

ACTAAP

Arkansas Comprehensive Testing, Assessment, and Accountability Program

RELEASED ITEM

BOOKLET

GRADE 7

AUGMENTED BENCHMARK EXAMINATION

April 2014

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Table of Contents—2014 Augmented Benchmark Grade 7

	PAGE
PART I	
Overview	1
Scoring Student Responses to Open-Response Items	2
PART II	
RELEASED TEST ITEMS WITH CORRECT RESPONSES AND RUBRICS	
Released Reading Items	3
Released Writing Items	15
Released Writing Prompt	16
Released Mathematics Items	18
Released Science Items	36
PART III	
ITEM CORRELATION WITH CURRICULUM FRAMEWORK	
The Arkansas English Language Arts Curriculum Framework—Reading Strand	47
Released Items for Reading	48
Non-Released Items for Reading	49
The Arkansas English Language Arts Curriculum Framework—Writing Strand	50
Released Items for Writing	52
Non-Released Items for Writing	53
The Arkansas Mathematics Curriculum Framework	54
Released Items for Mathematics	56
Non-Released Items for Mathematics	57
The Arkansas Science Curriculum Framework	58
Released Items for Science	61
Non-Released Items for Science	62

The criterion-referenced tests implemented as part of the Arkansas Comprehensive Testing, Assessment, and Accountability Program (ACTAAP) are being developed in response to Arkansas Legislative Act 35, which requires the State Board of Education to develop a comprehensive testing program that includes assessment of the challenging academic content standards defined by the Arkansas Curriculum Frameworks.

As part of this program, all grade 7 students in Arkansas public schools participated in the *Grade 7 Augmented Benchmark Examination* in April 2014.

This Released Item Booklet for the *Grade 7 Augmented Benchmark Examination* contains test questions or items that were asked of students during the April 2014 operational administration. The test items included in Part II of this booklet are some of the items that contributed to the student performance results for that administration.

Students were given between two and three hours each day to complete assigned test sessions during the five days of testing in April 2014. Students were permitted to use a calculator for the mathematics items (both multiple-choice and open-response), with the exception of mathematics questions 1–8 in this Released Item Booklet (items 1–10 in the test booklet). Students were also supplied with a reference sheet to be used during the mathematics sessions so that all students would have equal access to this information during testing. (See the reference sheet on page 35 of this booklet.) All of the reading, writing, mathematics, and science multiple-choice items within this booklet have the correct response marked with an asterisk (*). The open-response questions for reading, mathematics, science, and the essay prompt for writing are listed with scoring guides (rubrics) immediately following. These rubrics provide information on the scoring model used for each subject, with the scoring model for writing defining the overall curricular and instructional link for that subject with the *Arkansas English Language Arts Curriculum Framework*. The domain scoring model, implemented within Arkansas for a number of years, illustrates the appropriate instructional approaches for writing within the state.

The development of the *Grade 7 Augmented Benchmark Examination* was based on the Arkansas Curriculum Frameworks. These frameworks have common distinct levels: Strands to be taught in concert, Content Standards within each Strand, and Student Learning Expectations within each Content Standard. Abridged versions of the *Arkansas English Language Arts Curriculum Framework—Reading Strand*, *Arkansas English Language Arts Curriculum Framework—Writing Strand*, *Arkansas Mathematics Curriculum Framework*, and *Arkansas Science Curriculum Framework* can be found in Part III of this booklet. It is important to note that these abridged versions list only the predominant Strand, Content Standard, and Student Learning Expectation associated with each item. However, since many key concepts within the Arkansas Curriculum Frameworks are interrelated, in many cases there are other item correlations or associations across Strands, Content Standards, and Student Learning Expectations.

Part III of the Released Item Booklet also contains a tabular listing of the Strand, Content Standard, and Student Learning Expectation that each question was designed to assess. The multiple-choice and open-response items found on the *Grade 7 Augmented Benchmark Examination* were developed in close association with the Arkansas education community. Arkansas teachers participated as members of Content Advisory Committees for each subject area, providing routine feedback and recommendations for all items. The number of items associated with specific Strands, Content Standards, and Student Learning Expectations was based on approximate proportions suggested by the Content Advisory Committee, and their recommendations were accommodated to the greatest extent possible given the overall test design. Part III of the Released Item Booklet provides Arkansas educators with specific information on how the *Grade 7 Augmented Benchmark Examination* items align or correlate with the Arkansas Curriculum Frameworks to provide models for classroom instruction.

PART I Scoring Student Responses to Open-Response Items

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.

The Arkansas Benchmark Rangefinding Committee assisted in the development of the scoring criteria. The committee comprises active Arkansas educators with expertise in science, math, English, and/or language arts education.

Reader Training

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

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

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

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

Scoring Procedures

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

8 Incredible Elephant Tales

by Scott Elder

Photograph by Michael Nichols

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

1

Elephants teach each other.

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



2

Elephants listen to their elders.

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

3

Elephants really never forget.

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

4

Elephants figure out things with their trunks.

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

5

Elephants care for the injured.

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

6

Elephants feel sad when another dies.

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

7

Elephants make long-distance calls.

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

8

Elephants adopt orphans.

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

1 According to the passage, which relationship shows that humans are smarter than elephants?

- A** eye size compared to head size
- B** eye size compared to brain size
- C** head size compared to body size
- * **D** brain size compared to body size

2 According to the passage, elephants can learn from

- A** avoiding human behavior.
- * **B** observing other elephants.
- C** practicing several times.
- D** fighting other animals.

3 Which of the following **best** explains why elephant families split up into smaller groups when searching for food?

- * **A** Food is scarce and spread over a large area.
- B** Too big a group will fight over patches of plants.
- C** Young elephants could be injured in a large herd.
- D** Each group brings a different type of food back to share.

- 4 Read this dictionary entry.

tank

n 1 prison cell 2 armored vehicle used in combat 3 large container that holds liquid;
v 4 to drop suddenly

Which definition from the dictionary entry matches the word tank as it is used in section 4?

- A definition 1
 - B definition 2
 - * C definition 3
 - D definition 4
- 5 According to the passage, elephants use their trunks in all of the following activities **except**
- * A wrestling.
 - B throwing.
 - C gripping.
 - D drinking.

- 6 What is the meaning of tranquilize as it is used in section 5?

- A to study by observation
- * B to calm with medicine
- C to become confused
- D to welcome guests

- 7 Which behavior **best** shows how elephants rely on one another?

- A remembering events from the past
- B feeling sad upon finding elephant bones
- * C visiting family members when they are sick
- D recognizing the call of many other elephants

- 8 In which area of the library would this passage **most likely** be found?

- A Fiction
- B Reference
- C Biography
- * D Nonfiction

Reading Item A—2014 Grade 7

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

Reading Item A Scoring Rubric—2014 Grade 7

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

Safety Tips: Inline Skating

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

Why Is Inline Skating Safety Important?

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

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

Gear Guidelines

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

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

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

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

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

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

Before You Start Skating

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

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

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

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

While Skating

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

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

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

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

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

A Few Other Reminders

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

9 According to the passage, which parts of the body get hurt most often when inline skating?

- A** legs and feet
- B** head and neck
- * **C** hands and arms
- D** knees and ankles

10 Read this dictionary entry.

gear
n 1 toothed wheel 2 equipment
 3 level of functioning 4 harness

Which definition from the dictionary entry matches the word gear as it is used in paragraph 3?

- A** definition 1
- * **B** definition 2
- C** definition 3
- D** definition 4

11 According to the passage, an inline skating helmet differs from a bicycle helmet in that it

- A** is lighter.
- B** is stronger.
- C** fits tighter around the head.
- * **D** comes down lower in the back.

12 What is the meaning of the word invest as it is used in paragraph 5?

- A** exchange
- * **B** purchase
- C** organize
- D** amaze

13 What is the main idea of paragraph 11?

- A** Skate instructors can offer tips to new skaters.
- B** Skaters should practice falling before skating.
- C** Inline skaters are likely to have minor accidents.
- * **D** New skaters should develop skills before skating.

- 14** Based on the information in the passage, inline skating is popular because it is
- A** good training for skateboarding.
 - B** an easy way to meet people.
 - * **C** a fun way to exercise.
 - D** safer than bicycling.

- 15** In which area of the library would “Safety Tips: Inline Skating” **most likely** be found?
- A** Biography
 - * **B** Reference
 - C** Fiction
 - D** Poetry

- 16** The author wrote this passage **most likely** to
- * **A** explain how inline skaters can stay safe.
 - B** argue reasons for learning inline skating.
 - C** describe the types of injuries inline skaters get.
 - D** entertain readers with a story about inline skating.

Reading Item B—2014 Grade 7

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

Reading Item B Scoring Rubric—2014 Grade 7

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

- 1** ¹Birds aren't the only animals that sing. ²Scientists have learned that humpback whales sing some of the longest and most complex songs of any animal. ³The songs are made up of themes, or repeated groups of notes. ⁴Every year the whales add new themes to their songs and let old themes drop; therefore, their songs are continually evolving. ⁵We still do not know the purpose of whale songs, but most scientists agree that whales use the songs to communicate with each other.

Which of the following sentences is the **best** summary of the paragraph above?

- * **A** Humpback whales communicate using long, constantly changing songs.
- B** Themes are sets of notes within a song that are repeated.
- C** Birds and whales aren't much alike, except that they both sing songs.
- D** Humpback whale songs are longer and more complicated than bird songs.

- 2** Calvin wants to apologize _____ interrupting the conversation.

Which word **best** completes this sentence?

- * **A** for
- B** about
- C** at
- D** with

- 3** **A dozen electric guitarists jammed together, creating music that _____.**

Which is the **best** use of hyperbole to complete this sentence effectively?

- A** got the crowd cheering
- B** made my ears throb after a while
- * **C** caused neighbors in four states to complain
- D** moved some people to stand on their seats and sing

- 4** You are writing a persuasive essay on the importance of recycling. Which would be the **most** effective conclusion?

- A** In conclusion, there are many good reasons to recycle.
- B** To sum up, the three best reasons to recycle are to help the environment, to save money, and to conserve resources.
- C** I know that recycling is not very exciting, but I hope my paper has not bored you too much and that you will try recycling soon.
- * **D** As you can see, it's easy to help protect our environment—just toss that can into the recycling bin instead of the trash!

WRITING PROMPT

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

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

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

WRITER'S CHECKLIST

- | | |
|--|---|
| <p>1. Look at the ideas in your response.</p> <ul style="list-style-type: none"><input type="checkbox"/> Have you focused on one main idea?<input type="checkbox"/> Have you used enough detail to explain yourself?<input type="checkbox"/> Have you put your thoughts in order?<input type="checkbox"/> Can others understand what you are saying? <p>2. Think about what you want others to know and feel after reading your paper.</p> <ul style="list-style-type: none"><input type="checkbox"/> Will others understand how you think or feel about an idea?<input type="checkbox"/> 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.)<input type="checkbox"/> Do you have sentences of different lengths? (Hint: Be sure you have a variety of sentence lengths.) | <ul style="list-style-type: none"><input type="checkbox"/> Are your sentences alike? (Hint: Use different kinds of sentences.) <p>3. Look at the words you have used.</p> <ul style="list-style-type: none"><input type="checkbox"/> Have you described things, places and people the way they are? (Hint: Use enough detail.)<input type="checkbox"/> Are you the same person all the way through your paper? (Hint: Check your verbs and pronouns.)<input type="checkbox"/> Have you used the right words in the right places? <p>4. Look at your handwriting.</p> <ul style="list-style-type: none"><input type="checkbox"/> Can others read your handwriting with no trouble? |
|--|---|

Domain Scoring Rubric

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
- Elaboration
- Unity
- Organization

Style (S)

The Style domain comprises those features that show the writer 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
- Sentence variety
- Tone
- Voice
- Selected information

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

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
- Agreement
- Word meaning
- 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
- Punctuation
- Formatting
- Spelling

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, is done with the assistance of a committee of Arkansas teachers, language arts supervisors, 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."

CALCULATOR NOT PERMITTED—ITEMS 1–8

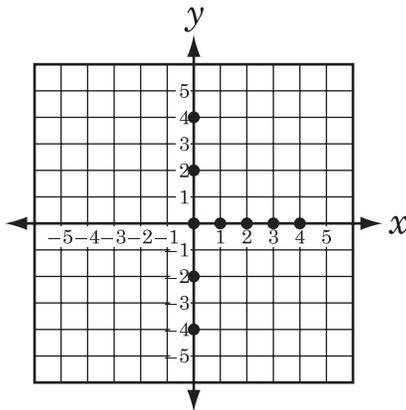


- 1 When Calvin woke up the temperature outside was -4°F . He checked the temperature hourly and made the table below.

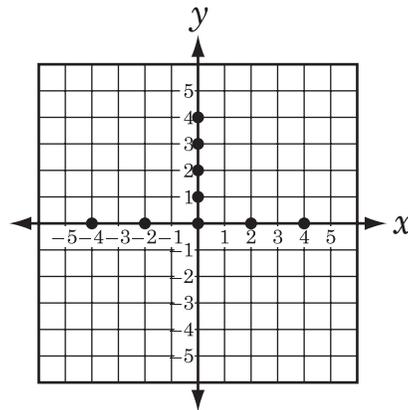
Number of Hours Passed	Temperature ($^{\circ}\text{F}$)
0	-4
1	-2
2	0
3	2
4	4

Which graph shows the data in the table plotted correctly?

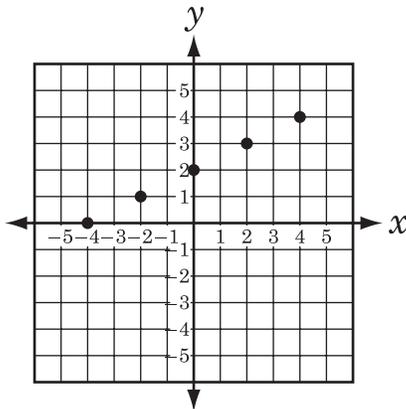
A



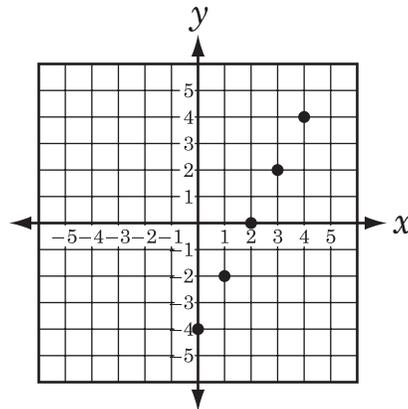
B



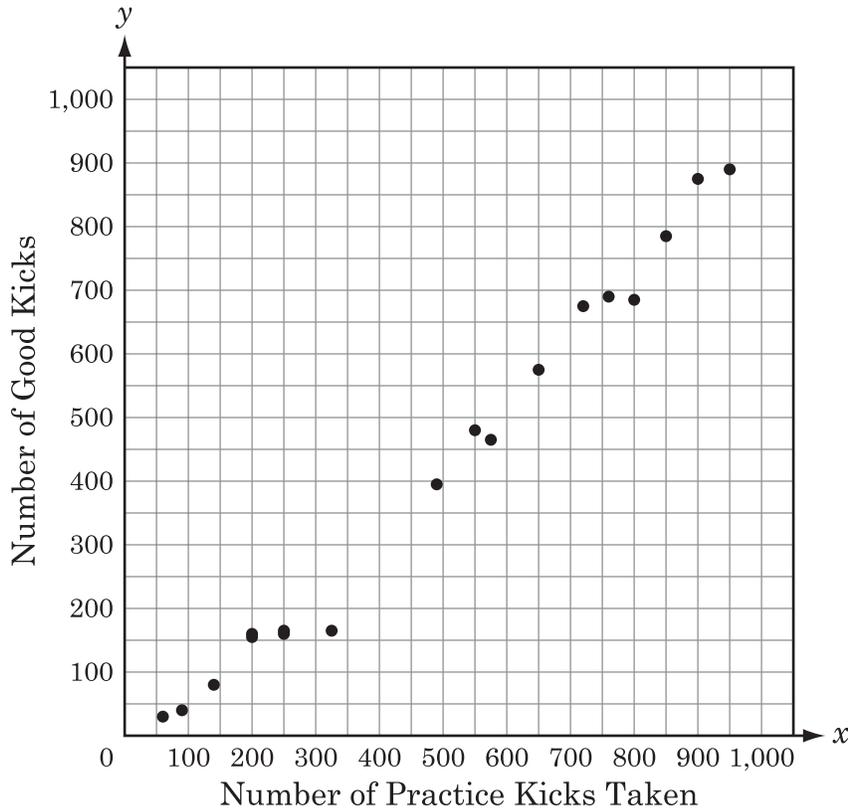
C



***D**



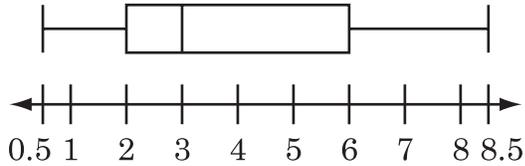
- 2 The kickers for several football teams were asked to keep track of the number of practice kicks they took in a pre-season, and the number of good kicks they made. The data is shown on the scatter plot.



Which is the most accurate statement about the data in the scatter plot?

- * **A** As the number of practice kicks increases, the number of good kicks increases.
- B** As the number of practice kicks increases, the number of good kicks decreases.
- C** The scatter plot does not show a relationship between practice kicks and good kicks.
- D** As the number of practice kicks increases, the number of good kicks stays constant.

- 3 The box-and-whisker plot shows the data for band members and the time they spent this past week practicing their musical instruments.



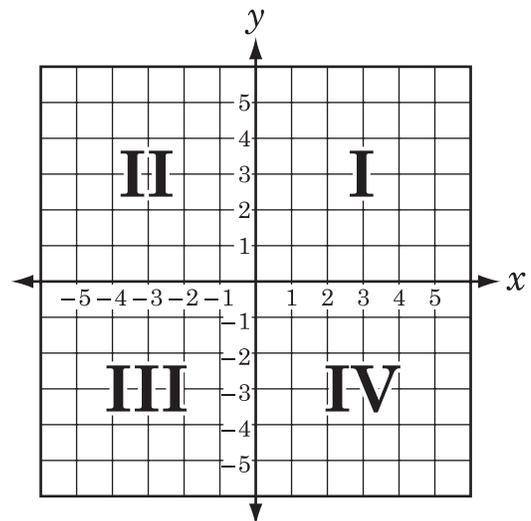
What is the range of the data?

- A 1
 - B 3
 - C 4
 - * D 8
- 4 Angelo is filling his bathtub. Which of the following would **most likely** be the volume of the bathtub?
- * A 250 liters
 - B 250 kiloliters
 - C 250 milliliters
 - D 250 centiliters

- 5 According to the 2010 census, the population of Arkansas was approximately 2,930,000 people. What is this number written in scientific notation?

- A 2.93×10^7
- B 0.293×10^7
- * C 2.93×10^6
- D 0.293×10^6

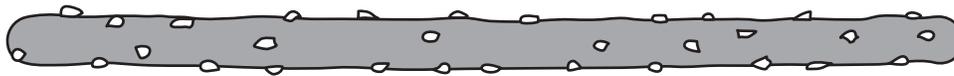
- 6 The quadrants are labeled on the coordinate plane below.



The point $(-3, 6)$ is in which quadrant?

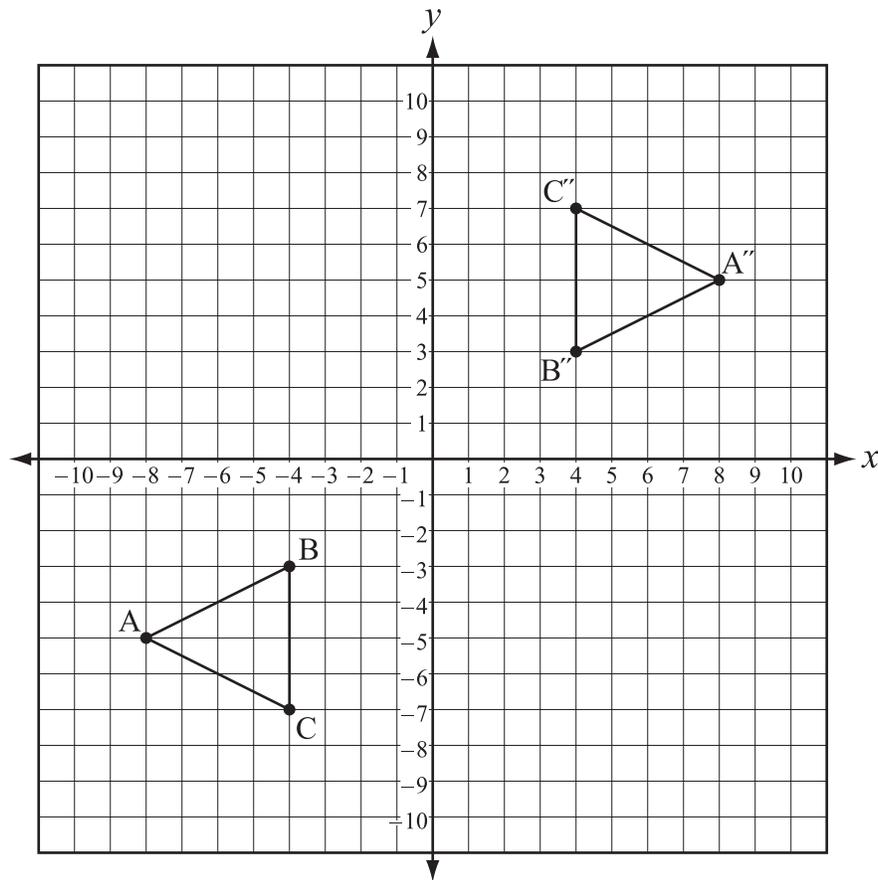
- A I
- * B II
- C III
- D IV

- 7 To the nearest millimeter, what is the length of the pretzel stick shown below?



- A 5 millimeters
- B 12.7 millimeters
- C 50 millimeters
- * D 127 millimeters

- 8 Wanda drew figure ABC on the graph. Then she performed two transformations to produce image $A''B''C''$.



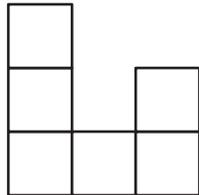
What two transformations could Wanda have performed to produce image $A''B''C''$?

- * **A** a reflection over the y -axis, then a reflection over the x -axis
- B** a reflection over the x -axis, then a translation across the y -axis
- C** a translation over the y -axis, then a reflection over the x -axis
- D** a translation over the x -axis, then a translation across the y -axis

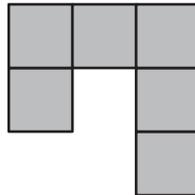
CALCULATOR PERMITTED—ITEMS 9–20 and A–C



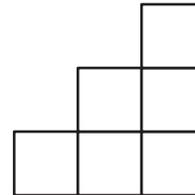
- 9 All of the following are views of the same stack of cubes.



Front View

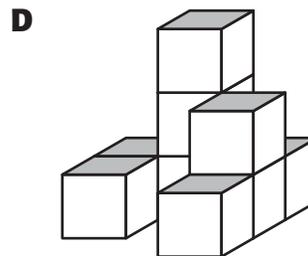
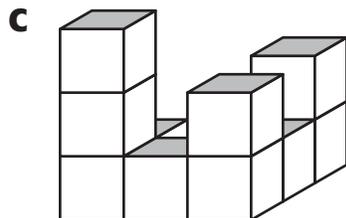
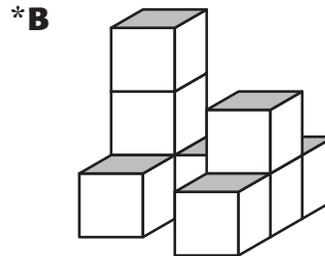
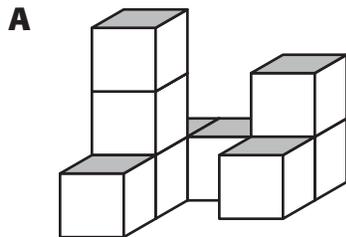


Top View



Right-Side View

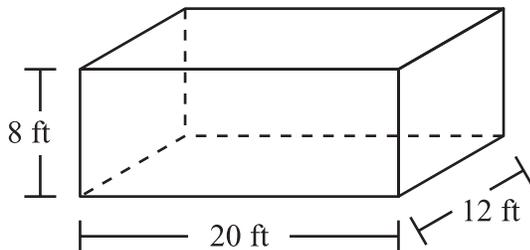
Which figure shows a three-dimensional view of the stack of cubes represented above?



- 10** Mr. Turner, a 7th-grade math teacher, writes 25 different survey questions and puts them in a hat. Each student draws a survey question without looking, then asks the question of a population. Carlos draws the survey question “What is your favorite type of music?” He surveys the 9 classmates closest to him. What type of sample population has Carlos chosen?

- A** a random sample
- B** a probability sample
- * **C** a convenience sample
- D** a representative sample

- 11** Dwight is doing some construction work on his home. One downstairs room is 20 feet long, 12 feet wide, and 8 feet high. He wants to divide this room into one large room and one small room.



If the large room will have a length of 12 feet, what will be the volume of the smaller room?

- A** 448 cubic feet
- * **B** 768 cubic feet
- C** 1,152 cubic feet
- D** 1,920 cubic feet

- 12** Micah’s mother took a group of kids to the movies. She bought 5 tickets for \$9.00 each and then bought a tub of popcorn for each person. Which expression represents this situation if p is the price of one tub of popcorn?

- A** $9 + p$
- B** $45 + p$
- * **C** $45 + 5p$
- D** $5(45 + p)$

13 Which function table represents points on the line $y = 2x + 3$?

***A**

x	y
-2	-1
0	3
3	9

B

x	y
-2	-1
0	5
3	6

C

x	y
-2	-4
0	0
3	6

D

x	y
-2	$-\frac{5}{2}$
0	$-\frac{3}{2}$
3	0

14 The café at a science museum serves pea soup every 3 days and clam chowder every 4 days. Today, the café is serving both pea soup and clam chowder. How many days will pass until the café again serves both soups on the same day?

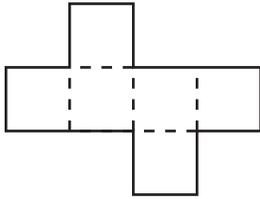
- A** 3 days
- B** 4 days
- C** 7 days
- *D** 12 days

15 A figure has four vertices: $P(0, 0)$, $Q(0, 5)$, $R(7, 6)$, and $S(6, 0)$. Which is the most specific classification for the figure PQRS?

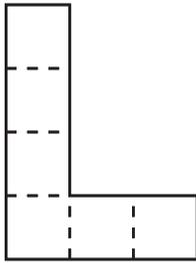
- A** square
- B** rectangle
- *C** quadrilateral
- D** parallelogram

16 Which net would form a cube?

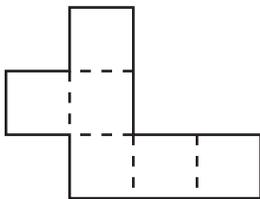
* **A**



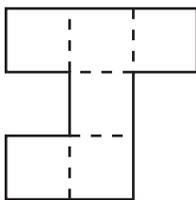
B



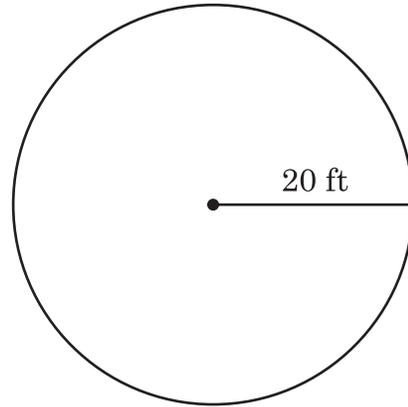
C



D



17 John is building a homemade ice skating rink in his backyard. The radius of the circular tarp he will use as the foundation is 20 feet.



To the nearest square foot, what is the area of the skating rink?

A 63 ft²

B 126 ft²

* **C** 1,256 ft²

D 3,944 ft²

- 18** Look at the table below.

Input (x)	Output (y)
-2	-5
-1	-2
0	1
1	4
2	7

What is the rule for finding the output in the table?

- A** subtract 3 from x
 - * **B** multiply x by 3, then add 1
 - C** add 1 to x , then multiply by 5
 - D** multiply x by 2, then subtract 1
- 19** The first transatlantic telegraph cable was approximately 4600000 meters long. About how many kilometers long was the cable?
- A** 460 km
 - * **B** 4600 km
 - C** 46000 km
 - D** 460000 km

- 20** A basketball team scored the following number of points in their last 4 games.

115, 80, 65, 90

How many points does the team need to score in their next game to have a mean score of 95?

- A** 95
- B** 103
- C** 105
- * **D** 125

Mathematics Item A—2014 Grade 7
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- A** Chase is calculating membership costs for his gym, *Fit World*. He uses the equation $25m + 99 = c$ to find the cost of his membership which includes the \$25 monthly fee and the \$99 sign-up fee. Let c = the cost and m = the number of months.
1. Make a table of values to represent the costs for 3 months, 6 months, 9 months, and 12 months.
 2. A new gym, *Health Space*, opened nearby and has no sign-up fee with a \$37 monthly fee. In which month would *Health Space* first become more expensive than Chase's current gym? Explain and show your work.

BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

Mathematics Item A Scoring Rubric—2014 Grade 7

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

Solution and Scoring

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

Mathematics Item B—2014 Grade 7

B Use the coordinate grid in your answer document to answer Parts 1 through 3.

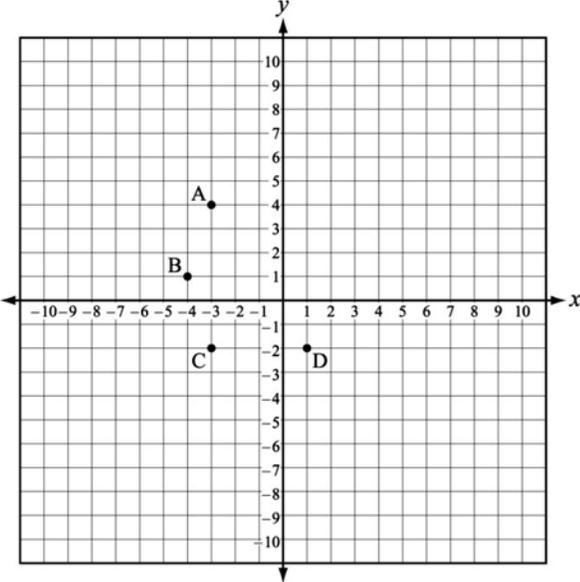
1. On the coordinate grid in your answer document, plot and label the following ordered pairs.
 - A $(-3, 4)$
 - B $(-4, 1)$
 - C $(-3, -2)$
 - D $(1, -2)$
2. Plot two more points so that all six points become the corners of a shape with three pairs of parallel sides. Label those two new points E and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

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

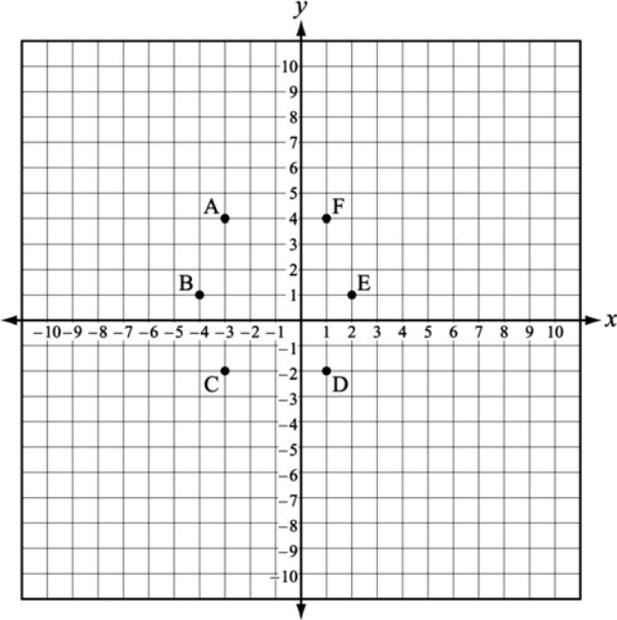
Mathematics Item B Scoring Rubric—2014 Grade 7

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

Solution and Scoring

Part	Points
1	<p>2 points possible:</p> <p>2 points: Correct answer: Points A, B, C, and D are plotted and labeled correctly (<i>½ point apiece</i>)</p> <p>Give credit for the following or equivalent:</p> <p>Ex.</p>  <p><i>Note: Inconsistent interval(s) result in a score max of 1 point in Part 1 only. Points not labeled also result in a score max of 1 point in Part 1 only.</i></p>

Solution and Scoring

Part	Points
<p>2</p>	<p>2 points possible:</p> <p>1 point: Correct answer: (1, 4) plotted and labeled as E or F <i>Or correct answer based on Part 1</i></p> <p>AND</p> <p>1 point: Correct answer: (2, 1) or (0, 1) plotted and labeled as E or F <i>Or correct answer based on Part 1</i> Ex.</p> 
<p>3</p>	<p>1 point possible:</p> <p>1 point: Fully correct answer: Irregular Hexagon</p> <p>OR</p> <p>½ point: Partially correct answer: Hexagon</p>

Mathematics Item C—2014 Grade 7
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- C** Sofia has 44 feet of fencing to go around a vegetable garden.
- Sofia wants the garden to be rectangular or square. What is the **greatest** area she can make the garden? Explain and give the dimensions of the garden.
 - Sofia also has a rectangular flower garden. Is it possible for the flower garden to have the same area as the vegetable garden but need more than twice the fencing as the vegetable garden? Explain, using possible dimensions.

BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

Mathematics Item C Scoring Rubric—2014 Grade 7

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

Solution and Scoring

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

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Mathematics Reference Sheet Grade 7

Use the information below, as needed, to answer questions on the Mathematics test.

Square Area = s^2 Perimeter = $4s$	Rectangle Area = lw Perimeter = $2(l + w)$	Triangle Area = $\frac{1}{2}bh$ Perimeter = $a + b + c$
Circle Area = πr^2 Circumference = $2\pi r$	Parallelogram Area = bh Perimeter = $2a + 2b$	Equilateral Triangle Perimeter = $3s$
Cube Volume = s^3	Cone Volume = $\frac{1}{3}\pi r^2h$	Rectangular Prism Volume = lwh
Pyramid Volume = $\frac{1}{3}(\text{area of base})h$	Sphere Volume = $\frac{4}{3}\pi r^3$	Cylinder Volume = πr^2h
Miscellaneous Formulas and Conversions		Trapezoid Area = $\frac{1}{2}h(b_1 + b_2)$

$$\pi \approx 3.14$$

$$\text{distance} = \text{rate} \times \text{time}$$

$$1 \text{ foot} = 12 \text{ inches}$$

$$1 \text{ cup} = 8 \text{ ounces (oz)}$$

$$1 \text{ kilogram} = 1000 \text{ grams}$$

$$1 \text{ yard} = 3 \text{ feet}$$

$$1 \text{ pint} = 2 \text{ cups}$$

$$1 \text{ meter} = 100 \text{ centimeters}$$

$$1 \text{ mile} = 5,280 \text{ feet}$$

$$1 \text{ quart} = 2 \text{ pints}$$

$$1 \text{ decimeter} = 10 \text{ centimeters}$$

$$1 \text{ gallon} = 4 \text{ quarts}$$

$$1 \text{ centimeter} = 10 \text{ millimeters}$$

$$1 \text{ kilometer} = 1000 \text{ meters}$$

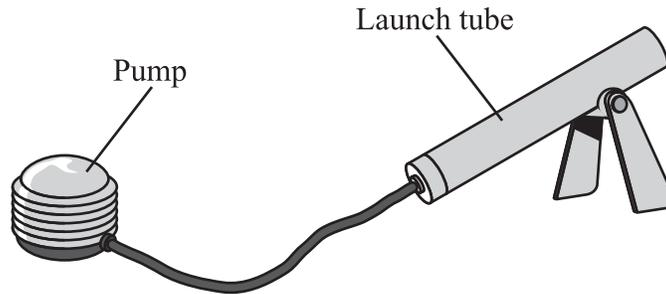
$$1 \text{ liter} = 1000 \text{ milliliters}$$

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Arkansas Department of Education April 2011.



- 1** A student investigates the relationship between the length of a launch tube and the distance an object travels.

The student tests five launch tubes that are identical except for length. Each tube is used to launch a marshmallow. The distances the marshmallows travel are measured. The diagram below shows the set-up.



The collected data are shown in the table below.

Data Table

Launch Tube Length (cm)	Distance Marshmallow Traveled (m)
10	2.7
15	3.3
20	4.3
25	5.8
30	6.2

Which conclusion is **best** supported by the data?

- A** Large objects travel longer distances than small objects.
- B** Large objects travel shorter distances than small objects.
- * **C** As the length of the tube increases, the distance an object travels increases.
- D** As the length of the tube increases, the distance an object travels decreases.

2 Which human body system forms a barrier between internal body structures and the external environment?

- A** nervous
- B** digestive
- C** circulatory
- * **D** integumentary

3 Which statement **best** explains why summer days are warmer than winter days in Arkansas?

- A** The Sun is closer to Earth in the summer than in the winter.
- B** The Sun has more sunspots in the summer than in the winter.
- C** Earth’s western hemisphere is tilted toward the Sun during the summer.
- * **D** Earth’s northern hemisphere is tilted toward the Sun during the summer.

4 Which statement **best** describes the development of a human embryo?

- * **A** A single cell becomes many cells.
- B** Each cell has a different function.
- C** Many cells combine to form one cell.
- D** All the cells have the same function.

5 Which pair of instruments can be used to measure wind chill?

- A** barometer and wind vane
- B** wind vane and anemometer
- C** thermometer and barometer
- * **D** anemometer and thermometer

6 Soccer players use their muscle systems to kick a ball into a goal.

What organ system coordinates the muscles?

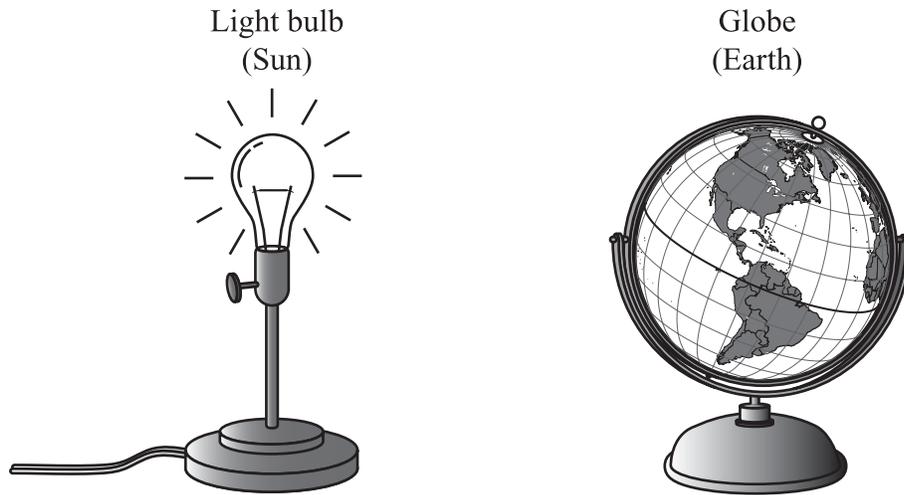
- * **A** The nervous system
- B** The endocrine system
- C** The respiratory system
- D** The circulatory system

7 Wind turbines are being used to generate electricity in many parts of the United States. One advantage of wind turbines is that no fossil fuels are burned.

Which of the following is a disadvantage of wind turbines?

- A** Wind turbines can emit dangerous radiation if damaged.
- B** Wind turbine farms must be located near large bodies of water.
- C** Wind turbines do not produce energy until many years after being built.
- * **D** Wind turbine farms require a lot of area compared to how much energy they produce.

- 8 A student is modeling the night and day cycle of Earth using a light bulb and a globe as shown below.



How can the student **best** model the night and day cycle?

- A turn the bulb on and off
 - * B spin the globe on its axis
 - C move the bulb in a circle around the globe
 - D move the globe in a circle around the bulb
-
- 9 Which method could be used to separate a solution of table salt and water?
- A mixing
 - B settling
 - C filtration
 - * D evaporation
- 10 Which gas is the most abundant in Earth's atmosphere?
- A oxygen
 - * B nitrogen
 - C water vapor
 - D carbon dioxide

- 11** A teacher puts a cup of coffee into the cup holder of a car. When the car stops suddenly some of the coffee spills out of the cup.

Which statement **best** explains why the coffee spills?

- * **A** The coffee stays in motion because the stopping force acts only on the car.
- B** The coffee stays in motion because a force from the cup holder pulls on the coffee.
- C** The stopping force on the car causes an equal and opposite reaction from the coffee.
- D** The stopping force causes the motion of the car to slow down and the motion of the coffee to speed up.

- 12** Which substance contributes **most** to the greenhouse effect?

- A** wood smoke
- B** nitrous oxides
- * **C** carbon dioxide
- D** nuclear radiation

- 13** People often use a mixture of salt and water to clean contact lenses.

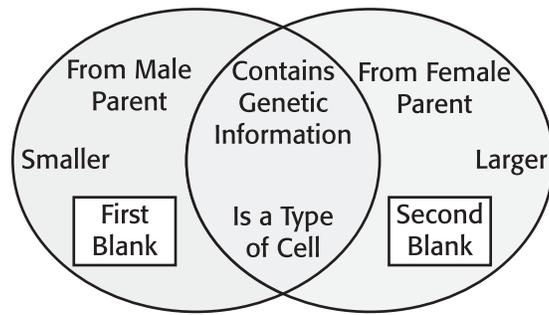
Which statement **best** describes this mixture?

- A** Salt is the solvent and water is the solute.
- * **B** Salt is the solute and water is the solvent.
- C** Salt is the solvent and water is the solution.
- D** Salt is the solution and water is the solvent.

- 14** Which process in plants is **most similar** to sexual reproduction in vertebrates?

- A** cell division
- B** self-pollination
- * **C** cross-pollination
- D** seed development

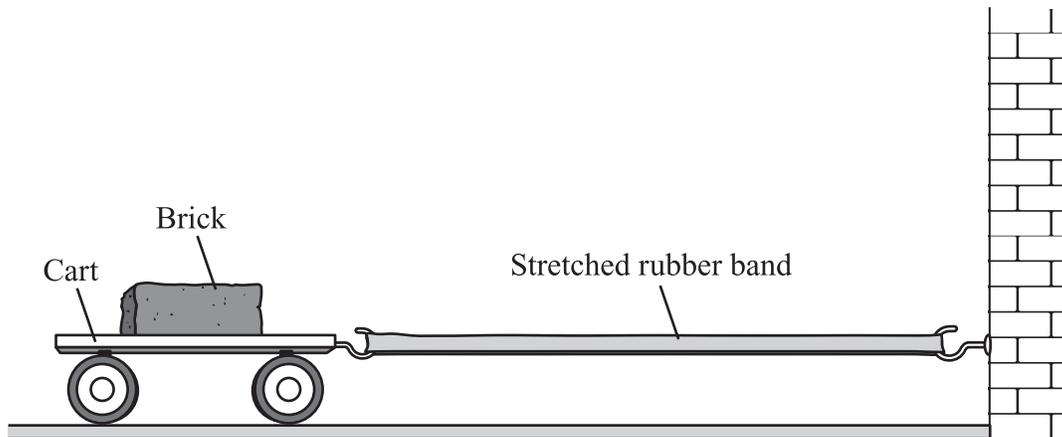
15



How should the first and second blanks be filled in to complete the Venn diagram above?

- * **A** First blank = Has a tail
Second blank = Has a round shape
- B** First blank = Does not move very much
Second blank = Has a tail
- C** First blank = Has a round shape
Second blank = Many produced at the same time
- D** First blank = Only one produced at a time
Second blank = Many produced at the same time

- 16** A student investigates the effect of mass and force on acceleration. The student uses the setup shown in the diagram below.



When the student releases the cart, the rubber band pulls the cart toward the wall. The student changes the mass of the cart by adding bricks. The student changes the force on the cart by using more rubber bands. The student performs four tests as described in the table below.

Acceleration Investigation

Test	Number of Bricks	Number of Rubber Bands
1	1	1
2	1	2
3	2	1
4	2	2

In which test is the acceleration of the cart **most likely** the greatest?

- A** Test 1
- * **B** Test 2
- C** Test 3
- D** Test 4

- 17** As part of a science fair experiment, a student measures the heights of five plants. The data are shown in the table below.

Plant Data

Plant	1	2	3	4	5
Height (cm)	15	15	25	25	20

Which set of numbers **best** represents the mean and the range for the plant heights (cm)?

- A** mean: 10, range: 20
- B** mean: 15, range: 25
- * **C** mean: 20, range: 10
- D** mean: 25, range: 15

Science Item A—2014 Grade 7

A It is a hot, sunny day. Billy and his friends are swimming in a cold lake. Billy gets out of the water because he starts to feel cold.

1. Identify two body systems that work together to keep Billy’s body temperature stable when he starts to feel cold.
2. Describe how the body systems identified in Part 1 work together to keep Billy’s body temperature stable.

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

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

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

Science Item A Scoring Rubric—2014 Grade 7

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

Solution and Scoring

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

Science Item B—2014 Grade 7

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

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

BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

Science Item B Scoring Rubric—2014 Grade 7

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

Solution and Scoring

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

The Arkansas English Language Arts Curriculum Framework—Reading Strand*

Content Standards	Student Learning Expectations
<p>9. Comprehension: Students shall apply a variety of strategies to read and comprehend printed material.</p>	<p>4. Generate and prioritize questions related to universal themes to interpret meaning. 6. Connect own background knowledge and personal experience to make inferences and to respond to new information presented in text. 7. Infer a character's impact on plot development. 9. Analyze literary elements of fiction with emphasis on plot development, including conflict, rising action, climax, falling action, and resolution. 12. Identify main ideas and supporting evidence in short stories and novels. 14. Use knowledge of text structure(s) to enhance understanding with emphasis on problem/solution. 16. Use skimming, scanning, note-taking, outlining, and questioning as study strategies.</p>
<p>10. Variety of Text: Students shall read, examine, and respond to a wide range of texts for a variety of purposes.</p>	<p>4. Understand how word choice and language structure convey an author's viewpoint. 5. Use skimming, scanning, note taking, outlining, and questioning as study strategies. 7. Read a variety of literature, including short stories, science fiction, legends, and myths.</p>
<p>11. Vocabulary, Word Study, and Fluency: Students shall acquire and apply skills in vocabulary development and word analysis to be able to read fluently.</p>	<p>4. Use knowledge of root words and affixes and word relationships to determine meaning. 8. Identify and explain idioms and comparisons such as analogies, metaphors and similes to infer the literal and figurative meanings or phrases. 10. Use context to determine meaning of multiple meaning words.</p>

* The Content Standards and Student Learning Expectations listed are those that specifically relate to the released and non-released test items in this booklet.

Released Items for Reading*

Item	Strand	Content Standard	Student Learning Expectation
1	R	9	16
2	R	9	14
3	R	9	6
4	R	11	10
5	R	9	16
6	R	11	4
7	R	9	6
8	R	10	7
A	R	9	14
9	R	10	5
10	R	11	10
11	R	10	5
12	R	11	4
13	R	9	12
14	R	9	6
15	R	10	7
16	R	9	6
B	R	9	14

* Only the predominant Strand, Content Standard, and Student Learning Expectation are listed for the English Language Arts items.

Non-Released Items for Reading*

Strand	Content Standard	Student Learning Expectation
R	9	7
R	11	10
R	9	16
R	10	4
R	11	8
R	9	9
R	10	4
R	9	4
R	9	7

* Only the predominant Strand, Content Standard, and Student Learning Expectation are listed for the English Language Arts items.

PART III Item Correlation with Curriculum Framework—Grade 7

The Arkansas English Language Arts Curriculum Framework—Writing Strand*

Content Standards	Student Learning Expectations
<p>4. Process: Students shall employ a wide range of strategies as they write, using the writing process appropriately.</p>	<p>8. Revise content for</p> <ul style="list-style-type: none"> • Central Idea • Organization • Unity • Elaboration (e.g., explanation, examples, description, etc.) • Clarity <p>11. Edit individually or in groups for appropriate grade-level conventions, within the following features:</p> <ul style="list-style-type: none"> • <i>Sentence formation</i> <ul style="list-style-type: none"> • Completeness • Absence of fused sentences • Expansion through standard coordination and modifiers • <i>Embedding</i> through standard subordination and modifiers • Standard word order • <i>Usage</i> <ul style="list-style-type: none"> • Standard inflections • Agreement • Word meaning • Conventions • <i>Mechanics</i> <ul style="list-style-type: none"> • Capitalization • Punctuation • Formatting • Spelling
<p>5. Purpose, Topics, Forms, and Audiences: Students shall demonstrate competency in writing for a variety of purposes, topics, and audiences employing a wide range of forms.</p>	<p>5. Write research reports and document sources, summarizing, and paraphrasing.</p>

* The Content Standards and Student Learning Expectations listed are those that specifically relate to the released and non-released test items in this booklet.

The Arkansas English Language Arts Curriculum Framework—Writing Strand* (continued)

Content Standards	Student Learning Expectations
<p>6. Students shall apply knowledge of Standard English conventions in written work.</p>	<p>5. Analyze personal and peer <i>sentence formation</i> for effective use of the parts of speech.</p> <ul style="list-style-type: none"> • Precise nouns • Pronouns • Demonstrative • Compound personal • Reflexive • Intensive • Personal • Interrogative • Relative • Indefinite • Active and linking verbs • Adjectives • Possessive • Article • Numeral • Descriptive • Adverbs • Manner • Time • Place • Degree • Negative • Conjunctions • Coordinate • Correlative • Subordinate
<p>7. Craftsmanship: Students shall develop personal style and voice as they approach the craftsmanship of writing.</p>	<p>1. Use figurative language purposefully, such as personification and hyperbole, to shape and control language to affect readers.</p> <p>6. Write to reflect ideas/interpretations of multicultural and universal themes and concepts.</p>

Released Items for Writing*

Item	Strand	Content Standard	Student Learning Expectation
1	W	5	5
2	W	6	5
3	W	7	1
4	W	7	6

* Only the predominant Strand, Content Standard, and Student Learning Expectation are listed for the Writing items.

Non-Released Items for Writing*

Strand	Content Standard	Student Learning Expectation
W	4	11
W	4	11
W	4	11
W	4	8

* Only the predominant Strand, Content Standard, and Student Learning Expectation are listed for the Writing items.

The Arkansas Mathematics Curriculum Framework*

Strands	Content Standards	Student Learning Expectations
1—Number and Operations (N)	1. Number Sense: Students shall understand numbers, ways of representing numbers, relationships among numbers, and number systems.	2. Demonstrate, with and without appropriate <i>technology</i> , an understanding of <i>place value</i> using powers of 10 and write numbers greater than one in <i>scientific notation</i> . 4. Find decimal and <i>percent equivalents</i> for mixed numbers and explain why they represent the same value. 5. Compare and represent <i>integers</i> , fractions, decimals and mixed numbers and find their approximate location on a number line.
	2. Properties of Number Operations: Students shall understand meanings of operations and how they relate to one another.	2. Apply the addition, subtraction, multiplication and division properties of equality to one-step <i>equations</i> with <i>integers</i> , fractions, and decimals. 3. Apply rules (conventions) for <i>order of operations</i> to <i>integers</i> and positive <i>rational numbers</i> including parentheses, brackets or exponents.
	3. Numerical Operations and Estimation: Students shall compute fluently and make reasonable estimates.	1. Compute, with and without appropriate <i>technology</i> , with <i>integers</i> and positive <i>rational numbers</i> using real world situations to solve problems. 2. Solve with and without appropriate <i>technology</i> , multi-step problems using a variety of methods and tools (i.e., objects, mental computation, paper and pencil). 4. Apply <i>factorization</i> , <i>LCM</i> , and <i>GCF</i> to solve problems using more than two numbers and explain the solution. 6. Solve, with and without <i>technology</i> , real world <i>percent</i> problems. Ex. I=PRT
2—Algebra (A)	4. Patterns, Relations, and Functions: Students shall recognize, describe, and develop patterns, relations, and functions.	1. Create and complete a <i>function</i> table (<i>input/output</i>) using a given rule with two operations. 2. Identify and extend <i>patterns</i> in real world situations. 3. Interpret and write a rule for a two operation <i>function table</i> . Ex. multiply by 2, add 1
	5. Algebraic Representations: Students shall represent and analyze mathematical situations and structures using algebraic symbols.	1. Solve and graph one-step <i>linear equations</i> and <i>inequalities</i> using a variety of methods (i.e., hands-on, <i>inverse operations</i> , symbolic) with real world application with and without <i>technology</i> . 2. Solve simple <i>linear equations</i> using <i>integers</i> and graph on a <i>coordinate plane</i> . Ex. use a T chart 3. Translate phrases and sentences into <i>algebraic expressions</i> and <i>equations</i> including parentheses and positive and <i>rational numbers</i> and simplify <i>algebraic expressions</i> by combining like terms. 4. Write and evaluate <i>algebraic expressions</i> using positive <i>rational numbers</i> .
	6. Algebraic Models: Students shall develop and apply mathematical models to represent and understand quantitative relationships.	2. Represent, with and without appropriate <i>technology</i> , <i>linear equations</i> by plotting and graphing points in the <i>coordinate plane</i> using all four <i>quadrants</i> given data in a table from a real world situation.
	7. Analysis of Change: Students shall analyze change in various contexts.	1. Use, with and without appropriate <i>technology</i> , tables and graphs to compare and identify situations with constant or varying <i>rates</i> of change.

* The Content Standards and Student Learning Expectations listed are those that specifically relate to the released and non-released test items in this booklet.

The Arkansas Mathematics Curriculum Framework* (continued)

Strands	Content Standards	Student Learning Expectations
3—Geometry (G)	8. Geometric Properties: Students shall analyze characteristics and properties of 2- and 3-dimensional geometric shapes and develop mathematical arguments about geometric relationships.	1. Identify, draw, classify and compare geometric figures using models and real world examples. 3. Recognize the pairs of angles formed and the relationship between the angles including two <i>intersecting lines</i> and <i>parallel lines</i> cut by a <i>transversal</i> (<i>vertical, supplementary, complementary, corresponding, alternate interior, alternate exterior angles</i> and <i>linear pair</i>). 4. Use paper or physical models to determine the sum of the measures of <i>interior angles</i> of triangles and <i>quadrilaterals</i> .
	9. Transformation of Shapes: Students shall apply transformations and the use of symmetry to analyze mathematical situations.	2. Perform <i>translations</i> and <i>reflections</i> of <i>two-dimensional</i> figures using a variety of methods (paper folding, tracing, graph paper).
	10. Coordinate Geometry: Students shall specify locations and describe spatial relationships using coordinate geometry and other representational systems.	1. Plot points in the <i>coordinate plane</i> . 2. Plot points that form the <i>vertices</i> of a geometric figure and draw, identify and classify the figure.
	11. Students shall use visualization, spatial reasoning, and geometric modeling.	1. Build <i>three-dimensional</i> solids from <i>two-dimensional patterns</i> (<i>nets</i>). 2. Construct a building out of <i>cubes</i> from a set of views (front, top, side).
4—Measurement (M)	12. Physical Attributes: Students shall use attributes of measurement to describe and compare mathematical and real-world objects.	1. Understand, select, and use the appropriate units and tools (metric and customary) to measure length, weight, <i>mass</i> , and <i>volume</i> to the required degree of accuracy for real world problems. 2. Understand relationships among units within the same system. 3. Find different <i>areas</i> for a given <i>perimeter</i> and find a different <i>perimeter</i> for a given <i>area</i> .
	13. Systems of Measurement: Students shall identify and use units, systems, and processes of measurement.	2. Draw and measure distance to the nearest mm and 1/16 inch accurately. 3. Develop and use <i>strategies</i> to solve problems involving <i>area</i> of a <i>trapezoid</i> and <i>circumference</i> and <i>area</i> of a circle. 4. Derive and use formulas for <i>surface area</i> and <i>volume</i> of <i>prisms</i> and <i>cylinders</i> and justify them using geometric models and common materials. 5. Apply properties (scale <i>factors, ratio, and proportion</i>) of <i>congruent</i> or <i>similar</i> triangles to solve problems involving missing lengths and angle measures. 6. Find the distance between two points on a number line and locate the midpoint.
5—Data Analysis And Probability (D)	14. Data Representation: Students shall formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.	1. Identify different ways of selecting samples and compose appropriate questions. Ex. survey response, random sample, representative sample and convenience sample 3. Construct and interpret <i>circle graphs, box-and-whisker plots, histograms, scatter plots</i> and <i>double-line graphs</i> with and without appropriate <i>technology</i> .
	15. Data Analysis: Students shall select and use appropriate statistical methods to analyze data.	1. Analyze data displays, including ways that they can be misleading. 2. Analyze, with and without appropriate <i>technology</i> , a set of data by using and comparing measures of <i>central tendencies</i> (<i>mean, median, mode</i>) and <i>measures of spread</i> (<i>range, quartile, interquartile range</i>).
	16. Inferences and Predictions: Students shall develop and evaluate inferences and predictions that are based on data.	1. Make, with and without appropriate <i>technology, conjectures</i> of possible relationships in a <i>scatter plot</i> and approximate the <i>line of best fit</i> (<i>trend line</i>).
	17. Probability: Students shall understand and apply basic concepts of probability.	1. Understand that <i>probability</i> can take any value between 0 and 1 (events that are not going to occur have <i>probability</i> 0, events certain to occur have <i>probability</i> 1).

* The Content Standards and Student Learning Expectations listed are those that specifically relate to the released and non-released test items in this booklet.

Released Items for Mathematics*

Item	Strand	Content Standard	Student Learning Expectation
1	A	6	2
2	D	16	1
3	D	14	3
4	M	12	1
5	N	1	2
6	G	10	1
7	M	13	2
8	G	9	2
9	G	11	2
10	D	14	1
11	M	13	4
12	A	5	4
13	A	4	1
14	N	3	4
15	G	10	2
16	G	11	1
17	M	13	3
18	A	4	3
19	M	12	2
20	D	15	2
A	A	4	1
B	G	10	2
C	M	12	3

* Only the predominant Strand, Content Standard, and Student Learning Expectation are listed for the Mathematics items.

Non-Released Items for Mathematics*

Strand	Content Standard	Student Learning Expectation
D	15	1
N	3	6
G	8	4
M	13	5
G	8	3
M	13	6
A	5	2
A	7	1
N	3	1
N	3	2
N	1	5
G	8	1
N	2	2
D	17	1
D	15	2
A	4	2
N	2	3
A	5	3
N	1	4
A	5	1
D	15	1
N	3	2

* Only the predominant Strand, Content Standard, and Student Learning Expectation are listed for the Mathematics items.

PART III Item Correlation with Curriculum Framework—Grade 7

The Arkansas Science Curriculum Framework*

Strands	Content Standards	Student Learning Expectations
1— Nature of Science (N)	1. Characteristics and Processes of Science: Students shall demonstrate and apply knowledge of the characteristics and processes of science using appropriate safety procedures, equipment, and technology.	2. Analyze components of <i>experimental design</i> used to produce <i>empirical evidence</i> : <ul style="list-style-type: none"> • <i>hypothesis</i> • replication • sample size • appropriate use of <i>control</i> • use of standardized <i>variables</i> 3. Interpret scientific data using mean, median, mode, and range using <i>SI units</i> . 5. Communicate results and conclusions from scientific inquiry.
2— Life Science (L)	2. Living Systems: Characteristics, Structure, and Function: Students shall demonstrate and apply knowledge of living systems using appropriate safety procedures, equipment, and technology.	1. Illustrate the hierarchical relationships of <i>cells, tissues, organs, and organ systems</i> . 2. Analyze how two or more <i>organs</i> work together to perform a function (e.g., mouth and stomach to digest food). 6. Identify human body systems: <ul style="list-style-type: none"> • nervous • digestive • circulatory • respiratory • excretory • integumentary • skeletal/muscular • endocrine • reproductive 8. Investigate functions of human body systems. 9. Describe interactions between major <i>organ systems</i> . 10. Investigate careers, scientists, and historical breakthroughs related to life systems.
	3. Life Cycles, Reproduction, and Heredity: Students shall demonstrate and apply knowledge of life cycles, reproduction, and heredity using appropriate safety procedures, equipment, and technology.	2. Distinguish between <i>sperm cells</i> and <i>egg cells</i> . 4. Investigate and analyze the development of <i>embryos</i> . 7. Differentiate between sexual and <i>asexual reproduction</i> in <ul style="list-style-type: none"> • vertebrates • plants 8. Identify the number and source of chromosomes in human body <i>cells</i> . 12. Summarize the interactions between <i>organ systems</i> in the maintenance of <i>homeostasis</i> .

* The Content Standards and Student Learning Expectations listed are those that specifically relate to the released and non-released test items in this booklet.

The Arkansas Science Curriculum Framework* (continued)

Strands	Content Standards	Student Learning Expectations
3— Physical Science (P)	5. Matter: Properties and Changes: Students shall demonstrate and apply knowledge of matter, including properties and changes, using appropriate safety procedures, equipment, and technology.	2. Create models of common <i>compounds</i> : <ul style="list-style-type: none"> • water • carbon dioxide • salt • iron oxide • ammonia 4. Compare and contrast properties of <i>compounds</i> to those of the <i>elements</i> that compose them: <ul style="list-style-type: none"> • salt: sodium, chlorine • water: hydrogen, oxygen • carbon dioxide: carbon, oxygen 5. Demonstrate techniques for forming and separating <i>mixtures</i> : <ul style="list-style-type: none"> • mixing • magnetic attraction • evaporation • filtration • chromatography • settling 7. Distinguish among <i>solvent</i> , <i>solute</i> , and <i>solution</i> . 8. Investigate the effect of <i>variables</i> on <i>solubility rates</i> .
	6. Motion and Forces: Students shall demonstrate and apply knowledge of motion and forces using appropriate safety procedures, equipment, and technology.	3. Demonstrate Newton’s second law of motion. 5. Explain how Newton’s three laws of motion apply to real world situations (e.g., sports, transportation).
	7. Energy and Transfer of Energy: Students shall demonstrate and apply knowledge of energy and transfer of energy using appropriate safety procedures, equipment, and technology.	1. Identify <i>natural resources</i> used to supply energy needs. 2. Describe alternatives to the use of <i>fossil fuels</i> : <ul style="list-style-type: none"> • <i>solar energy</i> • <i>geothermal energy</i> • wind • <i>hydroelectric power</i> • <i>nuclear energy</i> • <i>biomass</i> 4. Investigate alternative <i>energy sources</i> .

* The Content Standards and Student Learning Expectations listed are those that specifically relate to the released and non-released test items in this booklet.

PART III Item Correlation with Curriculum Framework—Grade 7

The Arkansas Science Curriculum Framework* (continued)

Strands	Content Standards	Student Learning Expectations
4— Earth and Space Science (E)	8. Earth Systems: Students shall demonstrate and apply knowledge of Earth's structure and properties using appropriate safety procedures, equipment, and technology.	1. Describe the composition and physical characteristics of the <i>atmosphere</i> . 6. Conduct investigations using weather measurement devices: <ul style="list-style-type: none"> • <i>anemometers</i> • <i>barometers</i> • <i>sling psychrometers</i> • <i>thermometers</i> • weather charts 8. Identify the causes and effects of weather-related phenomena: <ul style="list-style-type: none"> • thunderstorms • tornadoes/hurricanes/cyclones/typhoons • drought • <i>acid precipitation</i> 13. Identify and explain the effects that human activities have on weather and <i>atmosphere</i> . 16. Conduct investigations demonstrating the <i>water cycle</i> . 18. Investigate cloud formation.
	9. Earth's History: Students shall demonstrate and apply knowledge of Earth's history using appropriate safety procedures, equipment, and technology.	2. Demonstrate that Earth has a magnetic field that is detectable at the surface with a compass. 5. Research ways in which people have used compasses.
	10. Objects in the Universe: Students shall demonstrate and apply knowledge of objects in the universe using appropriate safety procedures, equipment, and technology.	1. Identify and model the causes of night and day. 2. Compare and contrast Earth's day to those of other planets in our <i>solar system</i> . 5. Identify and model the causes of seasons.

* The Content Standards and Student Learning Expectations listed are those that specifically relate to the released and non-released test items in this booklet.

Released Items for Science*

Item	Strand	Content Standard	Student Learning Expectation
1	N	1	5
2	L	2	8
3	E	10	5
4	L	3	4
5	E	8	6
6	L	2	9
7	P	7	4
8	E	10	1
9	P	5	5
10	E	8	1
11	P	6	5
12	E	8	13
13	P	5	7
14	L	3	7
15	L	3	2
16	P	6	3
17	N	1	3
A	L	3	12
B	P	5	8

* Only the predominant Strand, Content Standard, and Student Learning Expectation are listed for the Science items.

Non-Released Items for Science*

Strand	Content Standard	Student Learning Expectation
L	2	10
E	8	16
E	9	5
L	2	2
P	5	4
E	8	8
L	2	1
E	10	5
P	7	2
P	5	2
P	5	2
P	7	2
E	9	2
P	7	1
E	10	2
L	2	6
E	8	18
L	3	8
P	6	5
N	1	2
N	1	2
L	2	8
E	8	18
P	6	5
N	1	2

* Only the predominant Strand, Content Standard, and Student Learning Expectation are listed for the Science items.

ACTAAP

Arkansas Comprehensive Testing, Assessment, and Accountability Program

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

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