2011

ISAT
Sample Book

Illinois Standards Achievement Test

GRADE

8

Sample Items for Reading and Mathematics

ILLINOIS STATE BOARD OF EDUCATION

Portions of this work were previously published.

Stanford Achievement Test: Tenth Edition sample items used with permission of NCS Pearson, Inc.

"They Put the Flavor in What You Eat" by Seth Stern. Reproduced with permission from the July 2, 2002 issue of the Christian Science Monitor (www.csmonitor.com KidSpace at http://www.csmonitor.com/2002/0702/p18s04-hfks.html, accessed April 2, 2007). Copyright © 2002 The Christian Science Monitor. All rights reserved. Photograph of Flavorists in laboratory courtesy of International Flavors & Fragrances Inc. and used by permission.

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Introduction

This sample book contains sample ISAT items classified with an assessment objective from the *Illinois Assessment Frameworks*. These 2011 samples are meant to give educators and students a general sense of how items are formatted for ISAT. All 2011 ISAT test books will be printed in color. This sample book does not cover the entire content of what may be assessed. Please refer to the *Illinois Assessment Frameworks* for complete descriptions of the content to be assessed at each grade level and subject area. The *Illinois Assessment Frameworks* are available online at www.isbe.net/assessment/IAFindex.htm. The Student Assessment website contains additional information about state testing (www.isbe.net/assessment).

Illinois Standards Achievement Test

Reading Samples

Structure of the Grade 8 Reading ISAT

ISAT Reading testing in spring 2011 will consist of 30 norm-referenced items, as well as criterion-referenced items. The 30 norm-referenced items are an abbreviated form of the *Stanford 10 Reading* assessment, developed by Pearson, Inc. The criterion-referenced items are all written by Illinois educators and pilot tested with Illinois students.

Item Formats

All items are aligned to the *Illinois Reading Assessment Framework*, which defines the elements of the Illinois Learning Standards that are suitable for state testing.

Multiple-choice items require students to read and reflect, and then to select the alternative that best expresses what they believe the answer to be. A carefully constructed multiple-choice item can assess any of the levels of complexity, from simple procedures to sophisticated concepts.

Extended-response items require students to demonstrate an understanding of a passage by explaining key ideas using textual evidence and by using this information to draw conclusions or make connections to other situations. The extended-response items are scored with a holistic rubric and count as 10% of the scale score of the test.

Reading Sessions

All standard time administration test sessions are a minimum of 45 minutes in length. Any student who is still actively engaged in testing when the 45 minutes have elapsed will be allowed up to an additional 10 minutes to complete that test session. More details about how to administer this extra time will appear in the *ISAT Test Administration Manual*. This policy does not affect students who already receive extended time as determined by their IEP.

Reading ISAT Grade 8	
Session 1 **45 minutes**	6 shorter passages—30 multiple-choice items total
Session 2 **45 minutes**	Two longer passages consisting of: 1 expository passage with 10 multiple-choice items 1 literary passage with 10 multiple-choice items 1 extended-response item
Session 3 **45 minutes**	Consists of 2 or 3 passages 20 multiple-choice items 1 extended-response item
	(Some items will be pilot items.)

Shorter Passage Followed by Multiple-Choice Sample Items

School Photographer

by
Kristine O'Connell George

When I am behind my camera lens
I can make people stand closer,
wrap their arms around each other,
even get them to smile.
When I am behind my camera lens
I see things others don't.
I can record a single moment
That *distorts* or tells the truth.
When I am behind my camera lens
I can see everything
Except my own self, hiding
behind my camera.

1

The poet most likely took the idea for this poem from —

A a book on photography
B a volume of poetry
C her camera's owner's manual
D her own experience

2

Why does the speaker feel hidden?

A No one can see her.
B She is looking through the camera.
C There is no one around.
D Other people are standing in front of her.

3

In line 6, when the speaker says, "I see things others don't," she most likely means —

A people often overlook what's around them
B people don't pay attention when their picture is taken
C cameras are the most accurate form of record keeping
D the camera lens is like a microscope

4

If you did not know the meaning of *distorts* in stanza 2, you should —

A look for other words in the poem that begin with "d"
B say the word over and over to yourself
C read on, looking for clues
D decide on the word's part of speech

5

In this poem, which point of view does the poet use?

A First person (one person who describes her own thoughts)
B Third person (a person outside the story who describes the thoughts of one other person)
C Third person omniscient (a person outside the story who describes the thoughts of several characters)
D Third person objective (a person outside the story who describes events objectively)

STOP

Answer Key with Assessment Objectives Identified

	Item Number	Correct Answer	Assessment Objective
Shorter Passage	1	D	**2.8.04** Compare stories to personal experience, prior knowledge, or other stories.
	2	B	**1.8.19** Draw inferences, conclusions, or generalizations about text and support them with textual evidence and prior knowledge.
	3	A	**2.8.10** Identify literary devices: (e.g., figurative language, hyperbole, understatement, symbols, dialogue).
	4	C	**1.8.03** Determine the meaning of an unknown word using word, sentence, and cross-sentence clues.
	5	A	**2.8.05** Recognize points of view in narratives (e.g., first person).

To view all the reading assessment objectives, download the *Illinois Reading Assessment Framework* for Grades 3–8 online at www.isbe.net/assessment/IAFindex.htm.

Longer Passage Followed by Multiple-Choice Sample Items

This passage is about how scientists create flavors that go in the food we eat.

They Put the Flavor in What You Eat

by Seth Stern

1 When it's time to pick strawberries, Dennis Kujawski goes to his laboratory instead of the berry patch. You see, he creates the flavors in many foods you enjoy.

2 Take strawberry yogurt, for example. It's not the fruit that gives most yogurt that strawberry flavor. Read the label. Does it contain "natural and artificial flavors"? Then Mr. Kujawski and his fellow scientists probably cooked up those flavors by blending natural oils and chemicals in a New Jersey lab.

3 Kujawski's office looks like a science classroom. Shelves are filled with little vials. Each vial contains a different liquid. To an untrained nose (such as this reporter's), each liquid smells vaguely familiar. One smells like cut grass and another like a green apple. Others have a hint of butter or lime or cotton candy. All these scents are important in creating a food flavoring because, Kujawski says, 85 percent of a flavor comes from its smell.

4 Kujawski's job is part art and part science. Picking out the right ingredients for a flavor is like composing music or painting a picture. When he talks about adding flavors, he asks whether it adds the right "note."

5 He is one of many "flavorists" who work at International Flavors & Fragrances (IFF) near Princeton, N.J. Each year, they create flavors for hundreds of foods — from candy and cereals to soups and *marinades*.

6 Some flavors are based on the taste of familiar, natural products — like strawberry or chocolate. But many flavors we recognize are completely made up: cola and fruit punch, for instance.

How about a hamburger-flavored potato chip?

7 One snack-food company asked for a new flavor for a potato chip. They wanted it to taste like an entire hamburger, with pickles, ketchup, and meat. IFF made the flavor, but the chip never reached supermarkets. (Maybe the makers had second thoughts about its potential success.)

8 IFF even creates flavors for dog food. Dogs have very sensitive noses, but it's usually the owner who is pickier about the smell.

9 It's a fun job, Kujawski says, but it's not easy. Flavorists usually study chemistry or biology in school. They must work for years as *apprentices* to train their nose and tongue to recognize thousands of ingredients.

10 Creating a flavor starts when a food company calls up with a new idea for a product. Flavor scientists first need to know something about the idea behind the product. Will adults or children be eating it? Is it supposed to taste natural? Extra sour? Are there other

GO ON▶

considerations that might affect what ingredients are used? (Non-kosher ingredients might offend Jewish consumers, for instance. Non-vegetarian ingredients might upset Hindus.)

11 Not every food that's supposed to taste like strawberry gets the same flavoring. Strawberry yogurt for adult consumers tastes different from strawberry in red-licorice candy or in ice cream. (Ice cream needs a "seedy" flavor, Kujawski says.)

12 The flavoring's ingredients may be natural or artificial. Natural flavors may include lemon oil, orange oil, and even rose oil. An oil's flavor may depend on how it was extracted. If you grind up a lime and heat it, the resulting oil is sweet-smelling. Extract the flavor from the peel without heating, and it smells more like a fresh lime.

13 Getting oils that way is very expensive, though, so artificial flavors are often used. These flavors can be created from ingredients that are present in natural foods but have been manufactured in a laboratory. (Vanillin, or artificial vanilla flavor, is made from wood pulp. But it's chemically almost identical to "real" vanilla, made from vanilla beans.) Some of these flavors are so strong that only a few parts per million — or parts per billion — are needed to add a flavor. That's like putting one drop in a swimming pool of water. By themselves, some of the ingredients may not smell very good, such as one that adds a "ripe" note to a flavor's "profile."

14 Tastes change. IFF employees do research to find what new flavors are popular — especially among kids. Children like intense flavors. Today's kids seem to like new combinations of familiar and different tastes and sensations, says IFF's Amanda Smith. She tries to find out what kids like. (They seem to enjoy kiwi/lime fruit juices and crackling candy in ice pops.)

Still striving for 'the perfect strawberry'

15 Even after creating flavors for 29 years, Kujawski says it's still a challenge coming up with new versions of familiar flavors like chocolate and strawberry. But he's willing to keep trying to produce the perfect strawberry flavor. "Like an artist or photographer," he says, "you think, 'Gee, I could have done that better.'"

16 Sometimes, the scientists start with a strawberry flavor they've already created. The labs are full of bottles of "finished" flavors that smell like marshmallows, smoked meat, or blueberry pie. Usually, though, they start a new flavor from scratch, drawing on the hundreds of vials in rotating spice racks lining the walls of each lab.

17 Either way, flavorists have to work fast. Clients usually want the finished flavor in just a few weeks.

18 Once the flavorists are satisfied with a few options, another group of scientists adds the flavor to a sample of the new food. IFF has many kitchens where technicians can bake a cake, make chewing gum, or put soup in cans.

19 IFF tests its flavors by asking people to try it. Sitting in small testing booths, different versions of a product are passed to employees and even to children.

20 The taste-testers rate the flavors, writing answers on a computer screen. Is the flavor too strong or too weak? Too sweet or too sour? There's also a small sink so you can rinse out your mouth between samples.

21 If the kids don't like what they taste, scientists must go back and try again. When the flavor is finally ready, IFF makes big batches of it to sell to the food company. The food company adds the flavor to the product at the factory. The exact formula is always a secret.

1 3584155_4

Which is the *best* summary for paragraphs 1 and 2?

A Berry patches serve as inspiration for new flavors.
B Scientists create flavors by testing foods.
C Strawberry yogurt contains artificial flavors.
D Flavors are often developed in a laboratory.

2 3584143_1

Based on the etymology of the word *marinades* [French *marinado*, meaning "to cure meat or fish in brine"], which of the following is the best meaning for the word *marinades*?

A A sauce to soak food in to enrich its flavor
B A method for steaming produce quickly
C Vegetables flavored with spices
D Food that is smoked on a grill

3 3584163_1

Which literary device is used in the sentence below?

"Dogs have very sensitive noses, but it's usually the owner who is pickier about the smell."

A Irony
B Simile
C Alliteration
D Understatement

4 3584162_3

Which best describes what *apprentices* are?

A Workers in a laboratory
B People who study foods
C Workers learning on the job
D People who work with chemicals

5 3584158_2

What is the *first* thing scientists do after a food company calls with a new idea for a product?

A They create flavors in a laboratory for the product.
B They try to find out more information about the product.
C They ask people to test the new product.
D They pick out the right mixture for the flavor of the product.

6 3584159_4

How does the oil smell *after* a lime is ground up and then heated?

A Ripe
B Sour
C Fresh
D Sweet

7 3584160_3

What happens *after* flavorists are satisfied with a new flavor for their client?

A Flavorists develop ways to extract oils to create flavors.
B Flavorists invent additional versions of the flavors.
C Flavorists add the flavor to a sample of the new food.
D Flavorists test how children react to the flavor.

8 3584150_4

How does the phrase, "variety is the spice of life," relate to this passage?

A Flavorists keep the exact formula of a flavor secret.
B Flavorists work in offices that look like science classrooms.
C Flavorists train their noses to recognize the thousands of ingredients.
D Flavorists continue to develop new versions of old flavors to satisfy clients.

GO ON ▶

9 3584164_2

What genre is "They Put the Flavor In What You Eat"?

A Biography
B Nonfiction
C Science fiction
D Autobiography

10 3584152_4

Which statement summarizes the passage?

A Flavors are designed to be delicate.
B Familiar flavors are popular with clients.
C Food flavors can be both natural and artificial.
D Flavoring food is a complicated process.

STOP

Answer Key with Assessment Objectives Identified

	Item Number	Correct Answer	Assessment Objective
Longer Passage with Multiple-Choice Items	1	D	**1.8.16** Summarize a story or nonfiction passage, or identify the best summary.
	2	A	**1.8.02** Use etymologies to determine the meanings of words.
	3	A	**2.8.10** Identify literary devices: (e.g., figurative language, hyperbole, understatement, symbols, dialogue).
	4	C	**1.8.03** Determine the meaning of an unknown word using word, sentence, and cross-sentence clues.
	5	B	**1.8.14** Determine the answer to a literal or simple inference question regarding the meaning of a passage.
	6	D	**1.8.14** Determine the answer to a literal or simple inference question regarding the meaning of a passage.
	7	C	**1.8.14** Determine the answer to a literal or simple inference question regarding the meaning of a passage.
	8	D	**1.8.10** Relate information in the passage to other readings.
	9	B	**2.8.13** Identify various subcategories of genres: poetry, drama (comedy and tragedy), science fiction, historical fiction, myth or legend, biography/autobiography, short story, poem, fairy tale, folktale, fable, nonfiction, and essay.
	10	D	**1.8.16** Summarize a story or nonfiction passage, or identify the best summary.

To view all the reading assessment objectives, download the *Illinois Reading Assessment Framework* for Grades 3–8 online at www.isbe.net/assessment/IAFindex.htm.

Extended-Response Sample Item

Assessment Objective: 1.8.21 Explain information presented in a nonfiction passage using evidence from the passage.

1

3584168

How do scientists combine creativity and research to develop new flavors? Use information from the passage and your own ideas and conclusions to support your answer.

STOP

Extended-Response Scoring Rubric

Reading Extended-Response Scoring Rubric

Readers identify important information found explicitly and implicitly in the text. Readers use this information to interpret the text and/or make connections to other situations or contexts through analysis, evaluation, or comparison/contrast. A student-friendly version of this extended-response rubric is available online at www.isbe.net/assessment/reading.htm.

Score	Criteria
4	• Reader demonstrates an accurate understanding of important information in the text by focusing on the key ideas presented explicitly and implicitly. • Reader uses information from the text to interpret significant concepts or make connections to other situations or contexts logically through analysis, evaluation, inference, or comparison/contrast. • Reader uses relevant and accurate references; most are specific and fully supported. • Reader integrates interpretation of the text with text-based support (balanced).
3	• Reader demonstrates an accurate understanding of information in the text by focusing on some key ideas presented explicitly and implicitly. • Reader uses information from the text to interpret significant concepts or make connections to other situations or contexts logically (with some gaps) through analysis, evaluation, inference, or comparison/contrast. • Reader uses relevant and accurate references; some are specific; some may be general and not fully supported. • Reader partially integrates interpretation of the text with text-based support.
2	• Reader demonstrates an accurate but limited understanding of the text. • Reader uses information from the text to make simplistic interpretations of the text without using significant concepts or by making only limited connections to other situations or contexts. • Reader uses irrelevant or limited references. • Reader generalizes without illustrating key ideas; may have gaps.
1	• Reader demonstrates little or no understanding of the text; may be inaccurate. • Reader makes little or no interpretation of the text. • Reader uses no references, or the references are inaccurate. • Reader's response is insufficient to show that criteria are met.
0	• Reader's response is absent or does not address the task. • Reader's response is insufficient to show that criteria are met.

Grade: 8 **Sample: 1** **Score: 2**

DIRECTIONS **Make sure you**

- **Read the question completely before you start to write your answer,**
- **Write your answer to the question in your own words,**
- **Write as clearly as you can so that another person can read your answer and understand what you were thinking,**
- **Read over your answer to see if you need to rewrite any part of it.**

Scientists combine creativity & research to create new flavors by mixing a lot of oils a lot of the food you eat is artificially flavored it would be too expensive to do every food you eat from 100% pure fruits is why the scientist have to come up with flavors that taste exactly alike so the public will like it & buy it they combine creativity in it to because of all those colors & flavors.

* This reader demonstrates a limited understanding of the text. The response focuses on an idea (*Scientists combine creativity & research to create new flavors by mixing a lot of oils*) and then generalizes without illustrating key ideas. The reader demonstrates some understanding of the text by summarizing, but does not use information from the text or specific references to provide interpretation.

Grade: 8 **Sample: 2** **Score: 2**

DIRECTIONS

Make sure you

- **Read the question completely before you start to write your answer,**
- **Write your answer to the question in your own words,**
- **Write as clearly as you can so that another person can read your answer and understand what you were thinking,**
- **Read over your answer to see if you need to rewrite any part of it.**

Scientists Combine Creativity and research to develope new flavors by adding natural flavors and chemicals together. After that, they try to get the exact flavor wanted. Scientists try many possible ways to create the exact flavor they want. If their results are positive they have to test their flavors on kids. IF the kids reject the flavor Scientis have to go back to their labs and try again. But if the kids like the flavor Scientist would sell the formula to the Food Companys or Candy Companies. The formula would stay as a secret if its exact. Thats how scientist Combine Creativity and research to develope new flavors.

* This reader demonstrates an accurate but limited understanding of the text. The response focuses on an idea (*Scientists Combine Creativity and research to develope new flavors by adding natural flavors and chemicals together*) and then summarizes the text without providing any meaningful interpretation. The reader understands the text well enough to summarize it accurately, but does not use the information from the text to provide interpretation.

Grade: 8 **Sample: 3** **Score: 3**

DIRECTIONS

Make sure you

- **Read the question completely before you start to write your answer,**
- **Write your answer to the question in your own words,**
- **Write as clearly as you can so that another person can read your answer and understand what you were thinking,**
- **Read over your answer to see if you need to rewrite any part of it.**

Scientists combine creativity and research to develop new flavors. First they must find out what flavors adults, children, and animals like best. Next they research on the idea of their flavor and who the food or snack would be for. Then they must tell flavorists about their idea and opinion. Last but not least the item is tested and if it is liked it goes to the markets and/or stores. But if it is not liked, scientists and flavorists must try again until they get to the point where it is liked. In my opinion this job is very important and interesting. Reason being is because it take a lot of time and patience. The workers can't just give out something that they want to give out. It has to be approved and tested first. So in conclusion, scientests combine creativity and research to develop new flavors. And it my be a hard job but it is important and interesting.

* This reader demonstrates an accurate understanding of information in the text. The reader focuses on a key idea from the text (*they must find out what flavors adults, children, and animals like best…they research on the idea of their flavor and who the food or snack would be for. Then they must tell flavorists about their idea…the item is tested…if it is liked it goes to the markets…if it is not liked, scientists and flavorists must try again*) and interprets this idea (*this job is very important and interesting…because it take a lot of time and patience…workers can't just give out something that they want to give out. It has to be approved and tested first.*). Though there are some gaps in interpretation, resulting in an unbalanced response, the reader does use accurate references to support the interpretation.

Grade: 8 **Sample: 4** **Score: 3**

DIRECTIONS

Make sure you

- **Read the question completely before you start to write your answer,**
- **Write your answer to the question in your own words,**
- **Write as clearly as you can so that another person can read your answer and understand what you were thinking,**
- **Read over your answer to see if you need to rewrite any part of it.**

How do scientists combine creativity and reaserch to develop new flavors is they mix sents together and they have kids test them if they dont like it they go back and try it again to make a better flavor.

Thay mix sents together to make a new flavor a new product like straw-barry and blueberry flavors. In the text it says "these sents are import-ant in creating a food flavoring becau-se 85% of a flavor comes from it's sent. This is important because it tells you they combine and makes a flavor.

Another reason how scientists combine research to develope new flavors is they have the kids to test the favor to see if they like it if they dont they go back to the lab and try again. In the text it says "Flavoverists must go back and try again if the kids doesn't agree on it", this is important because in order to make there money they have to make sure they kids like it so there products could be sold and that creativity because the kid might be having fun tasting new flavors.

Thats how scientists combine creativity and research to develop a new flavors.

* This reader demonstrates an accurate understanding of information in the text by focusing on some key ideas. The reader identifies a key idea (*they mix sents togather and, they have kids test them* [research and creativity]) and provides text support (*these sents are important in creating a food flavoring because 85% of a flavor comes from it's sent...they have the kids to test the favor to see if they like it if they dont they go back to the lab and try again*). The reader goes on to interpret this idea (*This is important because it tells you they combine and makes a flavor...This is important because in order to make there money they have to make sure they kids like it*) with some gaps. There is a partial integration of interpretation and text-based support.

Grade: 8 **Sample: 5** **Score: 4**

DIRECTIONS

Make sure you

- **Read the question completely before you start to write your answer,**
- **Write your answer to the question in your own words,**
- **Write as clearly as you can so that another person can read your answer and understand what you were thinking,**
- **Read over your answer to see if you need to rewrite any part of it.**

People may not realize it but when it comes to developing new flavors, it takes a lot of effort. In the passage Dennis Kujawski is a scientists that makes up some of our favorite flavors. The author states "Kujawski's job is part art and part science. Picking out the right ingredients for a flavor is like composing music or painting a picture." From my stand-point, I agree. It's hard enough to get a child to try something new, but it's even harder to put together the ingredients for it.

Creativity is really a strong attribute for a scientist that develops new flavors. You have to give the client something new without going overboard with the result. You have to have the right amount of sugar, or the right amount of strawberries

without over doing the product. Like on essay such as this, you have to add key points and connections without adding too much.

Research, as stated in the text is the other important part of this job. If Hershey's wanted an extra little flavor in it's new chocolate bar you have to know it's background. You have to know what's already been used, what's been declined, and what the public would really like to taste. It's a whole process that takes time.

In conclusion, you may not realize what it takes to be a scientist of new flavors. It takes a tremendous amount of creativity and great research skills. You need to not only please your clients, but the public too. It's a lot of work, but it's worth it.

* The reader demonstrates an understanding of important information in the text by focusing on key ideas (*...when it comes to developing new flavors, it takes a lot of effort*). This idea is interpreted (*It's hard enough to get a child to try something new, but it's even harder to put together the ingredients for it*) and supported by a relevant text reference (*"Kujawski's job is part art and part science. Picking out the right ingredients for a flavor is like composing music or painting a picture"*). Some ideas (*Creativity is really a strong attribute for a scientist that develops new flavors*) are interpreted but not supported by text (*You have to give the client something new without going overboard with the result. You have to have the right amount of sugar, or the right amount of strawberries without overdoing the product*). Overall, the reader successfully integrates interpretation with text-based support, demonstrating balance.

Grade: 8 **Sample: 6** **Score: 4**

DIRECTIONS

Make sure you

- **Read the question completely before you start to write your answer,**
- **Write your answer to the question in your own words,**
- **Write as clearly as you can so that another person can read your answer and understand what you were thinking,**
- **Read over your answer to see if you need to rewrite any part of it.**

Scientist combine creativity and research in many ways so that they can create new flavors.

First of all, Scientist can either use natural or artificial flavors. They have to be creative because sometimes they have to combine old flavors to form new ones. For example, in the story it says children enjoy new flavors. They state " They (childen) seem to enjoy kiwi/lime fruit juices ..." Even though they do a lot of hard work, it pays off when they're done.

Also, Scientist need to know a lot of stuff so that they can get the 'perfect' taste. They state " All these scents are important in creating a food

flavoring because, kujawski says, 85 percent of a flavor comes from it's smell", so, scientist need to do a lot of research on the type of taste they want because one little mistake could make the whole food taste bad.

not only this, but a scientist needs to know the right components in a natural flavor so that they can create a new artificial flavor. For example, the passage says "vanillin, or artificial vanilla flavor, is made from wood pulp. But it's chemically almost identical to "real" vanilla made from vanilla beans". so, they need to be smart and have a Imagination to create new flavors. who would have ever thought you could make vanilla from wood!

So, these scientist have to be strong in creativity and need to do a lot of research so that they can be able to make my favorite candy!

* In this response, the reader demonstrates an understanding of important information in the text by focusing on the key ideas. The reader identifies key ideas (*They have to be creative because sometimes they have to combine old flavors to form new ones...scientist need to do a lot of research on the type of taste they want*) and supports them with references from the text ("*(children) seem to enjoy kiwi/lime fruit juices"..."All these scents are important in creating a food flavoring because, Kujawski says, 85 percent of a flavor comes from it's smell"*). The reader interprets key ideas and significant concepts (*Even though they do a lot of hard work, it pays off when they're done*) and (*they need to be smart and have a Imagination to create new flavors. Who would have ever thought you could make vanilla from wood*), with relevant supporting text references (*For example..."vanillin, or artificial vanilla flavor, is made from wood pulp. But it's chemically almost identical to 'real' vanilla made from vanilla beans"*). The reader is able to integrate interpretation of the text with text-based support, creating a balance of interpretation and text references.

Illinois Standards Achievement Test

Mathematics Samples

Structure of the Grade 8 Mathematics ISAT

ISAT Mathematics testing in spring 2011 will consist of 30 norm-referenced items, as well as 45 criterion-referenced items, some of which will be used for developmental purposes. The 30 norm-referenced items are an abbreviated form of the *Stanford 10 Mathematics Problem Solving* assessment, developed by Pearson, Inc. The 45 criterion-referenced items are all written by Illinois educators and pilot tested with Illinois students.

Item Formats

All 75 items are aligned to the *Illinois Mathematics Assessment Framework*, which defines the elements of the Illinois Learning Standards that are suitable for state testing.

Multiple-choice items require students to read, reflect, or compute, and then to select the alternative that best expresses what they believe the answer to be. This format is appropriate for quickly determining whether students have achieved certain knowledge and skills. Well-designed multiple-choice items can measure student knowledge and understanding, as well as students' selection and application of problem-solving strategies. A carefully constructed multiple-choice item can assess any of the levels of mathematical complexity from simple procedures to sophisticated concepts. They can be designed to reach beyond the ability of students to "plug-in" alternatives or eliminate choices to determine a correct answer. Such items are limited in the extent to which they can provide evidence of the depth of students' thinking.

Short-response items pose similar questions as multiple-choice items and provide a reliable and valid basis for extrapolating about students' approaches to problems. These items reduce the concern about guessing that accompanies multiple-choice items. The short-response items are scored with a rubric and count as 5% of the scale score of the test.

Extended-response items require students to consider a situation that demands more than a numerical response. These items require students to model, as much as possible, real problem solving in a large-scale assessment context. When an extended-response item poses a problem to solve, the student must determine what is required to "solve" the problem, choose a plan, carry out the plan, and interpret the solution in terms of the original situation. Students are expected to clearly communicate their decision-making processes in the context of the task proposed by the item (e.g., through writing, pictures, diagrams, or well-ordered steps). The extended-response items are scored with a rubric and count as 10% of the scale score of the test.

Scoring Extended- and Short-Response Items

Extended- and short-response items are evaluated according to an established scoring scale, called a rubric, developed from a combination of expectations and a sample of actual student responses. Such rubrics must be particularized by expected work and further developed by examples of student work in developing a guide for scorers. Illinois educators play a substantial role in developing these guides used for the scoring of the short- and extended-response items. Committees of mathematics educators from throughout the state attend a validation meeting, during which they use the mathematics scoring rubrics to establish task-specific criteria that are used to score all short- and extended-response items consistently and systematically.

Answer Document for Grade 8 Mathematics ISAT

Students in grade 8 respond to all test items in a separate answer document. Test administrators should monitor students carefully during testing to make sure students are using the appropriate pages of the answer document, especially for the short- and extended-response items.

Mathematics Sessions

All standard time administration test sessions are a minimum of 45 minutes in length. Any student who is still actively engaged in testing when the 45 minutes have elapsed will be allowed up to an additional 10 minutes to complete that test session. More details about how to administer this extra time will appear in the *ISAT Test Administration Manual*. This policy does not affect students who already receive extended time as determined by their IEP.

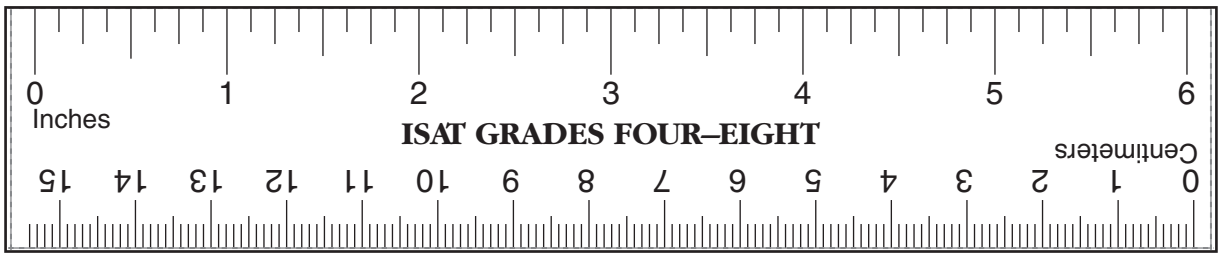
Mathematics ISAT Grade 8	
Session 1 **45 minutes**	40 multiple-choice items (30 of these are an abbreviated form of the *Stanford 10*.)
Session 2 **45 minutes**	30 multiple-choice items 3 short-response items
Session 3 **45 minutes**	2 extended-response items
(Some items will be pilot items.)	

Calculator Use for Grade 8 Mathematics ISAT

All students in grade 8 are allowed to use a calculator during all sessions of the mathematics assessment. Students are allowed to use a calculator as long as the calculator does not have any prohibited features as noted in the Calculator Use Policy for the ISAT Mathematics Tests (http://www.isbe.net/assessment/pdfs/2010/calculator_ISAT.pdf). Schools, teachers, and parents should be advised that when students attempt to use calculators with which they are unfamiliar, their performance may suffer. In a like manner, students who are not taught when and how to use a calculator as part of their regular mathematics instructional program are also at risk.

Rulers for Grade 8 Mathematics ISAT

All students in grade 8 will be provided with a ruler to use during all sessions of the mathematics assessment. This ruler will allow students to measure in both inches and centimeters.



Scratch Paper for Grade 8 Mathematics ISAT

Students must be provided with blank scratch paper to use during only session 1. Only session 1 contains norm-referenced items, which were normed under such conditions. Students may not use scratch paper during session 2 or session 3, but they may use the test booklet itself as scratch paper. However, students must show their work, when required, for each short-response item in session 2 on the appropriate page in the answer document. Students must show their work for each extended-response item in session 3 on the appropriate pages in the answer document.

Reference Sheet for Grade 8 Mathematics ISAT

All students in grade 8 will be provided with a reference sheet to use during all sessions of the mathematics assessment. This reference sheet is shown below.

ISAT MATHEMATICS REFERENCE SHEET
Grades 7 and 8

FORMULAS FOR PLANE FIGURES

Parallelogram: $A = bh$

Trapezoid: $A = \frac{1}{2}(b_1 + b_2)h$

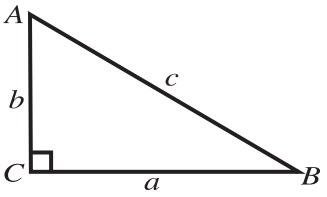
Triangle: $A = \frac{1}{2}bh$

Circle: $C = 2\pi r$ or $C = \pi d$

$A = \pi r^2$

Right Triangle:

The Pythagorean Theorem
$c^2 = a^2 + b^2$



FORMULAS FOR SOLID FIGURES

Prism: $V = Bh$ (B is the area of the base.)

Right Cylinder: $V = \pi r^2 h$

Regular Pyramid: $V = \frac{1}{3}Bh$ (B is the area of the base.)

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1

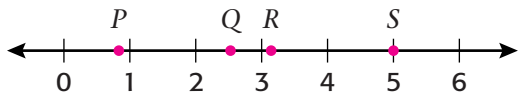
One light-year is approximately 5,880,000,000,000 miles.

Which expression represents this distance in scientific notation?

A 5.88×10^{10}
B 5.88×10^{12}
C 58.8×10^{11}
D 588×10^{10}

2

Which point on the number line below best represents the value $\sqrt{10}$?



A Point P
B Point Q
C Point R
D Point S

3

Amy has $\frac{3}{4}$ of a yard of string to make bracelets. Each bracelet requires $\frac{1}{8}$ of a yard of string.

What is the greatest number of bracelets Amy can make with this length of string?

A	B	C	D
8	6	4	3

4

Paula multiplied a number by 16. Her result is a positive number less than 16. Which of these did Paula multiply by 16?

A A number between zero and one
B A number greater than one
C A number less than zero
D Zero

5

Between which two consecutive integers is $\sqrt[3]{300}$?

A 6 and 7
B 17 and 18
C 75 and 76
D 100 and 101

GO ON ▶

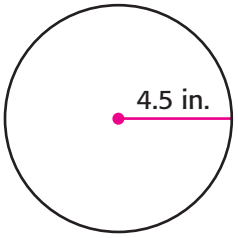
6

Last year there were 80 students enrolled in the eighth-grade class. This year the number of students enrolled in the eighth-grade class increased by 10%.

How many students are enrolled in the eighth-grade class this year?

8	81	88	90
A	**B**	**C**	**D**

7

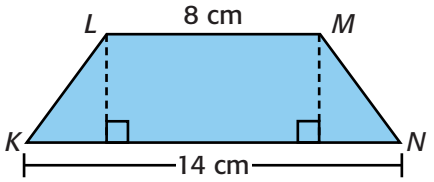


Which is closest to the circumference of this circle? (Use 3.14 for π.)

A 14 inches
B 20 inches
C 28 inches
D 63 inches

8

Quadrilateral *KLMN* is an isosceles trapezoid with a perimeter of 32 cm.



What is the area of quadrilateral *KLMN*?

A 44 cm^2
B 55 cm^2
C 88 cm^2
D 112 cm^2

9

A company packs its coffee into cylindrical containers. The height of each container is 6 inches, and the radius of the container is 3 inches.

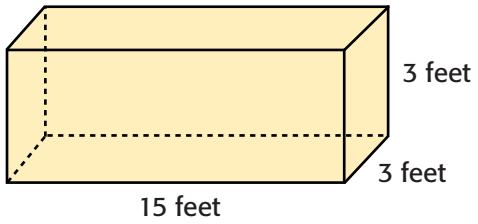
Which is closest to the volume of one of these cylindrical containers? (Use 3.14 for π.)

A 36 cubic inches
B 54 cubic inches
C 113 cubic inches
D 170 cubic inches

GO ON ▶

10

What is the surface area of this rectangular prism?



A 135 square feet
B 155 square feet
C 180 square feet
D 198 square feet

11

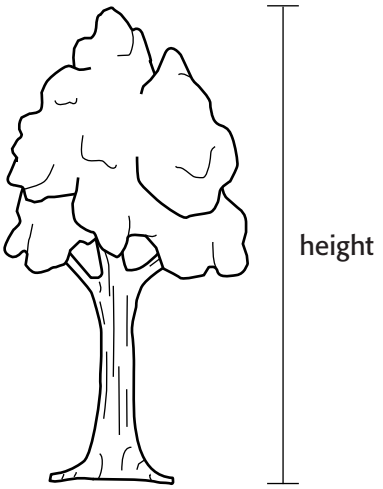
When filled to capacity, a container holds 4.6 liters of liquid. How many milliliters (mL) is this?

A 0.46 mL
B 46 mL
C 460 mL
D 4600 mL

12

Use your inch ruler to help you answer this question.

The picture shows the scale drawing of a tree.



1 inch represents 5 feet.

Which is closest to the height in feet of the actual tree?

A 10 feet
B $10\frac{1}{2}$ feet
C $12\frac{1}{2}$ feet
D 15 feet