



Arkansas Comprehensive Testing, Assessment, and Accountability Program

# TEACHER HANDBOOK

## AUGMENTED BENCHMARK EXAMINATION GRADE 8

APRIL 2013 ADMINISTRATION

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**Arkansas Department of Education**

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

In April 2013, eighth-grade students participated in the *Grade 8 Augmented Benchmark Examination*. Results of this examination will be provided to all students, schools, and districts to be used as the basis for instructional change.

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

Additional information about the *Grade 8 Augmented Benchmark Examination* is available through the Arkansas Department of Education. Questions can be addressed to the Office of Student Assessment at 501-682-4558.

## SCORING STUDENT RESPONSES TO OPEN-RESPONSE ITEMS

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The multiple-choice and open-response test items for the Reading, Writing, and Math components of the *Grade 8 Augmented Benchmark Examination* are developed with the assistance and approval of Content Advisory Committees. All passages and items on the *Grade 8 Augmented Benchmark Examination* are based on the Arkansas Curriculum Frameworks and developed with the assistance and approval of Content Advisory Committees and Bias Review Committees. These committees comprise active Arkansas educators with expertise in math, English, and/or language arts education.

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

### Reader Training

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

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

After three or four of these practice sets, readers are given “qualifying rounds.” These are additional sets of pre-scored papers, and, in order to qualify, each reader scoring responses must score in exact agreement on at least 80% of the responses, and each reader scoring writing responses must score in exact agreement with 70% of the responses in each domain. Readers who do not score within the required rate of agreement are not allowed to score the *Grade 8 Augmented Benchmark Examination* responses.

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

### Scoring Procedures

All student responses to the *Grade 8 Augmented Benchmark Examination* open-response test items are scored independently by two readers. Those two scores are compared, and responses that receive scores that are non-adjacent (a “1” and a “3,” for example) are scored a third time by a Team Leader or the Scoring Director for resolution.

This Teacher Handbook includes the math open-response items, reading passages with their open-response items, and a writing prompt as they appeared in this year’s test. The specific scoring rubric for each item and annotated response for each score point of the rubric follows. The goal is for classroom teachers and their students to understand how responses are scored. It is hoped that this understanding will help students see what kind of performance is expected of them on the *Grade 8 Augmented Benchmark Examination*.

# **MATH RESPONSES**

**A** Paulo has earned test scores of 87, 81, 82, 94, 89, and 96.

1. What is Paulo’s median test score? Show your work.
2. What is Paulo’s mean test score? Round your answer to the nearest whole number. Show your work.
3. Paulo wants to raise his mean score to be at least a 95. If there is only one more test this quarter, and the highest grade possible on a test is 100, can Paulo have a mean score of at least 95? Show your work or explain your response.

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

<b>Math Item A Scoring Rubric—2013 Grade 8</b>
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Score	Description
4	The student earns 4 points. The response contains no incorrect work.
3	The student earns 3 – 3½ points.
2	The student earns 2 – 2½ points.
1	The student earns ½ – 1½ points, or some minimal understanding is shown.
0	The student earns 0 points. No understanding is shown.
<b>B</b>	Blank—No Response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for the item.)

SOLUTION AND SCORING

Part	Points
1	<p><b>1 point possible:</b></p> <p>½ point: Correct answer: 88</p> <p><b>AND</b></p> <p>½ point: Correct and complete explanation or work shown  <i>Work may contain an arithmetic or copy error</i>            Give credit for the following or equivalent:            Ex. 81, 82, 87, 89, 94, 96</p>
2	<p><b>1 point possible:</b></p> <p>½ point: Correct answer: 88</p> <p><b>AND</b></p> <p>½ point: Correct and complete explanation or work shown  <i>Work may contain an arithmetic or copy error</i>            Give credit for the following or equivalent:            Ex. <math>\frac{(81+82+87+89+94+96)}{6} = 529 \div 6 = 88.1\bar{6} \approx 88</math></p>
3	<p><b>2 points possible:</b></p> <p>2 points: Correct answer: No it is not possible  <i>Or correct answer based on Part 2</i>            Correct and complete explanation or work shown            Give credit for the following or equivalent:            Ex. <math>\frac{81+82+87+89+94+96+x}{7} \geq 95</math>  <math>529+x \geq 665</math>  <math>x \geq 136</math></p> <p>Ex. <math>\frac{529+100}{7} = \frac{629}{7} \approx 89.857142857</math>, so no</p> <p>Ex. <math>95 \times 7 = 665</math>; <math>665 - 529 = 136</math> so he can't</p> <p><b>OR</b></p> <p>1 point: Correct answer, work is incomplete (some math is shown)            Or            An arithmetic or copy error is present in the work            Or            Correct and complete work shown</p>

SCORE: 4

<u>Part 1</u>		Points
Correct answer:	88	½
Correct procedure:	Correct ordered list	½

  

<u>Part 2</u>		Points
Correct answer:	88	½
Correct procedure:	$87 + 81 + 82 + 94 + 89 + 96 = 529; 529 \div 6 = 88.\overline{16}$	½

  

<u>Part 3</u>		Points
Correct answer:	No with math present	1
Correct procedure:	$529 + 100 = 629; 629 \div 7 = 89.85714286$	1

  

<b>Total Points</b>		<b>4</b>
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① 81, 82, 87, 89, 94, 96

$$\begin{array}{r} 87 + 89 \\ \hline 176 \\ \hline 2 \end{array}$$

88 = median test score.

②  $87 + 81 + 82 + 94 + 89 + 96$

$$\begin{array}{r} = 529 \\ \hline 6 \end{array}$$

$$= 88.\overline{16}$$

88 = Mean test score

③  $529 = \text{sum of test scores}$

$$\begin{array}{r} 529 \\ + 100 \\ \hline 629 \\ \hline 7 \end{array}$$

highest he can make originally 6 scores, but now 7.

$$= 89.85714286$$

Paulo cannot raise his mean score to a 90 this quarter.

SCORE: 3

<u>Part 1</u>		Points
Correct answer:	88	½
Incorrect procedure:	Correct ordered list with an order of operations error with $87 + 89 \div 2$	-

<u>Part 2</u>		Points
Correct answer:	88	½
Correct procedure:	$87 + 81 + 82 + 94 + 89 + 96 = 529$ ; $529 \div 6 = 88.16$	½

<u>Part 3</u>		Points
Correct answer:	Cannot with math present	1
Correct procedure:	$87 + 81 + 82 + 94 + 89 + 96 + 100 = 629$ ; $629 \div 7 = 89.86$	1

Total Points	3½
--------------	----

① 87, 81, 82, 94, 89, 96  
~~81, 82, 87, 89, 94, 96~~  
 $87 + 89 / 2 = 88$  is Paulo's median test score.

②  $87 + 81 + 82 + 94 + 89 + 96 = 529$   

$$\begin{array}{r} 88.16 \\ 6 \overline{) 529.00} \\ \underline{-48} \phantom{00} \\ 49 \phantom{00} \\ \underline{-48} \phantom{00} \\ 10 \phantom{00} \\ \underline{-6} \phantom{00} \\ 40 \phantom{00} \\ \underline{-36} \phantom{00} \\ 4 \dots \\ \vdots \end{array}$$
 88.16 → (rounded to nearest whole number)  
 88 is Paulo's mean test score.

③  $87 + 81 + 82 + 94 + 89 + 96 + 100 = 629$   
 $629 \div 7 = 89.86$   
Paulo cannot have a mean score of at least 95 because his other test scores were not high enough to reach 95 as the mean.

SCORE: 2

<u>Part 1</u>		Points
Correct answer:	88	½
Correct procedure:	Correct ordered list	½

  

<u>Part 2</u>		Points
Correct answer:	88	½
Correct procedure:	$81 + 82 + 87 + 89 + 94 + 96 = 529; 529 \div 6 = 88.\overline{16}$	½

  

<u>Part 3</u>		Points
Incorrect answer:	7	-
Incorrect procedure:	95 - 88; the student also includes 6 more tests than are required	-
<b>Total Points</b>		<b>2</b>

1) ~~81~~  
~~82~~  
~~87~~ → middle of these two numbers  
~~89~~ so therefore...  
~~94~~ Paulo's median test score is  
~~96~~ 88.

2)  $81 + 82 + 87 + 89 + 94 + 96 = 529$   
 $529 / 6 = 88.\overline{16}$   
88  
 \* Sidenote:  
 you divide 529 by six because Paulo has six test scores.

3)  $95 - 88 = 7$   
 Yes Paulo can have a mean score of at least a 95 as long as he at least scores a 90 on 7 more test in a row.

SCORE: 1

<u>Part 1</u>		Points
Incorrect answer:	7743	-
Incorrect procedure:	Correct ordered list with an incorrect following step: $87 \times 89$	-
<u>Part 2</u>		Points
Correct answer:	88	$\frac{1}{2}$
Correct procedure:	$87 + 81 + 82 + 94 + 89 + 96 = 529$ ; $529 \div 6 = 88$	$\frac{1}{2}$
<u>Part 3</u>		Points
Incorrect answer	"yes"	-
Incorrect procedure:	$529 + 100 = 629$ ; $629 \div 6 = 105$	-
<b>Total Points</b>		<b>1</b>

1.  $81, 82, 87, 89, 94, 96$   
 $87 \times 89 = 7,743$   
 Paulo's median test score = 7,743.

---

2.  $81 + 82 + 87 + 89 + 94 + 96 = 529$   
 $529 \div 6 = 88$

Paulo's mean test score = 88

---

3. Yes, he can because  
 $529 + 100 = 629$   
 and  
 $629 \div 6 = 105$   
 So that would make his mean test score 105 which is higher than atleast 95.

SCORE: 0

<u>Part 1</u>		Points
Incorrect answer:	264.5	-
Missing procedure:	Student crosses out values to find median without ordering	-

  

<u>Part 2</u>		Points
Incorrect answer:	90	-
Incorrect procedure:	$96 - 81 = 15 \times 6 = 90$	-

  

<u>Part 3</u>		Points
Incorrect answer:	"yes"	-
Incorrect procedure:	"he only needs 5 more points to raise it."	-
<b>Total Points</b>		<b>0</b>

① ~~81, 81, 82, 94, 81, 96~~  
 median = 264.5

②  $96 - 81 = 15 \cdot 6 = 90$   
 The mean is 90

③ Yes, he can raise his score to a 95 because he has a 90 and he only needs 5 more points to raise it.

- B** A track coach recorded his runners' times on two different races. The information is in the table below.

Runner	Speed
Adam	50 m/10 s
Felix	200 m/1 min

1. What is each runner's speed in km/hr? Show your work.
2. Each runner began running in the same direction along a path from the same point. If each runner maintained his speed from Part 1 and ran for 15 minutes, how much distance, in km, would be between them? Show your work.

BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

**Math Item B Scoring Rubric—2013 Grade 8**

Score	Description
4	The student earns 4 points. The response contains no incorrect work.
3	The student earns 3 – 3½ points.
2	The student earns 2 – 2½ points.
1	The student earns ½ – 1½ points, or some minimal understanding is shown.
0	The student earns 0 points. No understanding is shown.
B	Blank—No Response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for the item.)

SOLUTION AND SCORING

Part	Points
1	<p><b>2 points possible:</b></p> <p>½ point: Correct answer: Adam’s speed = 18 (km/hr)</p> <p><b>AND</b></p> <p>½ point: Correct and complete explanation or work shown  <i>Work may contain an arithmetic or copy error</i>            Give credit for the following or equivalent:            Ex. <math>50 \times 6 = 300</math>; <math>300 \times 60 = 18000</math>; <math>18000 \div 1000 = 18</math></p> <p><b>AND</b></p> <p>½ point: Correct answer: Felix’s speed = 12 (km/hr)</p> <p><b>AND</b></p> <p>½ point: Correct and complete explanation or work shown  <i>Work may contain an arithmetic or copy error</i>            Give credit for the following or equivalent:            Ex. <math>200 \times 60 = 12000</math>; <math>12000 \div 1000 = 12</math></p>
2	<p><b>2 points possible:</b></p> <p>1 point: Correct answer: 1.5 (km)  <i>Or correct answer based on Part 1</i></p> <p><b>AND</b></p> <p>1 point: Correct and complete explanation or work shown  <i>Work may contain an arithmetic or copy error</i>            Give credit for the following or equivalent:            Ex. Adam: <math>0.25 \times 18 = 4.5</math> km            Felix: <math>0.25 \times 12 = 3</math> km  <math>4.5 - 3 = 1.5</math> km            Ex. Adam: <math>18 \times 15 \div 60</math>            Felix: <math>12 \times 15 \div 60</math>  <math>4.5 - 3 = 1.5</math></p>

SCORE: 4

<u>Part 1</u>		Points
Correct answers:	Adam: 18 and Felix: 12	1
Correct procedures:	$50 \times 6 = 300$ ; $300 \times 60 = 18000$ ; $18000 \div 1000$ and $200 \times 60 = 12000$ ; $12000 \div 10000$	1
<u>Part 2</u>		Points
Correct answer:	1.5	1
Correct procedure:	$300 \times 15 = 4500\text{m}$ ; $200 \times 15 = 3000\text{m}$ ; $4.5 - 3$	1
Total Points		4

Runner	Speed
Adam	50m/10s
Felix	200m/1min

$Felix\ 200 \times 60 = 12000\text{m/hr}$        $12000 \div 1000 = 12$   
 $50 \times 6 = 300\text{m/min}$   
 $300 \times 60 = 18000\text{m/hr}$        $18000 \div 1000 = 18$   
Adam ran 18km/hr

1      Felix ran 12km/hr

---

Felix  
200m/1min  
 $200 \times 15\text{min} = 3000\text{m}/15\text{min}$   
3km/15min

Adam  
300m/min  
 $300 \times 15 = 4500\text{m}/15\text{min}$   
4.5km/15min

2

$4.5 - 3 = 1.5\text{km}$       After 15 minutes there was 1.5 km between Adam and Felix.

2

SCORE: 3

Part 1		Points
Correct answers:	Adam: 18 and Felix: 12	1
Incorrect procedures:	Both procedures contain errors. Adam's has "multiply 60 by 60" and Felix's has a calculation error of " $200 \div 100 = .20$ "	-
Part 2		Points
Correct answer:	1.5	1
Correct procedure:	$18 \div 4$ ; $12 \div 4$ ; $4.5 - 3$	1
Total Points		3

① 1,000 meters = 1 kilometer, 60 sec = 1 minute  
 If Adam ran 50 meters, divide 50 by 1000.  
 $50 \div 1,000 = 0.05$ . He ran 0.05 km. Multiply 0.05 by 6 to get km per minute, which is 0.30. Then, multiply 60 by 60 to get 1 hour. Multiply .30 by 60 to get km per hour. Adam ran 18 km/hour.  
 Felix =  $200 \div 100 = .20$ ,  $.20 \times 60 = 12$ . Felix ran 12 km/hour.

② Adam =  $\frac{18 \text{ km/hour}}{4}$  Felix =  $\frac{12 \text{ km/hour}}{4}$  (60 min)  
 $(60 \div 4 = 15)$   
 $\downarrow$   $\downarrow$   
 4.5 3  
 $4.5 - 3 = 1.5$

answer - 1.5 km would be between Adam and Felix

SCORE: 2

<u>Part 1</u>		Points
Correct answers:	Adam: 18 and Felix: 12	1
Correct procedures:	$50 \times 6$ ; $300 \times 60$ ; $18000 \div 1000$ and $200 \times 60$ ; $12000 \div 1000$	1
<u>Part 2</u>		Points
Incorrect answer:	.9	-
Incorrect procedure:	$18 \times .15$ ; $12 \times 1.8$ ; $2.7 - 1.8$	-
Total Points		2

Handwritten student work for Part 1:

$$\begin{array}{r} 200 \times 60 \\ \hline 12000 \\ \hline 1000 \end{array}$$

$$\begin{array}{r} 50 \times 6 \\ \hline 300 \times 60 \\ \hline 18000 \\ \hline 1000 \end{array}$$

Felix: 12 kph  
 Adam: 18 kph

---

2.  $18 \times 15 = 2.7$   
 $12 \times 15 = 1.8$

Adam: 9 km

$$\begin{array}{r} 270 \\ - 180 \\ \hline 90 \end{array}$$

SCORE: 1

<u>Part 1</u>		Points
Incorrect answers:	Adam: 72 and Felix: 75	-
Incorrect procedures:	$.20 \times 360$ ; $1.25 \times 60$	-
<u>Part 2</u>		Points
Correct answer:	1.5	1
Incomplete procedure:	$4.5 - 3$	-
Total Points		1

1)

Adam	72 km/hr
Felix	75 km/hr

$$\begin{array}{r} 50\text{m} = .20\text{ km} \\ \underline{\quad 360 \leftarrow \text{seconds in an hour} \div 10} \\ 7200 \end{array}$$

$$\begin{array}{r} 200\text{m} = 1.25\text{ km} \\ \underline{\quad \times 60 \leftarrow \text{minutes in hr.}} \\ 75 \end{array}$$

2).

$$\begin{array}{r} \text{Adam's distance: } 4.5\text{ km} \\ \text{Felix's distance: } \underline{- 3\text{ km}} \\ 1.5 \end{array}$$

1.5 km would be between them.

SCORE: 0

<u>Part 1</u>		Points
Incorrect answers:	Adam: 20 and Felix: 5	-
Incorrect procedures:	$1000 \div 50$ and $1000 \div 200$	-
<u>Part 2</u>		Points
Incorrect answer:	27	-
Incorrect procedure:	$10 \times 60 = 600 \times 50 = 30000\text{m}$ in 15 min = 30km; $200 \times 15 = 3000 = 3\text{km}$ ; $30 - 3 = 27$	-
<b>Total Points</b>		<b>0</b>

① Each runner speed in km/hr ?

$$\begin{array}{r} 1000 \\ \% \quad 50 \\ \hline \end{array}$$

20 km for Adam.

$$1000 \% 200 = 5 \text{ km for Felix.}$$

---

②  $10 \times 60 = 600 \times 50 = 30000 \text{ m in } 15 \text{ min}$   
Adam  $\rightarrow$   $= 30 \text{ km}$

$200 \times 15 = 3000 = 3 \text{ km}$   
Felix  $\rightarrow$

$$\begin{array}{r} 30 \text{ km} \\ - \quad 3 \text{ km} \\ \hline \end{array}$$

27 km distance between them

- C** The mean radius of the planet Mercury is  $2.4 \times 10^3$  km.
1. The mean radius of the planet Neptune is approximately 10 times that of Mercury. Estimate the mean radius of Neptune and express the value in scientific notation.
  2. The volume formula for a sphere is  $V = \frac{4}{3}\pi r^3$ . What is the approximate volume of Neptune? Express your answer in scientific notation.

**BE SURE TO LABEL YOUR RESPONSES 1 AND 2.**

<b>Math Item C Scoring Rubric—2013 Grade 8</b>
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Score	Description
4	The student earns 4 points. The response contains no incorrect work. Correct units in Parts 1 & 2.
3	The student earns 3 points.
2	The student earns 2 points.
1	The student earns 1 point, or some minimal understanding is shown.
0	The student earns 0 points. No understanding is shown.
B	Blank—No Response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for the item.)

SOLUTION AND SCORING

Part	Points
1	<p><b>2 points possible:</b></p> <p>1 point:            Correct answer:            <math>2.4 \times 10^4</math> km</p> <p><b>AND</b></p> <p>1 point:            Correct and complete explanation or work shown  <i>Work may contain an arithmetic or copy error</i>            Give credit for the following or equivalent:            Ex.     <math>2.4 \times 10^3 \times 10 =</math>            Ex.     <math>2400 \times 10 =</math></p>
2	<p><b>2 points possible:</b></p> <p>1 point:            Correct answer:            <math>5.8 \times 10^{13}</math> km<sup>3</sup>  <math>5.790583579 \times 10^{13}</math> km<sup>3</sup> (<i>using <math>\pi</math></i>)  <math>5.787648 \times 10^{13}</math> km<sup>3</sup> (<i>using 3.14</i>)  <i>Or correct answer based on Part 1</i>  <i>NOTE: Answers may be correctly rounded to any decimal place.</i></p> <p><b>AND</b></p> <p>1 point:            Correct and complete explanation or work shown  <i>Work may contain an arithmetic or copy error</i>            Give credit for the following or equivalent:            Ex.     <math>V = 4 / 3\pi(2.4 \times 10^4)^3</math>  <math>V = 4 / 3\pi(1.3824 \times 10^{13})</math>  <math>V = 5.8 \times 10^{13}</math> km<sup>3</sup></p> <p>Ex.     <math>4 \div 3\pi(24000^3)</math></p>

SCORE: 4

<u>Part 1</u>		Points
Correct answer:	$2.4 \times 10^4$ km	1
Correct procedure:	$2.4 \times 10^3 \times 10$	1

  

<u>Part 2</u>		Points
Correct answer:	$5.787648 \times 10^{13}$	1
Correct procedure:	$4 \div 3 (3.14) 24000^3$	1
<b>Total Points</b>		<b>4</b>

1.)  $2.4 \times 10^3 \times 10 = 24000 = 2.4 \times 10^4$   
 The mean radius of Neptune is about  $2.4 \times 10^4$  km.

---

2.)  $2.4 \times 10^4 = 24000$   
 $V = \frac{4}{3}(3.14) 24000^3 = \frac{4}{3}(3.14) 1.3824 \times 10^{13} = 5.787648 \times 10^{13}$

The volume of Neptune is approximately  $5.787648 \times 10^{13}$  km<sup>3</sup>.

SCORE: 3

<u>Part 1</u>		Points
Incorrect answer:	$2.4 \times 10^5$	-
Correct procedure:	$2400 \times 10$	1
<u>Part 2</u>		Points
Correct answer based on an erroneous answer from Part 1:	$5.79 \times 10^{16}$	1
Correct procedure:	$4 \div 3\pi (240,000)^3$	1
<b>Total Points</b>		<b>3</b>

1.  $2.4 \times 10^3 \cdot 10$   
 $2400 \cdot 10$   
 $2.4 \times 10^5$

2. approximately  $5.79 \cdot 10^{16}$   
 $\frac{4}{3}\pi r^3$   
 $\frac{4}{3}\pi (240,000)^3$   
 $\approx 5.79 \cdot 10^{16}$

SCORE: 2

Part 1		Points
Correct answer:	$2.4 \times 10^4$	1
Correct procedure:	$2400 \times 10$	1

  

Part 2		Points
Incorrect answer:	$10048 \times 10^1$	-
Incorrect procedure:	$4 \div 3 (3.14) (2.4 \times 10^4)$	-
Total Points		2

①

radius of Mercury  
 $2.4 \times 10^3$   
~~2400~~

$$\begin{array}{r} \times 2400 \\ 10 \\ \hline 24000 \end{array}$$

radius of Neptune  
 $2.4 \times 10^4$     ~~24000~~

②  $V = \frac{4}{3} \pi r^3$

$$\frac{4}{3} (3.14) (2.4 \times 10^4) =$$

$$V = 100480 \quad \leftarrow ?$$

$$\boxed{10048 \times 10^1}$$

SCORE: 1

<u>Part 1</u>		Points
Correct answer:	$2.4 \times 10^4$	1
Missing procedure:		-
<u>Part 2</u>		Points
Incorrect answer:	$5.8 \times 10^2$	-
Missing procedure:		-
<b>Total Points</b>		<b>1</b>

1)

$$2.4 \times 10^4$$

2)

$$5.8 \times 10^{12}$$



# **READING RESPONSES**

## Squirrels That Smell Like Snakes

by Cheryl M. Reifsnyder, Ph.D.

From the trunk of her Volkswagen hatchback, Dr. Barbara Clucas aimed her camera.

Nose a-twitch, a California ground squirrel bounded toward Clucas’s bait: a circle of sunflower seeds. A ground squirrel will almost always stop for sunflower seeds. Inside the circle of seeds was a rattlesnake skin.

The squirrel grabbed the skin with both front paws and began to chew. Then it smeared snakeskin-scented saliva onto its fur.

Clucas is a scientist who studies animal behavior—especially squirrel behavior—at the University of California, Davis. How did she get started studying how ground squirrels use snakeskins?

Other researchers had seen chipmunks and mice taking snakeskin baths. One day, Clucas saw a ground squirrel doing the same thing, using a skin left behind by a snake. As a snake grows, from time to time it must shed its skin. That shedding lets a new, larger skin underneath expand and make room for more growth. Clucas watched the ground squirrel chew the skin and then smear a mixture of snake scent and saliva onto its sides, hind legs, and tail.

Why would a squirrel do such a thing? There was only one way to find out. Clucas needed to spy on ground squirrels.

### What Are They Thinking?

- 7 Before Clucas began, she came up with three different educated guesses, or hypotheses, that might explain why squirrels spread snakeskin saliva on themselves.



Dr. Barbara Clucas loves her job: spying on squirrels.

**Idea No. 1:** Snakeskin saliva may protect squirrels from their number one enemy, the Northern Pacific rattlesnake.

If that idea is true, then young squirrels and their mothers (who protect them) should spend the most time smearing snakeskin saliva on themselves. More than a third of squirrel pups are eaten by snakes. (An adult male squirrel will fight an attacking rattlesnake, and that’s too much trouble for most rattlesnakes.)

**Idea No. 2:** The smell of snakeskin might make other squirrels think the snake-scented squirrel is tougher.

If this guess is correct, then adult males should spend the most time using snakeskin scent. They are the most likely to fight with one another, and an adult male would get an advantage from seeming tough.

**Idea No. 3:** Maybe something in snakeskin helps get rid of pesky fleas.

If this idea is right, then young squirrels should spend the most time smearing snake scent on themselves. That’s because they have more flea troubles than adults have.

Clucas’s guesses helped her know what to look for. Then she could figure out which guess might be right. She was ready to start squirrel watching.

Clucas began by trapping squirrels. She used black hair dye to mark each of them.

“We wanted to give them each an individual number,” she said, “so we knew their age and their sex and could tell all of the individuals apart.” She also found the squirrels’ burrows, so she knew just where to set up her experiments.

Next, she placed the bait: a snakeskin staked to the ground outside a burrow entrance. She surrounded the snakeskin with sunflower seeds to get the squirrel’s attention. Then she went into the back of her car, set up her camera, and waited.

“When you’re in your car, the squirrels can’t see you, and so they don’t run away,” Clucas said.

In most cases, when a squirrel came out of its burrow, it noticed the seeds—and the snakeskin. Clucas could start filming.

Dr. Clucas’s videos show squirrels chewing on snakeskins and smearing the snake scent on themselves.

Clucas planned how to record what the squirrels did. She watched each squirrel for 30 minutes, beginning when the squirrel touched the snakeskin.



She explained that scientists use “time sampling” to study behavior. “You have a beeper,” she said. “Every 30 seconds, it goes off and you write down what they’re doing.”

That’s what she did as she watched the ground squirrels. She ended up with 60 pieces of information for each time a squirrel found a snakeskin. She showed that young squirrels and adult females spent about twice as much time applying snake scent as adult males did.

“Even pups who had most likely never encountered a snake—had never even seen the outside world—would do the snake-scent-application behavior,” she said. “It was kind of funny, because although they were doing it, they were falling over and doing it very clumsily.”

### **The Idea That Won**

The numbers supported only one of her guesses: the squirrels most interested in applying chewed-up snakeskin were those in greatest danger from rattlesnakes, not those with the most fleas and not those who had the most fights with other squirrels.

Clucas’s findings raise more questions. How do rattlesnakes respond to squirrel scent when it’s mixed with rattlesnake scent? If the squirrels are applying an anti-snake disguise, does it work?

Clucas is busy answering these and other questions. “I’m just really fascinated with watching animals,” she said. “It’s something I’ve done all my life.” As a scientist, she’ll keep watching animals and asking smart questions about their behavior.

**A** Describe Dr. Clucas’s experiment, using four steps.

**Reading Item A Scoring Rubric—2013 Grade 8**

Score	Description
4	The response describes Dr. Clucas’s experiment, using four steps.
3	The response describes Dr. Clucas’s experiment, using three steps.
2	The response describes Dr. Clucas’s experiment, using two steps.
1	The response describes Dr. Clucas’s experiment, using one step. <b>OR</b> 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>B</b>	Blank—No response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for the item.)

SCORE POINT: 4

The response describes Dr. Clucas’s experiment, using more than the required four steps (“She first came up with three different hypotheses. Snakeskin saliva may protect squirrels from rattlesnakes,” “She dyed them, and gave them each individual numbers,” “She staked a snakeskin to the ground surrounding it with seeds,” “Dr. Clucas started to time sample,” and “she waited in her car, she filmed the squirrels”). The response demonstrates a thorough understanding of the task.

Dr. Clucas's experiment was finding out why ground squirrels have been smearing snake skin saliva on its fur. Here are the steps she took to conduct her experiment:

1. She first came up with three different hypotheses.
  - Snakeskin saliva may protect squirrels from rattlesnakes.
  - The smell of the skin might make them seem tougher.
  - Maybe the snakeskin will help get rid of pesky fleas.
2. Next, Dr. Clucas started trapping the squirrels. She dyed them and gave them each individual numbers. She also discovered the squirrels burrows so she knew where to set up her cameras.
3. The next step in conducting Dr. Clucas' experiment was placing the bait. She staked a snakeskin to the ground surrounding it with seeds.
4. Finally, Dr. Clucas started to time sample. As she waited in her car, she filmed the squirrels. Every 30 seconds, as her beeper went off she would write down what the squirrel was doing at that moment. After doing that, she ended her experiment with 60 pieces of information for each time a squirrel found snakeskin. Using this, she ended her experiment.

SCORE POINT: 3

The response describes Dr. Clucas's experiment, using three steps ("Made a question A. Why would a squirrel do such a thing? [take a snakeskin bath]," "Formed a hypothesis [educated guesses] A. Provides protection from rattlesnakes," and "Which idea won A. Numbers showed that the reason the Squirrels used rattlesnakes skin was in greatest danger from rattlesnakes"). The response shows evidence of a general, but not a comprehensive, understanding of the task.

1.) Identified what was happening  
 A. Dr. Clucas saw a ground squirrel taking a snakeskin bath

2.) Made a question  
 A. Why would a squirrel do such a thing? (take a snakeskin bath)

3.) Formed a hypothesis (educated guesses) - Acted on hypothesis  
 A. "Provides protection from rattlesnakes"  
     2. Gives an advantage in fight with other squirrels  
     3. Gets rid of fleas

4.) Which idea won  
 A. Numbers showed that the reason the Squirrels used rattlesnakes skin was in greatest danger from rattlesnakes

**SCORE POINT: 2**

The response describes Dr. Clucas’s experiment using two steps (“baited the squirrels” and “made a video and watched the squirrels for 30 minutes”). The response shows evidence of only a basic understanding of the task.

step 1. made a hypothesis  
 step 2. baited the squirrels  
 step 3. made a video and watched the  
 squirrels for 30 minutes  
 step 4. Dr. Clucas made a conclusion

**SCORE POINT: 1**

The response describes Dr. Clucas’s experiment using one step (“she placed the bait a snakeskin staked to the ground outside a burrow entrance”). The response provides evidence of minimal understanding.

She doing a experiment of a  
 ground squirrels she placed the  
 bait a snakeskin staked to the  
 ground outside a burrow entrance.

**SCORE POINT: 0**

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

①. informative because they used interesting experiments  
 ②. interesting because of they way they used the  
 experiments.  
 ③. explaining because it told us how they do it  
 why.  
 ④. entertaining because it told us about how she  
 did each experiment.

## Hannah and the Birdman

by Roland Smith

Is there really an extinct bird living in Mr. Tanner's back yard?

Things were pretty dull in Hannah Gill's neighborhood until the day Mr. Tanner reported seeing the ivory-billed woodpecker.

Reading the newspaper article about the sighting, Hannah's older brother, Martin, said, "That old coot is loony."

"He is not!" Hannah insisted.

"The ivory-billed woodpecker hasn't been seen for over sixty years!" Martin shot back. "It says so right here. The bird is extinct. That means gone forever. Tanner's just looking for attention."

"Mr. Tanner is . . ." Hannah stopped in mid-sentence and shook her head. She knew better than to argue with Martin, even if he was dead wrong. Which in this case he had to be because there was no one on earth who liked attention less than Mr. Joe Tanner. "I'm going over to talk to him," she said.

Mr. Tanner lived a few blocks from the Gills in a three-story house built by his grandfather over a hundred years before. The Tanner family used to own all of Hannah's neighborhood and a good part of the county, but had sold the land off section by section, piece by piece, until there was only the old house left plus the two hundred acres of swamp behind it. Mr. Tanner lived all alone, except for a yellow-headed parrot, nearly as old as he was, named Felix.

He was known in the neighborhood as The Birdman, but not because of the parrot. On his property were hundreds of birdhouses and birdfeeders. He had them nailed to trees, poles, fence posts—even the sides of his large home were covered with the tiny wooden houses he built in his workshop. And the birds flocked to Mr. Tanner's, which did not please his neighbors. They complained about the noise, their gardens getting eaten, and the mess the birds left behind. To which Mr. Tanner usually replied: "My family sold you the land, but they didn't sell you the air."

One day Hannah found a crow with a broken wing and took it to Mr. Tanner. He repaired the wing, and a few weeks later they set the crow free. Hannah and Mr. Tanner had been friends ever since.

As Hannah walked, she noticed a lot more traffic in the neighborhood than normal for a Sunday morning. The cars were unfamiliar and the drivers were certainly not neighbors. A jeep pulled up next to her and rolled down the window. The driver had a beard and wore a pair of binoculars around his neck. “Do you know where Mr. Joseph Tanner lives?” he asked.

“Just around the corner,” Hannah answered, pointing.

“Thanks!” The man sped away.

Hannah hurried after him. There were at least fifty cars parked in front of Mr. Tanner’s house, including a news van and two police cars. People were milling around his yard, some talking on cell phones, some talking to each other, some scanning the trees in the swamp in back of his house with binoculars.

Hannah wandered through the crowd catching bits and pieces of conversation.

“Tanner never saw no woodpecker . . .”

“I tell you he’s crazy . . .”

“Probably saw a pileated woodpecker. People get them mixed up.”

“He has a parrot you know . . .”

“What if he did see one?”

“He was just putting that reporter on . . .”

“Why doesn’t he come out of the house?”

Hannah looked up at the house and saw a curtain move in one of the ground-floor windows—Mr. Tanner’s workshop. She walked casually over to the side door—Mr. Tanner always left it unlocked—and slipped inside while no one was looking.

Mr. Tanner turned around angrily when she came into the room, but his features softened when he saw who it was. As always, Felix was perched on his shoulder like a feathered ornament. “It’s you,” he said turning back to the window. “Did anyone follow you in?”

“I don’t think so,” Hannah said.

“Look at them,” he said. “Like a bunch of turkey vultures on a carcass.”

“What happened?”

“That reporter from the newspaper came by to talk to me about what it was like around here before all the houses got built. I just mentioned the woodpecker in passing. And wouldn’t you know it, she wrote the whole blame article about me seeing the bird.”

“So, you really saw an ivory-billed woodpecker?” Hannah asked.

“I’ve seen plenty of ivory-bills in my life,” Mr. Tanner answered testily. “When I was a kid they were as common as jays.”

“I mean recently,” Hannah said.

He turned back from the window. “What are they saying down there?”

Hannah told him.

When she finished, Mr. Tanner hobbled over to his workbench with his cane—he had very bad arthritis and some days he could barely walk at all. He pulled one of his many bird books off the shelf above the bench and opened it. “This is a pileated woodpecker,”

he said. “And there are at least three pairs in the swamp.” He turned the page. “And this is an ivory-billed woodpecker.”

The most striking difference between the two birds was their beaks. The pileated woodpecker had a black beak. The ivory-bill’s beak was the color of an elephant’s tusk.

“Where did you see it?” Hannah asked.

“Not it,” Mr. Tanner said. “Them. A pair. The male had a red topnotch and the female’s head was solid black. Just like in the picture.” He flipped back to the picture of the pileated woodpecker. “You can see here that both the male and female pileated have red on their head. So, I know what I saw were ivory-bills.”

“Where did you see them?” Hannah asked.

“Right in my yard,” Mr. Tanner said and sat down in his chair with a heavy sigh.

“What’s the matter?”

“I think they’re still here, but I don’t know which house they’re in. I’ve been trying to find them, but my legs are giving me trouble. And my brain isn’t working the way it used to, either. I lose track of which bird is in which house.” He gave another sigh. “I get all mixed up. I get confused.”

Hannah had noticed this too. About a year ago, Mr. Tanner started drifting off in the middle of conversations. When he drifted back he sometimes seemed startled to see Hannah standing there.

“If I could find the ivory-bills, people wouldn’t think I was so crazy,” Mr. Tanner continued. “But more important, I might be able to save this property.”

“What do you mean?”

Mr. Tanner didn’t answer right away, and for a moment Hannah thought he had drifted off again. A beetle skittered across the sawdust-covered floor, reminding her that she needed to do a little housecleaning for her old friend.

“I’m worried about the birds,” he finally answered. “I’ve been trying to give this property to the state, but they don’t want it. When I die, some developer is going to get a hold of the swamp, fill it with dirt, and build houses on it. What will happen to the birds? Where will they go?”

“That’s terrible,” Hannah said. “But how would finding the ivory-bill help?”

“We don’t have endangered-land laws in this country,” Mr. Tanner explained. “But we do have an endangered-species law. If I could prove there were endangered birds here, the land would be protected forever.”

“Then we’ll just have to find them,” Hannah said.

49 Early the next morning, Hannah started looking for the ivory-bills and quickly discovered what a daunting task finding the birds was going to be. It was no wonder Mr. Tanner had gotten confused. There were no vacancies in the birdhouses. She had to stand beneath each house and wait for a bird to return with food to find out who lived there. She was able to disregard the houses too small to hold ivory-bills, but this still left hundreds of houses and thousands of holes drilled into the surrounding trees where birds had carved out homes of their own.

When she got home that night, covered in mud, exhausted, and her neck sore from looking up all day, she told her family that she was giving up.

“Gills don’t give up,” her father said. “There are no ivory-bills,” Martin said. “We’ll help you,” her mother said.

And the next morning they did, though Martin spent more time arguing than he did looking.

“There goes a starling,” he would say.

“That’s a blackbird,” Hannah corrected. “See the red and yellow on its wings?”

“Prove it,” he’d say.

Hannah would have to open her book and show him the picture.

Eventually, though, Martin stopped arguing with Hannah, and actually started asking her questions.

“What do ivory-bills eat?”

“No one knows for sure,” Hannah answered. “But most ornithologists think they eat insects and larvae.”

“Yuk.”

The Gills saw a lot of birds that first day, and the next day, and the day after. Mr. Tanner sat in his workshop window and gave them advice and encouragement. A week went by, during which they managed to write down the location and occupant of every birdhouse, nest, and tree they could reach, but they did not see an ivory-billed woodpecker.

“I think this might be it,” Mr. Gill finally admitted. The Gills had gathered in Mr. Tanner’s front yard to go over their bird map one last time.

“We’ve checked every birdhouse and tree at least twice,” Mrs. Gill said.

“Maybe those ivory-bills he saw were just passing through,” Martin suggested.

“I guess we better go in and tell him,” Hannah said sadly.

They knocked on the front door, but Mr. Tanner didn’t come to open it. From inside, they heard a distinct and steady thunk . . . thunk . . . thunk. “He must be building more birdhouses,” Hannah said. “He can’t hear us. I’ll go around to the side and get him.”

But Mr. Tanner was not in his workshop. She called for him.

“Up here,” a weak voice replied.

In all the time Hannah had known him she had never seen Mr. Tanner upstairs. With his poor legs he couldn’t negotiate the steps.

“Up here,” he said again.

Thunk . . . thunk . . . thunk. He must be pounding on the floor, Hannah thought. She rushed up the steps two at a time.

“Up here.”

He was not on the second floor. Hannah ran up to the third floor and found Mr. Tanner sitting at the bottom of a set of steep narrow stairs with Felix perched on his bony shoulder.

“Are you all right?” she asked.

“I’m fine,” he said. “I’m fine. I just had to take a rest after my climb.”

Thonk . . . thonk . . . thonk.

The sound was coming from behind the small door at the top of the steps. Mr. Tanner was grinning. “This is the birdhouse,” he said. “Beetles. And just think, I was going to call an exterminator.”

“What are you talking about?”

“They must have come in to eat the beetles,” he said. “Go up the stairs. Be real quiet. You’ll see my trail in the dust. Follow it.”

Hannah climbed the steps. Behind the door was an attic. Before entering she looked back down at Mr. Tanner, who was still grinning. “Go ahead,” he whispered.

Hannah followed Mr. Tanner’s footprints through the dusty furniture, trunks, boxes, and old paintings. The prints ended in front of a pile of wooden crates.

Thonk . . . thonk . . . thonk.

The sound was much louder now. Between the crates was a small gap. She peered through it and stifled a gasp of surprise. Not ten feet away were two of the most beautiful birds she had ever seen. One of them was hammering its ivory-colored bill on the floor and chasing the beetles that emerged from the rotting boards. The other bird was sitting on a nest and beneath her were three downy heads.

**B** How is the theme of loyalty developed in this passage?

Identify **two** characters who are loyal and use **two** details from the passage to support your response.

**Reading Item B Scoring Rubric—2013 Grade 8**

Score	Description
4	The response explains how the theme of “loyalty” is developed in this passage by identifying two characters that are loyal, and providing two details from the passage for support.
3	<p>The response explains how the theme of “loyalty” is developed in this passage by identifying two characters that are loyal, and providing one detail from the passage for support.</p> <p style="text-align: center;"><b>OR</b></p> <p>The response explains how the theme of “loyalty” is developed in this passage by identifying one character that is loyal, and providing two details from the passage for support.</p>
2	<p>The response explains how the theme of “loyalty” is developed in this passage by identifying two characters that are loyal, but failing to provide any details from the passage for support.</p> <p style="text-align: center;"><b>OR</b></p> <p>The response explains how the theme of “loyalty” is developed in this passage by identifying one character that is loyal, and providing one detail from the passage for support.</p> <p style="text-align: center;"><b>OR</b></p> <p>The response provides at least two details from the passage that demonstrate loyalty.</p>
1	<p>The response identifies one character that is loyal, but fails to provide any details from the passage for support.</p> <p style="text-align: center;"><b>OR</b></p> <p>The response generally explains how the theme of “loyalty” is developed in this passage.</p> <p style="text-align: center;"><b>OR</b></p> <p>The response provides one detail from the passage that demonstrates loyalty.</p> <p style="text-align: center;"><b>OR</b></p> <p>The response demonstrates minimal understanding of the question.</p>
0	The response is totally incorrect and shows no evidence that the student understands the task. The response may be off topic or completely irrelevant.
<b>B</b>	Blank—No response. A score of “B” will be reported as “NA.” (No attempt to answer the item. Score of “0” is assigned for the item.)

**SCORE POINT: 4**

The response identifies two characters that are loyal (“Hannah” and “Mr. Tanner”) and provides more than the required two details from the passage as support (“by saying he wasn’t crazy,” “helping find the woodpeckers,” “by telling people ‘My family sold you the land, but they didn’t sell you the air,’” and “he tried to get the government to make his house into a endangered Land for the birds to live on”). The response demonstrates a thorough understanding of the task.

Hannah was loyal to Mr. Tanner by saying he wasn't crazy and helping find the woodpeckers. Like it says in the passage "That old coot is loony." He is not!" Hannah insisted. She stood by her friend in a true show of loyalty. Mr. Tanner showed his loyalty to the birds he loved by telling people "My family sold you the land, but they didn't sell you the air." Also, he tried to get the government to make his house into a endangered Land for the birds to live on. He tried to do what was right for the birds and succeeded in finding his goal.

SCORE POINT: 3

The response identifies one character that is loyal (“Hannah”) and provides two details from the passage as support (“Hannah sticks up for Mr. Tanner, and tells her brother that he isn’t crazy” and “When Hannah gets done looking for the birds on the first day she wants to give up, but she doesn’t”). The response shows evidence of a general, but not a comprehensive, understanding of the task.

① When Hannah is talking to her brother he says that Mr. Tanner is crazy. But Hannah sticks up for Mr. Tanner, and tells her brother that he isn't crazy. Also that he doesn't know if Mr. Tanner wants attention or not because she knows he doesn't because he doesn't like attention.

② When Hannah gets done looking for the birds on the first day she wants to give up, but she doesn't. She tries until she has looked in every bird house. She is loyal to Mr. Tanner because she never gave up.

**SCORE POINT: 2**

The response identifies two characters that are loyal (“One character that is loyal is Hannah” and “Another person that was loyal was Mr Tanner”), but fails to provide any details from the passage for support. The response shows evidence of only a basic understanding of the task.

1 One character that is loyal is Hannah.

2. She always helped Mr Tanner with his stuff.

3 Another person that was loyal was Mr Tanner

4. He was very nice to Hannah and the birds all the time.

**SCORE POINT: 1**

The response identifies one character that is loyal (“how loyal Mr. Tanner is”), but fails to provide any details from the passage for support. The response provides evidence of minimal understanding.

The theme of loyalty is developed in this passage by the author showing how loyal Mr. Tanner is

**SCORE POINT: 0**

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

Will it was not so good to  
Read it but the Title is "Hannah and  
The Birdman" by Roland smith. he is  
not a verey good write he is not so  
good to make a Book. Sometimes you  
can fall asleep Reading it to your  
sief somtime you can.

# **WRITING RESPONSES**

## SCORING STUDENT RESPONSES TO WRITING PROMPTS

### Domain Scoring

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

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

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

### Scoring Scale

Each domain is scored independently using the following scale:

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

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

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

### Nonscoreable and Blank Papers

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

**WRITING DOMAINS AND DEFINITIONS—  
2013 GRADE 8 AUGMENTED BENCHMARK EXAMINATION**

**Content (C)**

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

- Central idea
- Unity
- Elaboration
- Organization

**Style (S)**

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

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

**Sentence Formation (F)**

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

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

**Usage (U)**

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

- Standard inflections
- Word meaning
- Agreement
- Conventions

**Mechanics (M)**

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

- Capitalization
- Formatting
- Punctuation
- Spelling

This is one of the two writing prompts administered to all grade 8 students in April 2013.

**Prompt**

Everyone has a special talent. What is your talent?

Before you begin to write, think about your talent. It could be something you do at home like cook, babysit, style hair, or repair cars. It could be something you do really well related to music, art, sports, work, school, or something else. Describe your talent.

Now write an essay describing your special talent. Give enough detail so that the person reading your essay will understand.

**WRITER'S CHECKLIST**

1. Look at the ideas in your response.

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

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

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

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

3. Look at the words you have used.

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

4. Look at your handwriting.

- Can others read your handwriting with no trouble?

## WRITING SAMPLE RESPONSE 1

**Content: 4**

This response has a clear central idea (the writer’s talent at golf) and is fully elaborated with details that support it (“Driving is when you hit off the tee towards the hole,” “I have that practice to fall back on whenever I have a birdie putt on the eighteenth,” “I can regroup and make good level-headed shots”). There is clear organization and an effective closure that brings unity to the entire piece. The response demonstrates consistent control of the Content domain.

**Style: 4**

There is purposefully chosen information and vivid, precise vocabulary selected to affect the reader throughout the response (“run for their money,” “bone-crushing drive,” “I’m going to break this club in half and throw it in the pond”). The variety in sentence beginnings and lengths creates an interesting reading. An appropriate tone is maintained throughout, and the writer’s voice is strong. This response demonstrates consistent control of Style features.

**Sentence Formation: 4**

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

**Usage: 4**

The one usage error in this response (“succeed into”) is not enough to lower the score. Standard inflections, agreement, word meaning, and conventions are all consistently controlled.

**Mechanics: 4**

Despite misspelling words (“fundamentals,” “succeed”) and some missing commas, this response demonstrates consistent control of Mechanics features.

My special talent is golfing. Yes, I'm aware of the cliché "golf's for old people," but I still enjoy it greatly. It has been said that golf is the world's toughest game, and I certainly agree.

Even people who don't know a water hazard from a green know you have to hit the ball. And this is a true and accurate statement. Driving is when you hit off the tee towards the hole. Being much younger and smaller than many of the local golfers I still give them a run for their money at driving. I have learned fundamentals enough to "Tee it high and let it fly." "Drive for show, putt for dough."

The words you hear everytime after a near-crushing drive. While I was younger I couldn't do many things on the course well, so I worked on putting. So now I have that practice to fall back on whenever I have an birdie putt on the eighteenth.

Pure strength and a keen eye can only get you so far in golf. All golfers love golf on the good days, but the best love it on the bad days. Living next to

the course and playing at least one round a day. I've had my share of "I'm going to break this club in half and throw it in the pond"-days. Playing with my dad he would always make me calm down and "hit it like you know you can." This frustrating tedious work ethic has gotten me to where if I hit one bad I can regroup and make good level-headed shots.

As much as I want to say that I go shoot two under par daily I can't because I don't, but I can say I have potential and I will look to succeed into higher things. But if I've learned anything from golf it's that somewhere along the lines from the Scottish to the English the word "golf" and the word "patience" were meant to be the exact same.

## WRITING SAMPLE RESPONSE 2

### **Content: 3**

This response has a clear central idea (the writer’s talent for cooking). Details support the central idea, but elaboration is not complete enough for a higher score. Ideas are logically organized yet move somewhat quickly from one meal, food, or tool to the next. Overall, the response demonstrates reasonable control of the Content domain.

### **Style: 3**

This response has purposefully selected, specific vocabulary in many places (“simple salad,” “awesome italian food, like spegety,” “recipe requires,” “un-wanted water”). However, there is a lack of variety in sentence beginnings (“I can cook,” “I can also cook”) that makes the tone flat and the voice fade. The consistent use of “etc.” also detracts from Style. Overall, the response demonstrates reasonable control of features in this domain.

### **Sentence Formation: 4**

This response begins with a comma splice and contains a couple of fragments to begin paragraphs. However, all other sentences are formed correctly, including some that go beyond simplistic construction. The response demonstrates consistent control of Sentence Formation features.

### **Usage: 4**

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

### **Mechanics: 3**

This response includes several spelling errors (“hambergers,” “spegety,” “samin,” “Straners”) and a few capitalization errors. Punctuation and formatting are handled well. Overall, this response demonstrates reasonable control of Mechanics features.

Talent is something everyone has, my talent is cooking. I can cook many things. I can cook many different types of food, exotic foods, and there are lots of different tools I use as well.

First, the different types of food I cook. I can cook many types of breakfast foods, like eggs, french toast, pancakes, etc. I can cook different lunches, like grilled sandwiches, grilled cheese, hot dogs, etc. I also cook different brunches or snacks, like a simple salad or something. I also cook many different types of dinner, like steak, hamburgers, etc.

Second, I can cook many exotic foods. I can cook terrific mexican food; like tacos, burritos, etc. I can cook awesome italian food, like spaghetti, etc. I can cook many types of sea food, like salmon, shark, lobster, etc. I can also cook great chinese food, like orange chicken, stir fry, dumplings, etc.

Finally, the different tools I use to make the food. I use many types of knives to cut portions of the ingredient the recipe requires. I use different utensils to stir or mix ingredients. I use pots, pans, and skillets to cook my food all ways. I use different types of strainers to drain out all the unwanted water.

Obviously, my talent is cooking and I know a lot about it. Cooking is easy to anyone who takes the time to learn.

### WRITING SAMPLE RESPONSE 3

**Content: 2**

This response is organized around a clear central idea of a few of the writer’s talents. However, the lack of elaboration and the simplistic closure keep this at the 2 level for inconsistent control of the features of Content.

**Style: 2**

Vocabulary and details are general (“habbit of doing those things,” “faviorit things,” “knew how to ryhme”), and show little evidence of purposeful selection. As a result, the tone is flat and the voice is dim. There is inconsistent control of the features of Style.

**Sentence Formation: 4**

There are no Sentence Formation errors in this response, and there are examples of correctly formed simple and complex sentences. The response demonstrates consistent control of Sentence Formation.

**Usage: 2**

This response has missing verbs (“Those my,” “These my faviorit”), errors in inflection (“Those my talent,” “I got,” “I just start writting”), and word meaning (“of the top of my head” and “finna”). This response demonstrates inconsistent control of Usage features.

**Mechanics: 2**

This brief response has several spelling errors (“waights,” “habbit,” “faviorit,” “becuase,” “ryhme,” “writting”) and some missing punctuation. These errors, within the context of the limited amount of writing, combine to demonstrate inconsistent control of the Mechanics domain.

My talent is rapping, dunking, driving, and lifting weights. These are my talents, and what I like to do. I got a habit of doing these things. These are my favorite things to do. Now I'm finally telling you about them.

How I know how to rap is listening to one of my favorite rappers. It's easy, because I knew how to rhyme when I was a boy. Then when I was seven I just started writing songs at the top of my head. That's my story.





# ACTAAP

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