorrectly names and describes one weather measurement device. 0

weather man – can go outside and see what is like outside

Weathermen or women use weather measuring instruments.

TOTAL POINTS

0

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