

Wisconsin Knowledge and Concepts Examinations  
Released Items from Fall 2005 Test Administration

Grade 3

- *Reading*
- *Mathematics*
- *Guide*

Grade 4

- *Reading*
- *Mathematics*
- *Guide*

Grade 5

- *Reading*
- *Mathematics*
- *Guide*

Grade 6

- *Reading*
- *Mathematics*
- *Guide*

Grade 7

- *Reading*
- *Mathematics*
- *Guide*

Grade 8

- *Reading*
- *Mathematics*
- *Guide*

Grade 10

- *Reading*
- *Mathematics*
- *Guide*

Manipulatives

Formula Reference

September 6, 2006





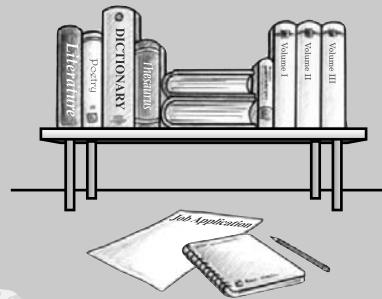
**Wisconsin Knowledge and Concepts Examinations**  
**Criterion-Referenced Test**

**Released Item Book**

**Reading**

**Grade**

**3**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.

**Acknowledgments** CTB is indebted to the following for permission to use material in this book:

All trademarks and trade names found in this publication are the property of their respective companies and are not associated with the publisher of this publication.

"The NO PETS Apartment Building" by Eileen Spinelli from *Highlights for Children* Magazine's March 1990 issue, copyright © 1990 by Highlights for Children, Inc., Columbus, Ohio. Used by permission.

"Basic Pet Care" copyright © 2004 by CTB/McGraw-Hill LLC. All rights reserved.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### What are released items?

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### How do I use this book?

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

## Directions

Read the passage “The No Pets Apartment Building.” Then answer Numbers 1 through 15.



by Eileen Spinelli

Sam wanted a pet. A little one. A big one. One that flew or walked. Any kind of pet at all.

But Mrs. Cabot, the landlady, said: “NO PETS!” And that was that.

Sam’s mom and dad bought him fuzzy stuffed bears and a kite in the shape of a kitten and a plastic parrot on a stick. But he wanted a *live* pet. And that was that.

Sam tried to change Mrs. Cabot’s mind. He told her he would get a quiet pet. He told her he would keep it clean. He told her he would not let the pet scratch the woodwork or jump through the hedges.

But Mrs. Cabot looked Sam square in the eye and said: “NO PETS!”

One day Sam heard Mrs. Cabot screaming in the hallway. He rushed over. “What’s wrong, Mrs. Cabot?”

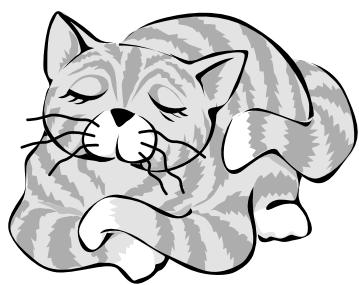
“A mouse!” she shrieked. “I saw a mouse!”

“I thought you had a rule, Mrs. Cabot. No pets allowed.”

“It wasn’t a *pet* mouse,” the landlady squawked. “It was a plain old terrorize-the-building type of mouse.”

Sam grinned. “What you need, Mrs. Cabot, is a cat.”

While it was true that Mrs. Cabot hated cats, there was something she hated even more—mice! And so that very day, Mrs. Cabot went to the animal shelter and found herself a cat.



“The NO PETS Apartment Building” by Eileen Spinelli from *Highlights for Children Magazine*’s March 1990 issue, copyright © 1990 by Highlights for Children, Inc., Columbus, Ohio. Used by permission.

The next time Sam saw Mrs. Cabot, he said, "I see you have a cat."

"Yes indeed," she replied.

"Does that mean I can get a pet?" Sam asked.

"No, it does not!" snapped Mrs. Cabot. "If I let you get a pet, I'd have to let everyone get a pet. Then I'd be running a zoo and not an apartment building!"

Another day Sam was coming home from school.

Police cars surrounded the apartment building.

"What happened, Mrs. Cabot?" he asked.

"I was robbed!" she cried. "They took my radio and my penny bank and my entire collection of salt and pepper shakers!"

"That's too bad," said Sam, shaking his head.

"What you need is a good watchdog."

While it was true that Mrs. Cabot hated dogs, there was something she hated even more—robbers! And so that very day, Mrs. Cabot went to the kennel and bought herself a dog.

A week later Sam found Mrs. Cabot dusting the stairs. There were tears in her eyes.

"You look sad," said Sam.

"*I am* sad," replied Mrs. Cabot. "My very best friend in all the world is moving away."

"I'm sorry to hear that," said Sam.

"She and I would talk for hours," sniffled Mrs. Cabot.

"Can't you talk to Mr. Cabot?" asked Sam.

Mrs. Cabot shook her head. "Mr. Cabot likes to read the newspaper. He likes to watch TV. He likes to build shelves for his wrench collection. But he doesn't like to talk."

"What you need, Mrs. Cabot, is a parrot."

Mrs. Cabot dabbed at her eyes with the hem of her apron. "A parrot?"

Sam nodded. "Parrots love to talk."

While it was true that Mrs. Cabot hated birds, there was something she hated even more—not having anyone to talk with.



And so that very day, Mrs. Cabot went to The Exotic Bird Shop and bought herself a parrot that talked all the way home.

In spring the grass grew green and thick and tall. Mrs. Cabot tried to mow the lawn, but every time she pushed the mower, she sneezed.

“Bless you,” said Sam.

“Thank you,” said Mrs. Cabot, between sneezes.

“Do you have a cold?” Sam asked.

Mrs. Cabot blew her nose. Sneezed. Pushed the mower. Then sneezed again. “No. I have allergies.”

“You shouldn’t be mowing grass, then,” said Sam.

“I know that,” replied Mrs. Cabot, sneezing. “But Mr. Cabot hurt his back. So he can’t mow the grass.”

“Maybe I could,” offered Sam.

“That’s kind of you,” said Mrs. Cabot. “But you’re too small.”

Sam smiled. “I know just what you need.”

“What’s that?” asked Mrs. Cabot.

“A goat!” Sam laughed. “A goat will eat every bit of grass. You’ll never have to mow again.”

While it was true that Mrs. Cabot hated goats, there was something she hated even more—sneezing! And so that very day, she drove to a farm and came back with a goat.

A month later Sam found Mrs. Cabot hammering a For Sale sign into the front lawn.

“Are you selling the building?” asked Sam.

“I don’t want to,” sighed Mrs. Cabot. “But I’m so busy taking care of the cat and the dog and the parrot and the goat that I don’t have time for anything else. The laundry room is full of cobwebs. The stairs are full of dust. And as for the hedges—well, see for yourself.”

Sam patted Mrs. Cabot on the shoulder. “What you need is a pet-sitter.”

Mrs. Cabot stopped hammering. “But who on earth would take care of all those pets?”

Sam’s grin was as wide as a wheelbarrow. “I know just the person,” he said. “And he even lives in the building!”

**1** The author most likely wrote the passage to

- (A) tell a funny story about pets
- (B) describe how to choose a pet
- (C) explain how to take care of pets
- (D) convince the reader to buy a pet

**2** Where do the events in the passage take place?

- (A) at a hotel
- (B) at a house
- (C) at an animal shelter
- (D) at an apartment building

**3** Which of these things does Sam want?

- (A) a live pet
- (B) a teddy bear
- (C) a plastic parrot on a stick
- (D) a kite in the shape of a kitten

**4** Mrs. Cabot says that if she lets Sam have a pet, she will have to

- (A) visit a zoo
- (B) feed the pet
- (C) let everyone get a pet
- (D) sell the apartment building

**5** Read this sentence from the passage.

“No, it does not!”

Another way to write does not is

- (A) doesnt
- (B) doesn’t
- (C) does’nt
- (D) doesnot

**6** Read this sentence from the passage.

“I saw a mouse!”

Which of these words means more than one mouse?

- (A) mice
- (B) mices
- (C) mouses
- (D) mousies



**7** Read this sentence from the passage.

Police cars surrounded the apartment building.

In this sentence, surrounded means about the same as

- (A) honked at
- (B) drove past
- (C) bumped into
- (D) circled around

**8** Read the sentences below.

Because of the **mouse**, Mrs. Cabot buys a **cat**.

Because of the **robbers**, Mrs. Cabot buys a \_\_\_\_\_.

Which animal belongs in the blank?

- (A) dog
- (B) goat
- (C) kitten
- (D) parrot

**9** Why does Mrs. Cabot buy a parrot?

- (A) Her cat is lonely.
- (B) Mr. Cabot is bored.
- (C) Sam is going to camp.
- (D) Her best friend is moving.

**10** Mr. Cabot does not like to

- (A) watch TV
- (B) build shelves
- (C) talk to others
- (D) read the newspaper

**11** Which of these words does not describe Sam?

- (A) clever
- (B) helpful
- (C) nice
- (D) lazy

**12** Mrs. Cabot puts up a For Sale sign because

- (A) she wants a bigger home
- (B) she is too busy with her pets
- (C) she is angry because everyone has pets
- (D) she does not want to clean the laundry room

**13** At the end of the passage, Sam hopes

- (A) to be the pet-sitter
- (B) to get a stuffed bear
- (C) to get a new landlady
- (D) to move to a new apartment building

**14** Read this sentence from the passage.

Sam's grin was as wide as a wheelbarrow.

This is the author's way of saying that

- (A) Sam likes gardening
- (B) Sam has a big smile
- (C) Sam needs to see a dentist
- (D) Sam does not like to smile



**15**

Compare how Sam felt at the beginning of the passage with how he felt at the end. Explain what happened to change how he felt. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

---

---

---

---

---

---

---

---

---

---

## **Directions**

This is the Table of Contents for a book called *Basic Pet Care*.  
Read the Table of Contents. Then answer Numbers 16 through 20.

# **Basic Pet Care**



## **Table of Contents**

<b>How to Be a Good Pet Owner .....</b>	page 3
<b>Choosing the Right Pet for You .....</b>	page 7
<b>Caring for Birds .....</b>	page 11
Small Birds (Canaries and Parakeets) .....	page 12
Large Birds (Cockatoos and Parrots) .....	page 14
<b>Caring for Dogs .....</b>	page 17
<b>Caring for Cats .....</b>	page 21
<b>Caring for Reptiles .....</b>	page 25
Lizards.....	page 26
Snakes.....	page 27
Turtles .....	page 29
<b>Caring for Rodents .....</b>	page 30
Gerbils.....	page 31
Hamsters.....	page 32
Guinea Pigs.....	page 34
Mice and Rats.....	page 35
<b>Glossary .....</b>	page 37
<b>Index .....</b>	page 39

"Basic Pet Care" copyright © 2000, by CTB/McGraw-Hill LLC. All rights reversed.



**16** Which part listed in the Table of Contents gives definitions of words used in the book?

- (A) Index
- (B) Glossary
- (C) How to Be a Good Pet Owner
- (D) Choosing the Right Pet for You

**17** Which page in *Basic Pet Care* has information about caring for turtles?

- (A) page 21
- (B) page 26
- (C) page 27
- (D) page 29

**18** Page 13 in *Basic Pet Care* most likely has information about

- (A) canaries
- (B) gerbils
- (C) lizards
- (D) snakes

**19** The book *Basic Pet Care* most likely has

- (A) ads for pets
- (B) poems about pets
- (C) facts for pet owners
- (D) stories about pet owners

**20** Which of these chapters might also be found in *Basic Pet Care*?

- (A) Caring for Bats
- (B) Caring for Lions
- (C) Caring for Eagles
- (D) Caring for Goldfish



# Reading Grade 3

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

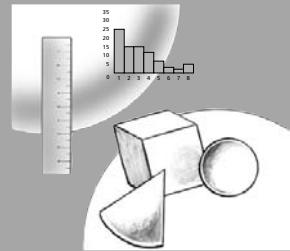
**Wisconsin Knowledge and Concepts Examinations  
Criterion-Referenced Test**

**Released Item Book**

**Mathematics**

**Grade**

**3**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### **What are released items?**

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### **How do I use this book?**

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

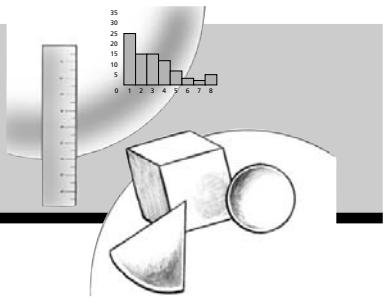
- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

# Mathematics

## Session 1



- 1** Look at the number sentence below.

$$27 + \square = 37$$

What number is missing from the number sentence?

- (A) 0
- (B) 10
- (C) 17
- (D) 64

- 2** The table below shows how many minutes Ben practiced playing the piano last weekend.

### Ben's Piano Practice

Day	Time (in minutes)
Friday	25
Saturday	30
Sunday	29

How many minutes did Ben practice playing the piano in all?

- (A) 74 minutes
- (B) 79 minutes
- (C) 84 minutes
- (D) 85 minutes

- 3** Which of these number sentences is true?

- (A)  $12 - 5 = 11 - 6$
- (B)  $12 - 5 = 12 - 7$
- (C)  $12 - 5 = 15 - 2$
- (D)  $12 - 5 = 16 - 9$

- 4** Missy made the number pattern below.

3, 6, 9, ?, ?, 18

What two numbers are missing from the pattern?

- (A) 10, 11
- (B) 12, 15
- (C) 13, 15
- (D) 19, 20



- 5** Simon has 3 boxes with 8 crayons in each box.

**Step A**

How many crayons does Simon have?

Answer: \_\_\_\_\_ crayons

**Step B**

Explain how you found the number of crayons that Simon has.  
Use words, numbers, and/or symbols in your answer.

---

---

---

---

- 6** Look at the number sentence below.

$$3 + 4 = 2 + \square$$

What number goes in the box to make the number sentence true?

- (A) 4
- (B) 5
- (C) 7
- (D) 9

- 7** The number sentence below is missing a number. Kerry needs to find the number that belongs in the box.

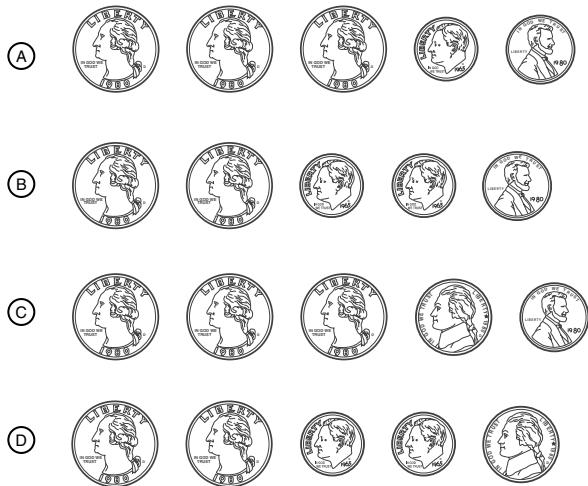
$$9 + \square = 16$$

Which of these number sentences shows another way that Kerry could find the missing number?

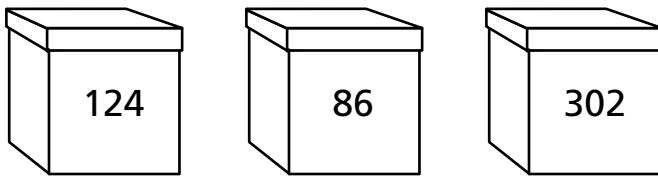
- (A)  $0 + 16 = \square$
- (B)  $16 + 9 = \square$
- (C)  $16 - 9 = \square$
- (D)  $25 - 16 = \square$



- 8** Which set of coins is equal to 86¢?



- 9** Mr. Kemp has 3 boxes of building blocks. Each box contains a different number of blocks, as shown below.

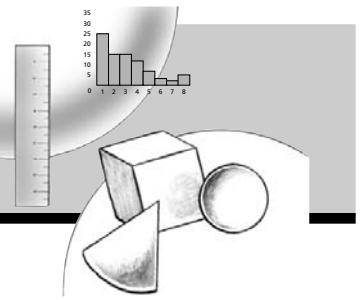


About how many building blocks does Mr. Kemp have?

- (A) 490
- (B) 510
- (C) 530
- (D) 550

# Mathematics

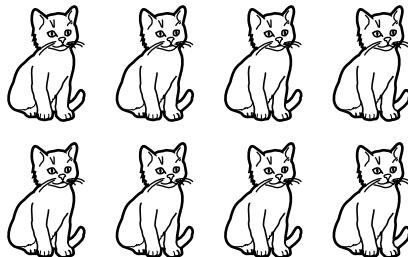
## Session 2



- 10** Which of these numbers has an 8 in the tens place?

- (A) 18
- (B) 98
- (C) 281
- (D) 862

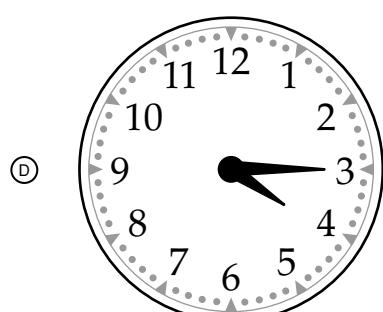
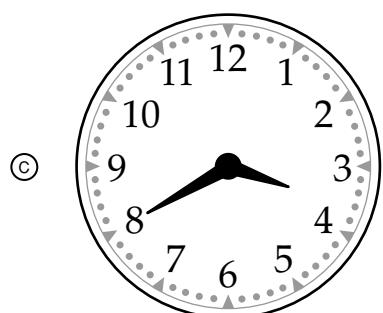
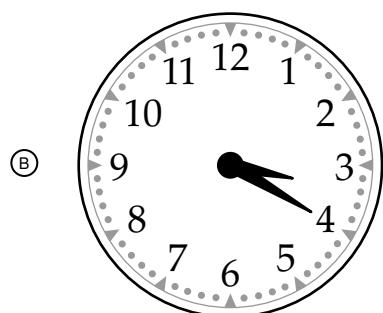
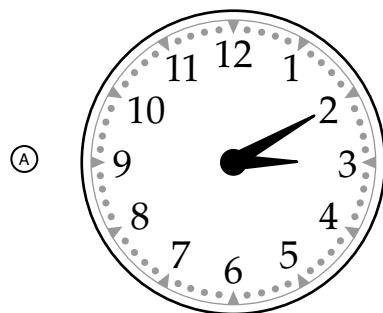
- 11** Ann's cat had 8 kittens as shown below. Ann kept  $\frac{1}{4}$  of the kittens.



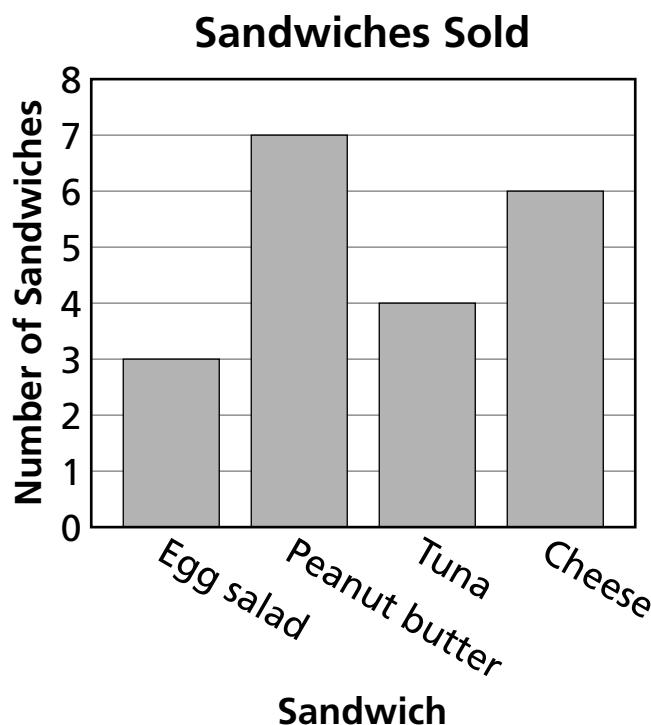
How many kittens did Ann keep?

- (A) 1 kitten
- (B) 2 kittens
- (C) 4 kittens
- (D) 6 kittens

- 12** Which clock shows 3:20?



- 13** The bar graph below shows the number of sandwiches sold at Sal's Store.



How many more peanut butter sandwiches were sold than tuna sandwiches?

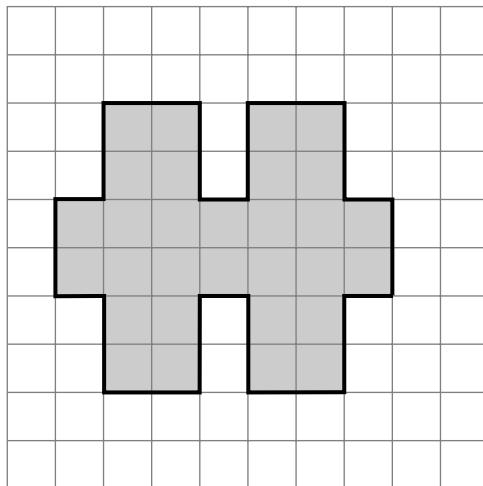
- (A) 1
- (B) 2
- (C) 3
- (D) 4

- 14** Eric walks to school each day. Which of these best describes how long it takes Eric to walk to school?

- (A) centimeters
- (B) inches
- (C) seconds
- (D) minutes



- 15** Look at the grid below.



**Step A**

How many square units are shaded on the grid?

Answer: \_\_\_\_\_ square units

**Step B**

Explain how you found the number of square units that are shaded.  
Use words and/or numbers in your answer.

---

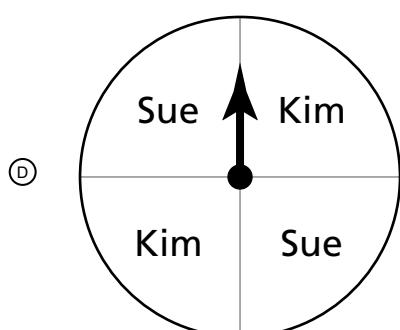
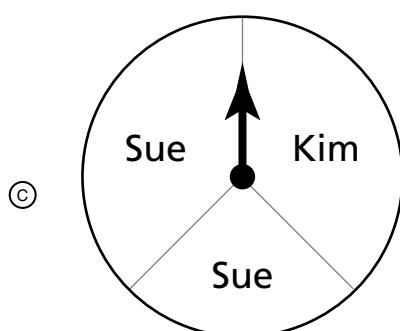
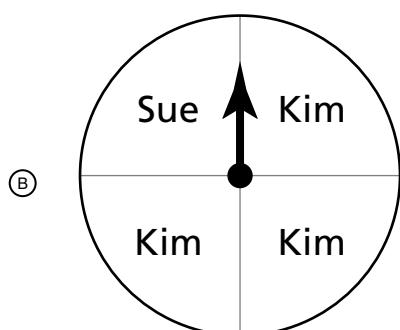
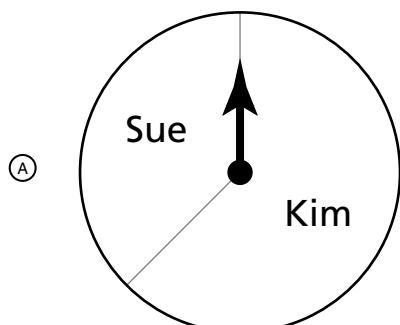
---

---

---

**16**

Sue and Kim made a spinner to help them decide who will ride a bike first. The spinner gives Sue and Kim the same chance to ride first. Which of these could be the spinner they made?



- 17** Look at the shape below.



Which 2 shapes can be used to make the shape shown?

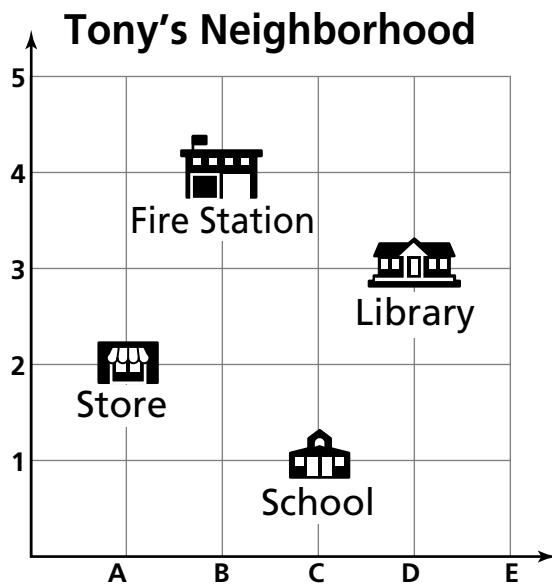
- (A) A rectangle and a triangle.
- (B) A trapezoid and a triangle.
- (C) A rectangle and a right-angled triangle.
- (D) A parallelogram and a triangle.

- 18** Which sign has 8 sides?

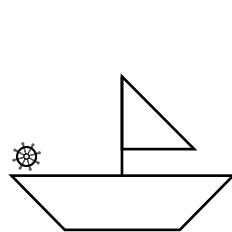
- (A) A pentagonal sign with two people walking.
- (B) An octagonal sign with the word "STOP" in the center.
- (C) A diamond-shaped sign with a deer jumping.
- (D) A rectangular sign with the words "NO PARKING" in the center.

- 19** The grid at right shows Tony's neighborhood. Which building is located at (B, 4)?

- (A) store
- (B) school
- (C) library
- (D) fire station

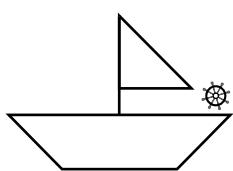


- 20** Jane owns the toy boat shown below.

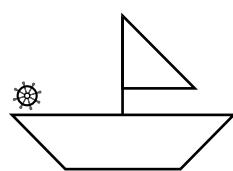


Which of these shows the boat flipped over the line?

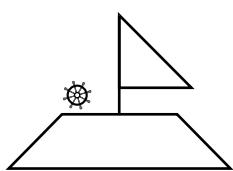
(A)



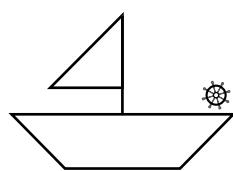
(C)



(B)



(D)



***STOP***

# Mathematics Grade 3

# Released Item Book

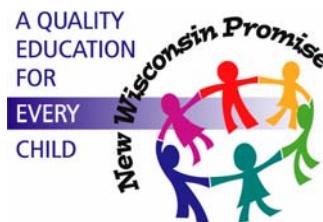


Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

**Wisconsin Knowledge and Concepts Examinations** **WI**  
***Criterion-Referenced Test***

# Guide to Grade 3

Released Item Books  
In READING and MATHEMATICS



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional, or learning disability.

## **Guide to Grade 3 Released Item Books in Reading and Mathematics**

This document contains information for using, scoring, and interpreting the released items in reading and mathematics.

August 2006  
(Document Version 1.0, August 28, 2006)

Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction.

## **Table of Contents**

<b>Introduction</b>	<b>1</b>
<b>Reading</b>	<b>2</b>
Reading Item Information	4
Reading Objectives and Subskills	5
Reading Depth of Knowledge	8
Reading Rubric for Constructed-Response Items	9
Reading Constructed-Response Item Scoring Guide	10
Anchor Papers for Reading Constructed-Response Item	11
<b>Mathematics</b>	<b>16</b>
Mathematics Item Information	19
Mathematics Objectives and Subskills	20
Mathematics Depth of Knowledge	24
Mathematics Rubric for Constructed-Response Items	25
Mathematics Constructed-Response Item Scoring Guides	26
Anchor Papers for Mathematics Constructed-Response Items	28

## **Guide to Released Item Books**

Please help us improve this document. We welcome your comments and questions.  
Please contact us at:

Wisconsin Department of Public Instruction  
Office of Educational Accountability  
125 S. Webster Street, P.O. Box 7841  
Madison, WI 53707-7841

Toll-free: (800) 441-4563  
Fax: (608) 266-8770

<http://www.dpi.wi.gov/oea/>

# Introduction

## What are released items?

The items in the Reading and Mathematics released item books are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in the released item books illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

## How do I use the released item books and this guide?

### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

This guide provides instructions for administering the released item books as practice tests and information for scoring the items, including scoring guides and anchor papers for the constructed-response items. The item information tables identify the answer key, what each item measures, depth of knowledge, and item difficulty. Item difficulty is presented as both the percentage of students who answered the item correctly and the scale score location of the item. The item's scale score location describes where the item functions along the ability scale. Items with higher scale score locations are considered more difficult than items with lower scale score locations. Students with scale scores above the scale score location of the item would have a greater probability of answering the item correctly than students with scale scores below the item's scale score location.

### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. Note that a student's score on the practice test cannot be converted to a total scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

## Reading

### Sample Directions for Administering the Reading Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, and scratch paper. Students' test books should be closed.*

**SAY** In this test, you will read some passages and answer both multiple-choice questions and short-answer questions about those passages. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Write your answer on the lines in your test book. You may also write in the space under the lines, but your answer must stay inside the boxed area. Answers or parts of answers written outside the boxed area will not be scored. You may use scratch paper to help you plan your answer, but remember to write your answer in the boxed area in your test book. After you have written your answer, be sure to read it to make sure you have written your ideas clearly and completely.

For both the multiple-choice questions and the short-answer questions, remember to look back at the reading passages to help you answer the questions. For some questions, you may need to go back to two reading passages to find the answer. Be sure to look back at both reading passages to help you answer these questions.

You will have 40 minutes to do the test. Work until you come to the word "STOP" at the bottom of the page. You may go back and check your answers. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** Please open your test book to Page 2.

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY** You may begin.

*Record the starting and stopping times.*

Record the Starting Time:	Add 40 Minutes:	Record the Stopping Time:
_____	+ 40	_____

*Check to be sure that students are marking their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY ➤ Stop. This is the end of the test. Please close your test book.**

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Reading Item Information

Item	Answer Key	Objective/ Subskill	Depth of Knowledge Level	Format	2005–06 Item Statistics				Scale Score Location
					A or 0	B or 1	C or 2	D or 3	
1	A	4.1	3	SR	*35%	26%	19%	19%	518
2	D	2.1	1	SR	2%	5%	4%	*87%	422
3	A	2.1	1	SR	*94%	1%	2%	3%	402
4	C	2.1	1	SR	6%	8%	*80%	6%	430
5	B	1.2	1	SR	4%	*74.7%	11%	9%	437
6	A	1.2	1	SR	*67%	8%	18%	5%	459
7	D	1.1	1	SR	4%	7%	3%	*85%	424
8	A	3.1	2	SR	*86%	2%	5%	6%	437
9	D	3.1	2	SR	6%	9%	2%	*82%	428
10	C	2.1	1	SR	16%	13%	*58%	12%	460
11	D	3.1	2	SR	6%	8%	6%	*79%	429
12	B	3.1	3	SR	8%	*78%	6%	7%	439
13	A	3.1	3	SR	*80%	3%	5%	10%	441
14	B	1.1	3	SR	9%	*79%	4%	7%	446
15		3.1	3	BCR	24%	38%	30%	4%	468
16	B	1.3	2	SR	21%	*34%	27%	14%	503
17	D	2.2	2	SR	7%	4%	5%	*80%	421
18	A	2.2	2	SR	*62%	14%	12%	8%	464
19	C	3.3	3	SR	21%	6%	*52%	15%	478
20	D	4.2	4	SR	6%	6%	13%	*70%	442

Objective/Subskill and Depth of Knowledge Level information follows this table.

SR: selected response; BCR: brief constructed response.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
393 and below	394–429	430–465	466 and above

# Reading Objectives and Subskills

---

## Types of Text

---

The grade 3 reading assessment presents a variety of grade-appropriate reading passages representing literary, informational, and everyday text. Passages may be up to 1,200 words long and some passages may be paired with other, related passages. Students may be asked to read and answer questions about texts such as these:

Literary	Informational	Everyday
Realistic fiction, animal stories, poetry, drama, folktales, fables, biography	Nonfiction trade book excerpts, magazine articles	Charts, schedules, menus, tickets, product labels, safety notices, school-related texts

---

## Objectives, Subskills, and Descriptors

---

Objectives (labeled 1, 2, 3, and 4) and subskills (labeled 1.1, 1.2, etc.) denote general knowledge and skills that are assessed and reported on the WKCE-CRT. Bulleted descriptors are *examples* of specific knowledge or skills that may be included within each subskill. The subskills include knowledge and skills *such as, but not limited to* the descriptors.

### 1. Determine the meaning of words and phrases in context.

#### 1.1. Use context clues to determine the meaning of words and phrases.

- Categorize words to demonstrate understanding of word meaning.
- Use context clues to determine the meaning of unfamiliar words.
- Understand the meaning of words and phrases used figuratively.
- Use context clues to determine the meaning of multiple-meaning words.
- Use knowledge of synonyms and antonyms to determine the meaning of words.
- Identify analogies to demonstrate understanding of word meaning.

#### 1.2. Use knowledge of word structure to determine the meaning of words and phrases.

- Recognize regular and irregular plural forms.
- Recognize possessive forms.
- Identify the meaning of contractions.
- Use knowledge of compound words to determine the meaning of a word.
- Identify how adding an affix changes the meaning of a word.
- Identify the meaning of a word with an affix.
- Use knowledge of root words to determine the meaning of a word.

1.3. Use word reference materials to determine the meaning of words and phrases.

- Identify and use parts of a book related to word meaning.
- Use primary dictionary guide words to locate definitions.
- Use an entry from a word reference to determine word meaning and pronunciation.

**2. Understand text.**

2.1. Demonstrate understanding of literal meaning by identifying stated information in literary text.

- Identify stated information about story elements.

2.2. Demonstrate understanding of literal meaning by identifying stated information in informational text.

- Determine where information can be found in a text.
- Identify stated information about main ideas and supporting details.
- Identify stated information provided through text features.

2.3. Demonstrate understanding of explicitly stated sequence of events in literary and informational text.

- Identify beginning, middle, and end events.
- Identify first, next, and last events.

**3. Analyze text.**

3.1. Analyze literary text.

- Make inferences about story elements.
- Summarize important ideas and events.
- Analyze stated or implied theme, message, or main idea.
- Draw conclusions.
- Identify purpose.

3.2. Analyze informational text.

- Identify implied main ideas and supporting details.
- Identify implied relationships (such as cause/effect and compare/contrast).
- Summarize information.
- Identify purpose.
- Make inferences based on text features.
- Make inferences based on visual information.
- Make inferences about text structure.
- Identify pros and cons.

3.3. Analyze author's use of language in literary and informational text.

- Analyze the use of literary devices.
- Recognize and distinguish among genres.

**4. Evaluate and extend text.**

4.1. Evaluate and extend literary text.

- Extend themes and concepts to other situations.
- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.

4.2. Evaluate and extend informational text.

- Extend ideas and concepts to other situations.
- Evaluate comparisons and contrasts.
- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.

4.3. Evaluate and extend the author's use of language in literary and informational text.

- Evaluate the author's word choice and use of language.

## **Reading Depth of Knowledge**

These depth of knowledge levels are intended to reflect the level of cognitive demand placed on students by test items. As the level of cognitive demand increases, so does the mental effort and integration of information required to answer a test item successfully. Each level represents important cognitive skills, and each level requires the use of cognitive skills in lower levels. For example, a student who is asked to make connections between two texts (level 4) would also need to recall pertinent details from the texts (level 1), understand stated information in the texts (level 2), and make inferences and draw conclusions about each text (level 3). The levels assume grade-appropriate text, vocabulary, and tasks. Test items should represent a range of depth of knowledge levels, and items within each level may represent a range of difficulty as indicated by percentage of students who answered the item correctly or scale score location.

### **Level 1: Recognizing and Recalling**

Students demonstrate a grade-appropriate ability to recognize or recall basic facts, terms, or definitions. For example, a student might be asked to identify an explicitly stated main idea in a text.

### **Level 2: Using Fundamental Concepts and Procedures**

Students demonstrate a grade-appropriate ability to use basic facts, definitions, skills, or concepts. For example, a student might be asked to use information in a text to complete a graphic organizer.

### **Level 3: Concluding and Explaining**

Students demonstrate understanding of grade-appropriate text by using stated and implied information and text elements to draw conclusions. Students explain and convey ideas effectively. For example, a student might be asked to provide details and examples from a text to support a conclusion.

### **Level 4: Evaluating, Extending, and Making Connections**

Students demonstrate their knowledge of concepts when evaluating or interpreting grade-level text. Students make connections among texts, common experiences, and issues. For example, a student might be asked to evaluate an author's effectiveness in achieving an intended purpose.

# **Reading Rubric for Constructed-Response Items**

## **3 points**

- The response demonstrates *thorough understanding* of the reading concept embodied in the task.
- The response is *accurate, complete, insightful, and fulfills all the requirements* of the task.
- Necessary support and/or examples are included.
- Information is clearly *text-based*.

## **2 points**

- The response demonstrates *partial understanding* of the reading concept embodied in the task.
- The response is *accurate* and *fulfills most of the requirements* of the task.
- Necessary support and/or examples may not be complete or clearly text-based.

## **1 point**

- The response demonstrates *an incomplete understanding* of the reading concept embodied in the task.
- The response provides *some information that is text-based*, but does not fulfill the requirements of the task.
- Information provided is *too general* or *too simplistic*.
- Necessary support and/or examples may be incomplete or omitted.

## **0 points**

- The response demonstrates *no understanding* of the reading concept embodied in the task.
- The response is *inaccurate, confused, or irrelevant*.
- The student has *failed to respond to the task*.

## Reading Constructed-Response Item Scoring Guide

Forms: Public Release	Item #: 15	Item Type: BCR	TB Page #: 8	AB Page #: n/a
Reporting Category: Reading				
Objective: 3. Analyzes Text				Max Score Pts:
Subskill: 3.1. Analyzes literary text				3
Descriptor: Understands and identifies story elements (character traits)				

### Item Stem

Compare how Sam felt at the beginning of the passage with how he felt at the end. Explain what happened to change how he felt. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

**Responses should be evaluated according to the guidelines outlined below for each score point.**

#### 3 points

- The response **demonstrates a thorough understanding** of how Sam felt at the beginning of the story, how he felt at the end of the story, and what happened to change the way he felt.
- The response consists of an **accurate** explanation for the change in Sam's attitude (i.e. Mrs. Cabot's acquisition of various animals and her decision to let Sam be their pet-sitter) and an **insightful** understanding that Sam himself influenced Mrs. Cabot's decision to buy the animals.
- The student supports the response with **highly relevant ideas and details** from the text. The link between Mrs. Cabot's new animals and the change in Sam's feelings will be explicitly stated.  
For example:
  - Sam was not happy at the beginning because he wanted a pet. He convinced Mrs. Cabot to buy so many animals that she needed a pet-sitter. Sam was happy at the end because he knew that he was the right person for the job.

#### 2 points

- The response **demonstrates a partial understanding** of the change in Sam's feelings and **fulfills most of the requirements** of the task.
- The response is accurate in its description of the change in Sam's feelings, but **does not indicate an insightful understanding** that Sam manipulated Mrs. Cabot into purchasing the animals.
- The student adequately supports the response with examples from the text. For example:
  - Sam wasn't happy at the beginning because he wanted a live pet. Sam was so happy to be Mrs. Cabot's pet-sitter at the end that he grinned like a wheelbarrow.

#### 1 point

- The response **demonstrates an incomplete understanding** of the change in Sam's feelings and/or the reasons for that change. It does not fulfill all of the requirements of the task.
- The response comments on Sam's feelings at the beginning or the end of the passage, but **fails to make connections** between Mrs. Cabot's purchase of the animals and the change in Sam's feelings.
- The student provides **limited or vague text-based details**. For example:
  - Sam isn't happy at the beginning, but he is at the end. (no explanation for change)
  - Sam is happy at the end because he can take care of animals. (no change)

## Anchor Papers for Reading Constructed-Response Items

Compare how Sam felt at the beginning of the passage with how he felt at the end. Explain what happened to change how he felt. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

Sam felt sad at first because he didn't have a pet. He felt happy at the end because he might be a pet-sitter. What happened to change how he felt was the landlady kept having problems like robberies and mice in the apartment so Sam told her to buy pets that can help with mice, robberies, mowing lawn, and talking. But then she couldn't take care of all those pets so Sam offered to take care of them and be the pet-sitter.

Score Point 3

- >Response demonstrates a thorough understanding of how Sam felt at the beginning of the story and how he felt at the end of the story, and what happened to change the way he felt.
- >Response gives you relevant ideas and details from the text. "Sam felt sad at first because he didn't have a pet." "He felt happy at the end because he might be a pet-sitter."
- >Response indicates Sam's manipulation of Mrs. Cabot to acquire the animals "Sam told her to buy pets."

Compare how Sam felt at the beginning of the passage with how he felt at the end. Explain what happened to change how he felt. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

Sam felt sad at the beginning because Mrs. Cabot would not let him have a pet. At the end Sam felt happy because he could be the pet-sitter. He changed from being sad all the way to happy.

Score Point 2

- > Response demonstrates a partial understanding of the change in Sam's feelings and fulfills most of the requirements of the task.
- > Response does not indicate an insightful understanding that Sam manipulated Mrs. Cabot into purchasing the animals.
- > Response indicates how he felt and why: "Sam felt sad... would not let him have a pet." "Sam felt happy because he could be the pet-sitter."

**Compare how Sam felt at the beginning of the passage with how he felt at the end. Explain what happened to change how he felt. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.**

He was angry at the beginning  
because he could not get a pet.  
But now he happy he can get a  
pet

**Score Point 1**

- > Response demonstrates an incomplete understanding or reasons for changes in Sam's feelings..
- > Response fails to make any connections between Mrs. Cabot's purchase of the animals and the change in Sam's feelings.
- > Response provides limited or vague text-based details: "He was angry at the beginning.....But now he happy...."

Compare how Sam felt at the beginning of the passage with how he felt at the end. Explain what happened to change how he felt. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

first, he was sad.  
then, he was happy

Score Point 1

- > Response demonstrates an incomplete understanding of the change in Sam's feelings and the reasons for that change.
- > Response fails to make connections between Mrs. Cabot's purchase of the animals and the change in Sam's feelings.
- > Response is very limited and vague in its text-based details. Sam is sad at the beginning and happy at the end with no explanation for the change.

Compare how Sam felt at the beginning of the passage with how he felt at the end. Explain what happened to change how he felt. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

Sam felt said at  
the beginning

Score Point 0

- > Response demonstrates no understanding of the change in Sam's feelings or the reasons for that change.
- > Response fails to make any connection between Mrs. Cabot's purchase of the animals and the change in Sam's feelings.
- > Response is very limited "Sam felt sad" gives no reason for his feelings and no indication of any change.

# Mathematics

## Sample Directions for Administering the Mathematics Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, and scratch paper.*

*NOTE: The use of calculators in Mathematics, Session 1 is not allowed for any student, as those sections of the test measure computation skills. Only students whose IEP or Section 504 plan allows for the accommodation of calculator usage may use a calculator for other sessions of the Mathematics test. The accommodated students must be tested in a separate room so as not to give the appearance of having an advantage.*

*Also required for the operational test, but not for this released item book:*

- Pattern blocks, 2 sets
- Ruler

*Students' test books should be closed.*

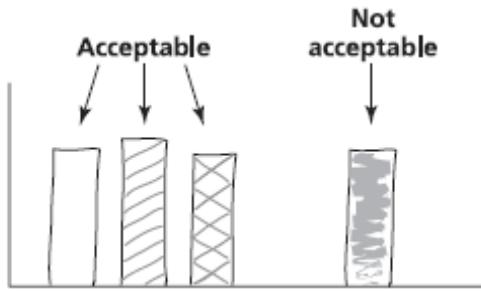
**SAY** **Remember to use only a No. 2 pencil in this test. In Session 1, you will be answering multiple-choice questions and short answer questions. Multiple-choice questions are questions that ask you to choose the best answer. For the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.**

**You may use scratch paper to work the multiple-choice questions, but remember to fill in the circle that goes with the answer you choose.**

**Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.**

**For the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.**

Demonstrate by drawing the illustration below on the board.



**Now you will do Session 1 of the Mathematics test. Remember to read all of the directions and information in the test book. When you come to the word "STOP" at the bottom of the page, you have finished Session 1. You may go back and check your answers, but do not go on to Session 2 of the Mathematics test. When you have finished, sit quietly until everyone else has finished.**

**You will have 15 minutes to do Session 1. Make sure you stop at the end of Session 1.**

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY ▶ Please open your test book to Page 2.**

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY ▶ You may begin.**

*Record the starting and stopping times for Session 1.*

Record the Starting Time:	Add 15 Minutes:  _____ + 15 _____	Record the Stopping Time:  _____
------------------------------	---	---

*Check to be sure that students are marking and writing their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY ▶ Stop. Put down your pencil and close your test book. This is the end of Session 1.**

*Pause to be sure that all students have closed their test books.*

**SAY** Now, open your test book to the page labeled “Mathematics Session 2.”

In Session 2, you will be answering multiple-choice questions and short-answer questions. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

Remember, for the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

You will have 20 minutes to do Session 2. Remember to read all of the directions and information in this part of the test book. When you come to the word “STOP” at the bottom of the page, you have finished Session 2.

You may go back over Session 2 to check your answers, but do not go back to Session 1. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** You may begin.

*Record the starting and stopping times for Session 2.*

Record the Starting Time:	Add 20 Minutes:	Record the Stopping Time:
_____	+ 20	_____

**SAY** Stop. This is the end of Session 2. Please close your test book.

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Mathematics Item Information

Item	Answer Key	Calculator Allowed	Objective/Subskill	Depth of Knowledge Level	2005–06 Item Statistics					Scale Score Location
					Format	A or 0	B or 1	C or 2	D	
1	B	No	Fc	2	SR	1%	*93%	3%	3%	362
2	C	No	Bb	2	SR	13%	6%	*73%	7%	403
3	D	No	Fb	2	SR	20%	23%	12%	*37%	480
4	B	No	Fa	2	SR	5%	*80%	5%	2%	382
5		No	Bb	2	A-BCR	22%	76%			387
5		No	Ae	3	B-BCR	16%	13%	69%		388
6	B	No	Fb	2	SR	18%	*46%	14%	17%	457
7	C	No	Fc	3	SR	21%	20%	*52%	5%	448
8	A	No	Ba	2	SR	*76%	3%	9%	7%	320
9	B	No	Bb	2	SR	20%	*59%	8%	8%	438
10	C	No <sup>1</sup>	Ba	1	SR	11%	3%	*80%	5%	394
11	B	No <sup>1</sup>	Ba	2	SR	16%	*26%	49%	9%	487
12	B	No <sup>1</sup>	Db	1	SR	6%	*79%	1%	13%	388
13	C	No <sup>1</sup>	Ea	2	SR	2%	3%	*77%	17%	402
14	D	No <sup>1</sup>	Da	2	SR	4%	5%	4%	*87%	375
15		No <sup>1</sup>	Db	2	A-BCR	29%	69%			382
15		No <sup>1</sup>	Ae	3	B-BCR	13%	73%	12%		439
16	D	No <sup>1</sup>	Eb	2	SR	15%	5%	2%	*77%	398
17	D	No <sup>1</sup>	Cb	3	SR	3%	26%	4%	*66%	420
18	B	No <sup>1</sup>	Ca	1	SR	1%	*97%	0%	0%	310
19	D	No <sup>1</sup>	Cc	1	SR	1%	2%	1%	*95%	348
20	D	No <sup>1</sup>	Cb	3	SR	5%	34%	27%	*33%	510

<sup>1</sup>Only students whose IEP or Section 504 plan allows for the accommodation of calculator usage may use a calculator for this item.

Objective/Subskill and Depth of Knowledge Level information follows this table.

SR: selected response; A-BCR: brief constructed response, part A; B-BCR: brief constructed response, part B.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
391 and below	392–406	407–451	452 and above

# Mathematics Objectives and Subskills

## Beginning of Grade 3

---

### How to use the Framework

---

The mathematics assessment framework is an indication of the knowledge and skills that will be assessed on the November WKCE-CRT. ***This information does not replace your local curriculum.*** However, you may wish to ensure that your local curriculum includes the knowledge and skills described in the framework.

This section of the framework describes the types of content that students may encounter on the WKCE-CRT

The knowledge and skills to be assessed are organized into objectives, subskills, and descriptors as shown below. WKCE-CRT results will be reported by objectives and subskill.

- A. **Objective:** A group of cognitively related skills.
  - A.a. **Subskill:** A group of related knowledge and skills that *may include, but is not limited to*, the descriptors which follow.
    - **Descriptor:** an example of a specific knowledge or skill that may be assessed.

---

### Objectives, Subskills, and Descriptors

---

#### Objective    Mathematical Processes

##### A:

Students will effectively use mathematical knowledge, skills, and strategies related to reasoning, communication, connections, representation, and problem solving.

##### Descriptors, such as but not limited to

- Use reasoning and logic to:
  - Perceive patterns
  - Identify relationships
  - Formulate questions
  - Pose problems
  - Make conjectures
  - Justify strategies
  - Test reasonableness of results
- Communicate mathematical ideas and reasoning using the vocabulary of mathematics in a variety of ways (e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models).
- Connect mathematics to the real world, as well as within mathematics.
- Create and use representations to organize, record, and communicate mathematical ideas.
- Solve and analyze routine and non-routine problems.

---

#### Objective    Number Operations and Relationships

##### B:

##### Subskill    Concepts

##### B.a.:

##### Descriptors, such as but not limited to

- Recognize and apply place-value concepts to whole numbers less than 1,000
- Read, write, and represent numbers using words, numerals, pictures (e.g., base-ten blocks), number lines, arrays, expanded forms ( $24=20+4$ ) and symbolic renaming (e.g.,  $24=30-6$ ).
- Compare and order whole numbers less than 1,000.
- Count by 2s, 3s, 5s, 10s, 25s and 100s.
- Count, compare and make change using a collection of coins (up to one dollar) and one-dollar bills.
- Identify a fractional part of a collection/set.

Read, write and represent fractional parts of a whole (e.g.,  $\frac{1}{4}$ ,  $\frac{1}{2}$ ).

#### **Subskill Computation**

**B.b.:**

##### **Descriptors, such as but not limited to**

- Use addition and subtraction in everyday situations and solve one-step word problems.
- Solve single and double-digit addition and subtraction problems with regrouping including horizontal format in problems with and without context.
- Demonstrate the concept of multiplication as grouping or repeated addition in context with products up to 50.
- Demonstrate understanding of the concept of division as repeated subtraction, partitioning/sharing or measuring (dividend up to 30 and divisors up to 5).
- Use fractions to represent quantities when solving problems involving equal sharing or partitioning.
- Represent with shaded circles, rods, squares, pictorial representations of a whole.
- Estimate sums to tens and hundreds and differences to ten.
- Determine reasonableness of answers.

#### **Objective Geometry**

**C:**

#### **Subskill Describing figures**

**C.a.:**

##### **Descriptors, such as but not limited to**

- Identify, describe, and compare properties of 2- and 3-dimensional figures such as squares, triangles, rectangles, circles, pattern block shapes, cubes, pyramids, rectangular prisms, cylinders, and spheres (e.g., comparing sides, faces, corners, and edges).

#### **Subskill Spatial relationships and transformations**

**C.b.:**

##### **Descriptors, such as but not limited to**

- Identify 2-dimensional geometric shapes created by combining or decomposing other shapes e.g., square/triangles; trapezoid/rhombus, triangle; hexagon/triangles, rhombus, trapezoid.
- Apply concepts of single-motion geometry (e.g., slides, flips and turns) to match two identical shapes.

#### **Subskill Coordinate systems**

**C.c.:**

##### **Descriptors, such as but not limited to**

- Use simple 2-dimensional coordinate systems to find locations on maps and to represent points and simple figures with coordinates of letters and numbers, (e.g., (E, 3)).

#### **Objective Measurement**

**D:**

<b>Subskill</b>	<b>Measurable attributes</b>
<b>D.a.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Describe attributes of length, time, and temperature and identify appropriate units to measure them. Units include: inches, feet, yards, centimeters, meters, seconds, minutes, hours, days, months, years, and degrees Fahrenheit/Celsius.</li> <li>• Compare attributes of length and weight by observation or when given actual measurements.</li> </ul>
<b>Subskill</b>	<b>Direct measurement</b>
<b>D.b.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Read and interpret measuring instruments to determine the measurement of objects with non-standard and standard units to the nearest centimeter or 1/2 inch.</li> <li>• Read thermometers to the nearest 5 degrees F/C.</li> <li>• Tell time to the nearest minute using analog and digital clocks; translate time from analog to digital clocks and vice versa.</li> <li>• Investigate measurements of area.</li> </ul>
<b>Subskill</b>	<b>Indirect measurement</b>
<b>D.c.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Apply estimation techniques using non-standard units.</li> </ul>
<b>Objective</b>	<b>Statistics and Probability</b>
<b>E:</b>	
<b>Subskill</b>	<b>Data analysis and statistics</b>
<b>E.a.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Answer and pose questions about collecting, organizing, and displaying data. Work with data in the context of real-world situations by determining what data to collect and when and how to collect it to answer questions.</li> <li>• Collect, organize, and display data in simple bar graphs and charts including translating data from one form to the other.</li> <li>• Draw reasonable conclusions based on simple interpretations of data.</li> <li>• Read, use information, and draw reasonable conclusions from data in graphs, tables, charts, and Venn diagrams.</li> </ul>
<b>Subskill</b>	<b>Probability</b>
<b>E.b.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Determine if the occurrence of future events are more, less or equally likely to occur.</li> <li>• Choose a fair and an unfair spinner.</li> </ul>
<b>Objective</b>	<b>Algebraic Relationships</b>
<b>F :</b>	
<b>Subskill</b>	<b>Patterns, relations and functions</b>
<b>F.a.:</b>	<p><b>Descriptors, such as but not limited to</b></p>

- Recognize, extend, describe, create, and replicate a variety of patterns including attribute, number, and geometric patterns.

Such as:

- Picture patterns
- Patterns in tables and charts
- “What’s-my-rule?” patterns
- Patterns using addition and subtraction rules.

Focusing on relationships within patterns as well as extending patterns e.g., patterns and relationships represented with pictures, tables and charts, and “what’s-my-rule?” patterns using addition and subtraction rules.

- Determine odd or even with a total set of 20 or less.

**Subskill F.b.: Expressions, equations and inequalities**

**F.b.:**

**Descriptors, such as but not limited to**

- Demonstrate an understanding that the “=” sign means “the same as” by solving open or true/false number sentences.
- Use notation to represent mathematical thinking: letter or box (variable); operation symbols (+, -, =).

**Subskill F.c.: Properties**

**F.c.:**

**Descriptors, such as but not limited to**

- Use properties and or relationships of arithmetical thinking to determine and to reason about what number goes in a “box” to make a number sentence true,
  - identity property of e.g., zero (e.g., property  $12 + 0 =$  “box”)
  - adding 1 to any number, commutative property for addition of single-digits
- Use simple equations in a variety of ways to demonstrate the properties above.

## **Mathematics Depth of Knowledge**

The representative examples for the following depth of knowledge categories are intended to reflect student performance expectations with regard to the level of mental effort and amount of information integrated by the student. Items are targeted at one of four levels of cognitive demand. Each level of demand is represented by items with a range of difficulty, as indicated by the percentage of students who answered the item correctly or by scale score location. Assuming grade-appropriate vocabulary and test items, these levels are viable and useful across all grades.

### **Level 1: Recognizing and Recalling**

Students recognize and recall basic facts, terms, concepts, and definitions of the content and processes of mathematics. For example, students may be required to do computation with whole numbers, fractions, decimals, and integers.

### **Level 2: Using Fundamental Concepts and Procedures**

Students describe or apply basic facts, terms, rules, concepts and definitions of the content and processes of mathematics.

### **Level 3: Concluding and Explaining**

Students demonstrate an understanding of complex ideas, draw conclusions based on this understanding, and communicate ideas and conclusions effectively.

### **Level 4: Evaluating, Extending, and Making Connections**

Students synthesize skills and techniques from various concepts of mathematics to solve multifaceted problems, and justify conclusions using mathematical definitions, properties, and principles. For example, students may be required to support mathematical arguments with definitions, properties, and principles.

## **Mathematics Rubric for Constructed-Response Items**

Step B of the constructed-response items is scored using a generic rubric.

- |                 |   |
|-----------------|---|
| <b>2 points</b> | The student demonstrates a thorough understanding of the mathematical concepts and/or procedures represented in the problem. The student uses appropriate mathematical procedures and/or concepts to explain or justify the response to Step A, and provides clear and complete explanations and interpretations containing words, calculations, or symbols, unless otherwise specified in the item stem.<br><br>The response may contain minor flaws that do <u>not</u> detract from the demonstration of a thorough understanding of the problem. |
| <b>1 point</b>  | The student demonstrates only a partial understanding of the mathematical concepts and/or procedures represented in the problem. The response lacks an essential understanding of the underlying mathematical concepts used to provide the response to Step A.<br><br>The response contains errors related to the misinterpretation of important aspects of the problem, misuse of mathematical procedures and/or concepts, or misinterpretation of results.  |
| <b>0 points</b> | The student provides a completely incorrect explanation or justification, or one that cannot be interpreted, or no response at all.   |

# Mathematics Constructed-Response Item Scoring Guides

Form: Public Release	Item #: 5	Item Type: BCR	TB Page: 4	AB Page #: n/a
Objective for Step A: B. Number Operations & Relationships			Max Score Pts: Step A: 0–1 Step B: 0–2	
Subskill: B.b. Number Computation				
Objective for Step B: A. Mathematical Processes				

## Step A: Response is limited to correct answer or range below

24 crayons

## Step B: Responses may include, but may not be limited to, the Answer Cues below

**2 points**      Either of the following tasks are accomplished:

- The student must correctly express how to solve the problem using the concepts of repeated addition, counting pictorial representations or multiplication as grouping.

(See note 1 below.)

**1 point**

- Student uses correct process needed to solve the problem but makes minor errors in his explanation.
- States process, I added or multiplied without showing work.

(See note 2 below.)

**0 points**      The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.

Note 1: Examples may include but are not limited to: ////////////// = 24 **OR**  
 $8 + 8 + 8 = 24$  **OR** I made 3 groups of 8 and counted them to find the number of crayons.  
There were 24.

Note 2: If an arithmetic error leads to the loss of a point in Step A, and the process is otherwise correct, award full credit for step B.

Form: Public Release	Item #: 15	Item Type: BCR	TB Page #: 10	AB Page #: n/a
Objective for Step A: D. Measurement				Max Score Pts:
Subskill: D.b. Direct Measurement				Step A: 0–1
Objective for Step B: A. Mathematical Processes				Step B: 0–2

<b>Step A: Response is limited to correct answer or range below</b>
30

<b>Step B: Responses may include, but may not be limited to, the Answer Cues below</b>
<p><b>2 points</b>     <u>Both</u> of the following tasks are accomplished (See note 1 below.):</p> <ul style="list-style-type: none"> <li>• The student states the process used.</li> <li>• The student sets up the calculations correctly.  <math>[2+6+6+2+6+6+2=30 \text{ OR } (3 \times 2) + (4 \times 6) = 30] \text{ OR }</math>  <math>(6 \times 7) - 12 = 30 \text{ OR } 5 \times 6 = 30</math> with explanation of outlying 4 units         </li> </ul> <p><b>1 point</b>     <u>One</u> of the following applies:</p> <ul style="list-style-type: none"> <li>• The student accomplishes either of the above tasks.</li> <li>• The student accomplishes both of the above tasks, but with a computational error.          (See note 2 below.)       </li> </ul> <p><b>0 points</b>     The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.</p> <p>Note 1: If the student indicates finding the result by counting square units, award 1 point only.</p> <p>Note 2: If an arithmetic error leads to loss of credit for Step A, and the process is otherwise correct, award full credit for Step B.</p>

## Anchor Papers for Mathematics Constructed-Response Items

### Item 5

Simon has 3 boxes with 8 crayons in each box.

**Step A**

How many crayons does Simon have?

Answer: 24 crayons

**Step B**

Explain how you found the number of crayons that Simon has.  
Use words, numbers, and/or symbols in your answer.

$$3 \times 8 = 24 \text{ crayons}$$

---

---

---

Step A

Score Point 1

Step B

Score Point 2

> Uses element of multiplication and correct numbers

**Item 5**

Simon has 3 boxes with 8 crayons in each box.

**Step A**

How many crayons does Simon have?

Answer: 24 crayons

**Step B**

Explain how you found the number of crayons that Simon has.  
Use words, numbers, and/or symbols in your answer.

I used times to figure it out.

---

---

## Step A

Score Point 1

## Step B

Score Point 1

&gt; Uses element of multiplication

&lt; [missing any numbers to be multiplied]

**Item 5**

Simon has 3 boxes with 8 crayons in each box.

**Step A**

How many crayons does Simon have?

Answer: 24 crayons

**Step B**

Explain how you found the number of crayons that Simon has.  
Use words, numbers, and/or symbols in your answer.

I drew the picture and I  
I drew the line, and it = 24

Step A

Score Point 1

Step B

Score Point 0

< [missing multiplication element and correct numbers]

### Item 5

Simon has 3 boxes with 8 crayons in each box.

#### Step A

How many crayons does Simon have?

Answer: 21 crayons

#### Step B

Explain how you found the number of crayons that Simon has.  
Use words, numbers, and/or symbols in your answer.

On my scrap peice of paper,  
I did  $3 \times 8$  and it equaled up  
to 21 crayons. That is how  
I found my answer

Step A

Score Point 0

Step B

Score Point 2

> Multiplies 8 and 3 for a correct response

**Item 5**

Simon has 3 boxes with 8 crayons in each box.

**Step A**

How many crayons does Simon have?

Answer: 25 crayons

**Step B**

Explain how you found the number of crayons that Simon has.  
Use words, numbers, and/or symbols in your answer.

I used times to  
figger it out.

Step A

Score Point 0

Step B

Score Point 1

> Uses element of multiplication

< [missing numbers to be multiplied]

### Item 5

Simon has 3 boxes with 8 crayons in each box.

#### Step A

How many crayons does Simon have?

Answer: 38 crayons

#### Step B

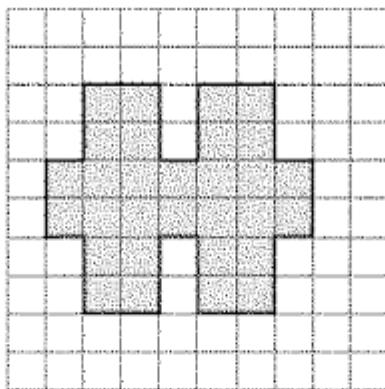
Explain how you found the number of crayons that Simon has.  
Use words, numbers, and/or symbols in your answer.

I guessed

Step A  
Score Point 0  
Step B  
Score Point 0  
< [missing multiplication element and correct numbers]

**Item 15**

Look at the grid below.



**Step A**

How many square units are shaded on the grid?

Answer: 30 square units

**Step B**

Explain how you found the number of square units that are shaded.  
Use words and/or numbers in your answer.

I counted the middle  
and it had 14 squares  
and I added 4,4,4, and 4  
and it = 16 and  $14 + 16 = 30$ .

Step A

Score Point 1

Step B

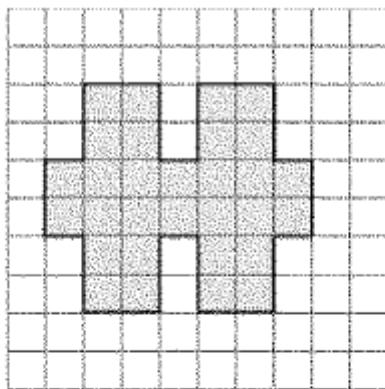
Score Point 2

> Response states a mathematical process (addition)

> Response sets up a calculation to find the number of square units that are shaded

**Item 15**

Look at the grid below.



**Step A**

How many square units are shaded on the grid?

Answer: There are 30 square units

**Step B**

Explain how you found the number of square units that are shaded.  
Use words and/or numbers in your answer.

I did it by counting the blocks  
or you can count by twos.

Step A

Score Point 1

Step B

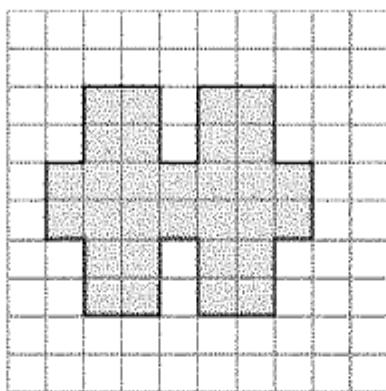
Score Point 1

> Response states a mathematical process (counting); specifying that blocks were counted by "twos" is irrelevant

< [response does not set up a calculation to find the number of square units that are shaded]

**Item 15**

Look at the grid below.



**Step A**

How many square units are shaded on the grid?

Answer: 30 square units

**Step B**

Explain how you found the number of square units that are shaded.  
Use words and/or numbers in your answer.

I have did it in rows.

**Step A**

Score Point 1

**Step B**

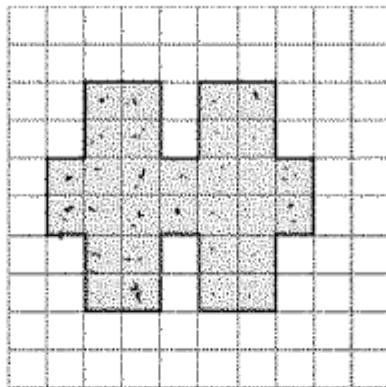
Score Point 0

< [response does not state a mathematical process]

< [response does not set up a calculation to find the number of square units that are shaded]

**Item 15**

Look at the grid below.

**Step A**

How many square units are shaded on the grid?

Answer: 3 square units

**Step B**

Explain how you found the number of square units that are shaded.  
Use words and/or numbers in your answer.

I did  $15 + 15$  and got  
30 that is how I got my  
answrs

## Step A

Score Point 0

## Step B

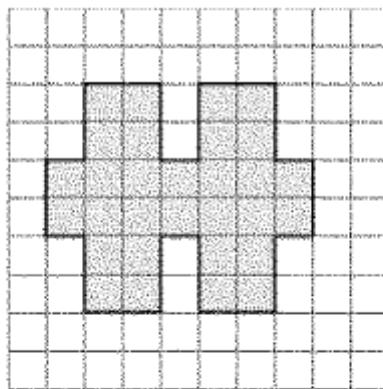
Score Point 2

&gt; Response states a mathematical process (addition)

&gt; Response sets up a calculation to find the number of square units that are shaded

**Item 15**

Look at the grid below.



**Step A**

How many square units are shaded on the grid?

Answer: six 's square units

**Step B**

Explain how you found the number of square units that are shaded.  
Use words and/or numbers in your answer.

Count by two's and count  
the squares.

**Step A**

Score Point 0

**Step B**

Score Point 1

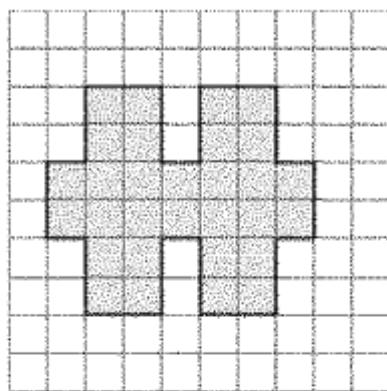
> Response states a mathematical process (counting); specifying that squares

were counted by "two's" is irrelevant

< [response does not set up a calculation to find the number of square units that are shaded ]

**Item 15**

Look at the grid below.



**Step A**

How many square units are shaded on the grid?

Answer: 4 square units

**Step B**

Explain how you found the number of square units that are shaded.  
Use words and/or numbers in your answer.

Look for a group of squares.

Step A

Score Point 0

Step B

Score Point 0

< [response does not state a mathematical process ]

< [response does not set up a calculation to find the number of square units that are shaded]

**Guide to Grade 3 Released Item Books  
In READING and MATHEMATICS**

Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

**Wisconsin Knowledge and Concepts Examinations**  
**Criterion-Referenced Test**

**Released Item Book**

**Reading**

**Grade**

**4**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.

- Acknowledgments** CTB is indebted to the following for permission to use material in this book:
- Images of photographs not otherwise acknowledged provided by © 1996 PhotoDisc, Inc.
- All trademarks and trade names found in this publication are the property of their respective companies and are not associated with the publisher of this publication.
- "The Story of the Two Brothers" by Jane Scherer from *Faces*' May 2002 issue: *Samoans*, copyright © 2002 by Cobblestone Publishing, 30 Grove Street, Suite C, Peterborough, NH 03458. All rights reserved. Reprinted by permission of Carus Publishing Company.
- "Smokey Bear" from *Incredible Animal Adventures* by Jean Craighead George, copyright © 1994 by Jean Craighead George. Used by permission of HarperCollins Publishers.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### What are released items?

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### How do I use this book?

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

**Directions**

Read the passage “The Story of the Two Brothers.” Then answer Numbers 1 through 11.

# The Story of the Two Brothers



by Jane Scherer

Two large mountains face each other across Pago Pago (PANG-go PANG-go) Harbor on the island of Tutuila (too-too-EE-la) in American Samoa. They are known as the Two Brothers: Matafao (mah-tah-FAH-oo) and Pioa (pee-OH-ah), the Rainmaker. The story of how they came to be is told and retold to children throughout the islands. It contains an important message.

Long ago, a man had two sons. He loved both children dearly, as fathers will. One he called Matafao; the other, Pioa. As small boys, they fought constantly. As they grew to manhood, their fights became ever fiercer and more frequent.

Time passed. The father grew gray and old. Tired of listening to his sons fight with each other, he began to despair. He knew the time was drawing near when he would leave them. What would become of his angry children?

The day came when he called Pioa and Matafao to him. This is what he told them, “My heart is heavy inside me. It seems you cannot love each other as brothers should. In fact, you cannot be together without one of you starting a fight. The only solution I can see is to separate you forever. Therefore, from this day forward, you will live apart from each other. Pioa, you shall live in the east,” he said. “Matafao, you will live in the west. Perhaps the sea will be wide enough to keep you from fighting when I could not.”

“The Story of the Two Brothers” by Jane Scherer from *Faces*’ May 2002 issue: *Samoans*, copyright © 2002 by Cobblestone Publishing, 30 Grove Street, Suite C, Peterborough, NH 03458. All rights reserved. Reprinted by permission of Carus Publishing Company.

And then he added, "Should either of you manage to start a fight, you will be turned into stone on the spot where you stand."

Soon, the old man died.

Although the two brothers could not seem to love each other, they both loved their father. Their grief for him was great. In fact, they found they were unable to eat. Had their sadness continued, they surely would have sickened and died, too.

With the passage of time, grief lessens. So, it was with them. The two brothers found themselves happy again. They decided to host a feast. They would roast a whole pig and many chickens. They would boil taro and bake a cake with so many tiers, it would be fine enough for the finest Samoan wedding.

Matafao and Pioa ate well at their feast. In fact, Matafao may have eaten a little too well. He decided to climb a cliff, and look over his lush green island.

At that moment, high above their heads, a seabird picked up a rock and, raising his great wings, took to the skies. When a wind sprang up, the rock slipped from his claws. Hurling down the cliff, it struck Pioa on the top of his head.

Pioa looked up. Being so quick to anger, he blamed his brother, not the seabird or the wind.

"It is your fault, Matafao!" Pioa screamed. "You threw the rock!" With that, he picked up a stone and threw it at his brother.

At those angry and unjust words, Matafao also got angry and threw some rocks. One knocked off Pioa's top. It fell into the sea with a giant splash, and lies there to this day, a small, rocky island.

As when a volcano erupts, rocks began to fly between the brothers. Only then did they remember their father's warning: Whoever starts another fight will be turned into stone.

Too late, they found their father's words were true. Their lower limbs had hardened and turned to stone.

Matafao realized then that fighting with his brother was wrong. He stopped and begged his brother to stop as well. Pioa's rage was too great and he refused and continued to fight.

"Stop, Brother. I beg you," Matafao pleaded again. When he realized his words were ignored, he fought back.

It was at that moment that Pioa and Matafao became the mountains known as the Two Brothers. Pioa, humbled by his own wrongdoings, stands the smaller of the two. The dark cloud that hovers over his head brings rain to the islands and remains as a reminder to Samoan children to love one another.



**Go On**

**1** This passage is mainly about

- (A) making friends with others
- (B) children helping their parents
- (C) learning to get along together
- (D) being happy with what you have

**2** How much time does it take for the events in this story to occur?

- (A) a few days
- (B) several weeks
- (C) several months
- (D) many years

**3** Read this sentence from the passage.

Tired of listening to his sons fight with each other, he began to despair.

In this sentence the word despair means

- (A) argue
- (B) complain
- (C) lose hope
- (D) make excuses

**4** What does the father mean when he says, “My heart is heavy inside me”?

- (A) He knows his sons do not love him.
- (B) He knows his sons have made him ill.
- (C) He is very sad that his sons are still fighting.
- (D) He cannot love his sons if they keep fighting.

**5** Which of these events happens right after the two brothers lose their father?

- (A) They move apart.
- (B) They plan a big feast.
- (C) They are unable to eat.
- (D) They try to love one another.

**6** Matafao decides to climb a cliff after the feast because he wants to

- (A) look over his beautiful island
- (B) watch his brother from above
- (C) find the nesting area of the seabird
- (D) get away from his brother for a while

**7** Why is Pioa unable to stop fighting near the end of the passage?

- (A) He is too angry.
- (B) He knows he was right.
- (C) His brother is winning the fight.
- (D) His brother keeps attacking him.

**8** Why do Pioa and Matafao turn to stone?

- (A) They bring shame to the island people.
- (B) They begin to fight with each other again.
- (C) They anger a seabird and it punishes them.
- (D) They eat and drink too much at a large feast.

**9** The main mistake the brothers make is

- (A) being sad for a long time
- (B) living apart from each other
- (C) eating too much at their feast
- (D) ignoring their father's warning

**10** Why is this story most likely told to children throughout the Samoan Islands?

- (A) to teach an important lesson
- (B) to explain how to prepare a feast
- (C) to warn about the behavior of seabirds
- (D) to describe how mountains sometimes form



**11**

What do you think would have happened if the brothers had been given another chance and had not been turned into stone? Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

---

---

---

---

---

---

---

---

---

---

---

**Directions**

Read the passage "Smokey Bear." Then answer Numbers 12 through 21.

# Smokey Bear A National Symbol

by Jean Craighead George

The worst fire in the history of Lincoln National Forest, New Mexico, raged for weeks in 1950. When the flames were out, when the thunder and crackle of blazing trees had died down, a badly burned bear cub was found clinging to a tree. A weary firefighter snapped his picture, then rescued the hurting and bewildered cub.

The rangers named him Smokey after the familiar poster character Smokey Bear, a cartoon bear in a ranger's hat and blue jeans holding a shovel. He had been created in 1944 by the U.S. Forest Service to publicize a campaign to prevent forest fires. Posters of the cartoon bear read "Only You Can Prevent Forest Fires!" and were tacked up in every national forest and park as well as in public buildings.



"Smokey Bear" from *Incredible Animal Adventures* by Jean Craighead George, copyright © 1994 by Jean Craighead George. Used by permission of HarperCollins Publishers.



Then the real Smokey came along. The rangers nursed him back to health and sent him to the National Zoo in Washington, D.C. Photographs of the badly burned cub, his playful recovery, and his life in Washington sent the popularity of the cartoon Smokey Bear skyrocketing.

With all the publicity, the living Smokey Bear became one of the most popular animals at the National Zoo. Thousands of visitors dropped by to see the black bear who limped on one leg and still bore scars from the fire that some careless camper or smoker had started. Smokey's misfortune became the best reason for preventing forest fires. He even made public appearances. Eventually he had his own Smokey Bear fan club. Membership was in the many thousands. Children who signed up to be Junior Forest Rangers received not only a Ranger kit but an official-looking badge and pictures of the real and the cartoon Smokeys.

In May 1975, when he was twenty-five years old (which is equal to seventy in human years), the National Zoo and the Forest Service retired Smokey in an impressive ceremony. At the same time, they introduced Smokey Junior, an orphan of another fire in Lincoln National Forest. Smokey Senior died a year later. His remains were buried at the Smokey Bear Historical Park in Lincoln National Forest, and today his message lives on: "Only You Can Prevent Forest Fires!"

**12** Which of these events happened first?

- (A) A Smokey Bear fan club was started.
- (B) Smokey was retired in a special ceremony.
- (C) A cub called Smokey Junior was introduced.
- (D) The poster character of Smokey was created.

**13** Which of these sentences states the main idea of the passage?

- (A) Forest rangers rescued Smokey Bear from a fire.
- (B) Smokey Bear became a popular symbol for fire safety.
- (C) Many people visited Smokey Bear at the National Zoo.
- (D) Smokey Bear was replaced by the orphan of another fire.

**14** Read this sentence from the passage.

Photographs of the badly burned cub, his playful recovery, and his life in Washington sent the popularity of the cartoon Smokey Bear skyrocketing.

The author uses the phrase playful recovery to suggest that Smokey

- (A) teased other zoo animals
- (B) was friendly with visitors
- (C) had fun while getting well
- (D) needed a long time to heal

**15** In the sentence above, the author uses the word skyrocketing to mean that the popularity of the cartoon bear

- (A) was clear
- (B) rose rapidly
- (C) was exciting
- (D) disappeared quickly



**16** Read this sentence from the passage.

Thousands of visitors dropped by to see the black bear who limped on one leg and still bore scars from the fire that some careless camper or smoker had started.

What does the phrase dropped by mean in this sentence?

- (A) came
- (B) looked
- (C) planned
- (D) refused

**17** The word careless means

- (A) full of care
- (B) without care
- (C) in a caring way
- (D) with some caring

**18** Which detail supports the idea that the real Smokey Bear was very popular?

- (A) Another orphan bear was rescued from a forest fire.
- (B) A firefighter took a photograph of him after the fire.
- (C) Smokey Bear had a large fan club while he lived at the zoo.
- (D) U.S. Forest Service rangers became famous for helping bears.

**19** What did children receive for becoming Junior Forest Rangers?

- (A) a free ticket to visit Smokey in the National Zoo
- (B) a ranger kit along with pictures and cartoons of Smokey
- (C) an original poster and an action figure of the first Smokey
- (D) an autographed picture of the firefighter who rescued Smokey

**20** How were Smokey Senior and Smokey Junior similar?

- (A) Both limped and had scars from a forest fire.
- (B) Both were buried at the Smokey Bear Historical Park.
- (C) Both could be seen at the National Zoo at the same time.
- (D) Both were rescued from a fire in the Lincoln National Forest.

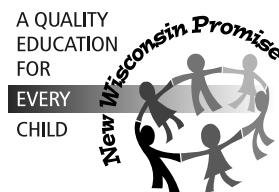
**21** This passage is an example of nonfiction because it

- (A) uses many descriptive words
- (B) gives facts about a true story
- (C) includes the names of real places
- (D) has more than one main character

**STOP** 

# Reading Grade 4

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

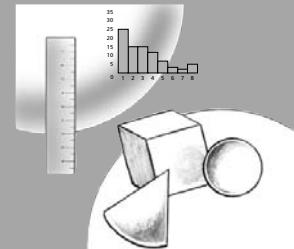
**Wisconsin Knowledge and Concepts Examinations  
Criterion-Referenced Test**

**Released Item Book**

**Mathematics**

**Grade**

**4**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### What are released items?

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### How do I use this book?

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

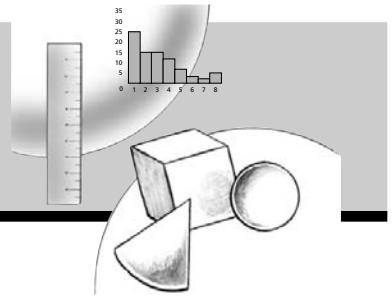
- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

# Mathematics

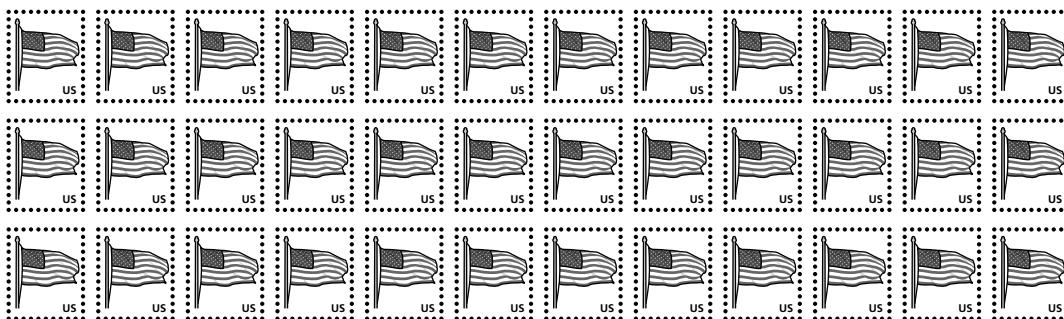
## Session 1



**1** Tonie has 383 pencils. She gives 9 pencils to her friend. How many pencils does Tonie have left?

- (A) 374
- (B) 376
- (C) 384
- (D) 386

**2** Ethan has 36 stamps in his stamp collection.

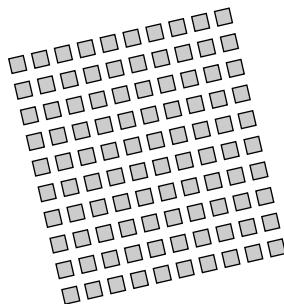


If Ethan puts 9 stamps on each page of his stamp book, how many pages does he have?

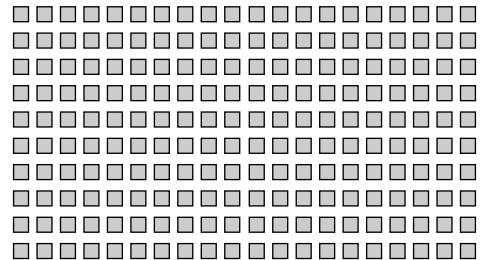
- (A) 3
- (B) 4
- (C) 6
- (D) 9

**3**

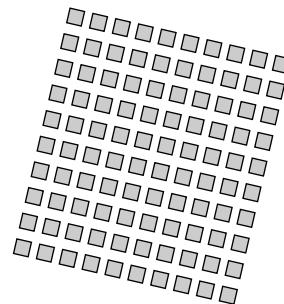
A theater has 3 sections of seats. Section A and section C each have 10 rows of seats. Each row has 10 seats. Section B has 10 rows of seats, but each row has twice as many seats as section A.



A



B



C

**Step A**

How many seats does the theater have?

Answer: \_\_\_\_\_ seats

**Step B**

Use what you know about multiplication to explain how you found the number of seats in the theater.

Use words, numbers, and/or symbols in your answer.

---

---

---

---

**4**

The table below shows the number of star beads and moon beads that Taylor uses to make necklaces.

### Taylor's Necklaces

Star Beads	Moon Beads
13	5
17	9
25	17
34	?

If Taylor makes a necklace that uses 34 star beads, how many moon beads does she use?

- (A) 21
- (B) 23
- (C) 25
- (D) 26

**5**

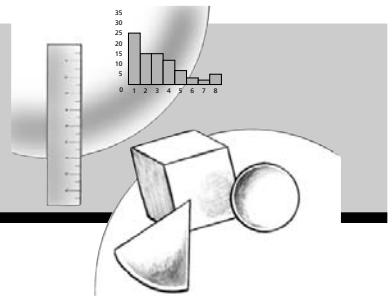
Mr. Glaser has 4 children. He gave 6 dimes to each child. Which number sentence can be used to find the number of dimes Mr. Glaser gave his children?

- (A)  $6 + 4 = \square$
- (B)  $6 - 4 = \square$
- (C)  $6 \times 4 = \square$
- (D)  $6 \div 4 = \square$

**STOP** 

# Mathematics

## Session 2



- 6** Jenna found an odd number of shells. Which of these was the number of shells Jenna found?

- (A) 4
- (B) 8
- (C) 14
- (D) 17

- 7** Tyler had four numbers. He used each number only once to make a larger number.

7      9      4      5

If Tyler put the 9 in the tens place, what would be the largest number he could make?

- (A) 7,954
- (B) 7,549
- (C) 7,594
- (D) 9,754

- 8** Look at the pattern below.

275	280	285	290	295	300
-----	-----	-----	-----	-----	-----

What is the rule for the pattern?

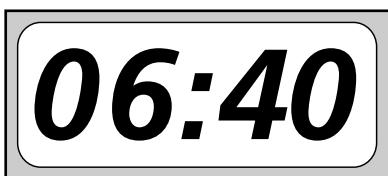
- (A) counting by 5s
- (B) counting by 10s
- (C) counting by 25s
- (D) counting by 100s

- 9** Anna bought 5 pencil erasers. Which of these is most likely the weight of Anna's pencil erasers?

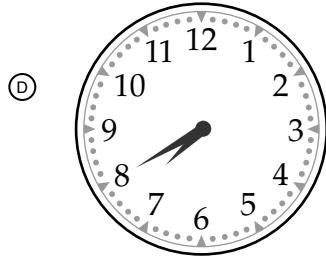
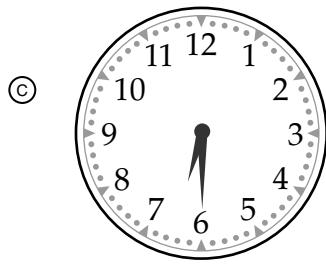
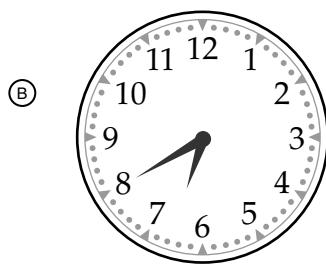
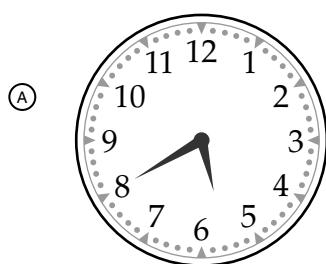
- (A) 5 inches
- (B) 5 liters
- (C) 5 ounces
- (D) 5 pounds



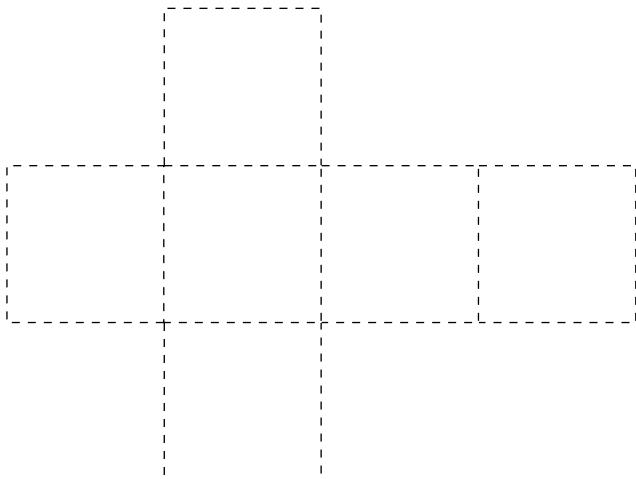
- 10** Tiara's alarm clock is shown below.



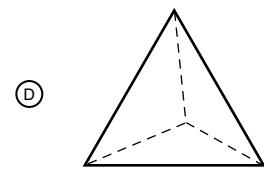
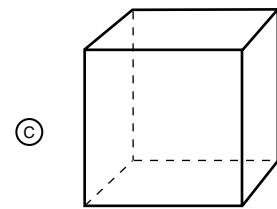
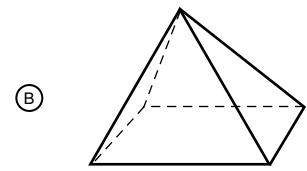
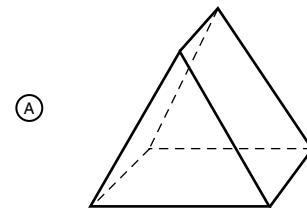
Which clock shows the same time as Tiara's clock?



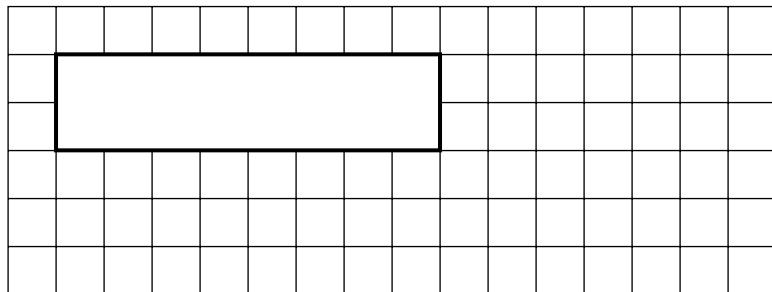
- 11** Brandy made a shape by folding the cardboard below.



Which shape did Brandy make?



- 12** Look at the rectangle on the grid below.



**Step A**

On the same grid, draw a square that covers the same amount of space as the rectangle shown. Use a heavy dark line to draw the square.

**Step B**

Use what you know about measurement to explain why the square you drew covers the same amount of space as the rectangle.

Use words, numbers, and/or symbols in your answer.

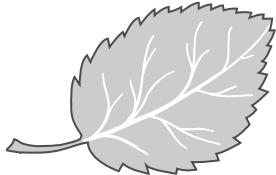
---

---

---

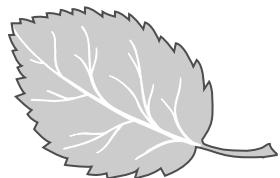
---

- 13** Look at the picture of the leaf below.

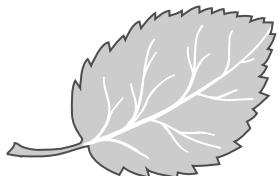


Which of these shows this leaf flipped over the line?

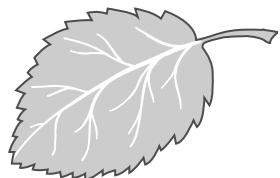
(A)



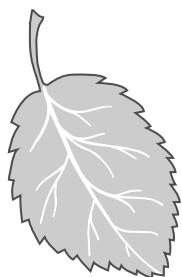
(B)



(C)



(D)



- 14** The tally chart below shows the number of cans David recycled each week.

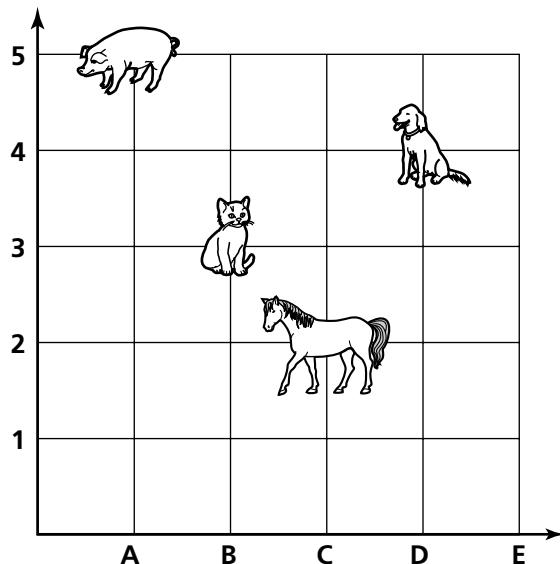
### Recycling Cans

Week	Number of Cans
1	
2	
3	
4	
5	

How many more cans did David recycle in Week 2 than in Week 5?

- (A) 11
- (B) 14
- (C) 15
- (D) 16

- 15** The pictures of 4 animals are shown on the grid below.



Where is the cat located?

- (A) (B, 3)
- (B) (C, 3)
- (C) (B, 2)
- (D) (C, 2)

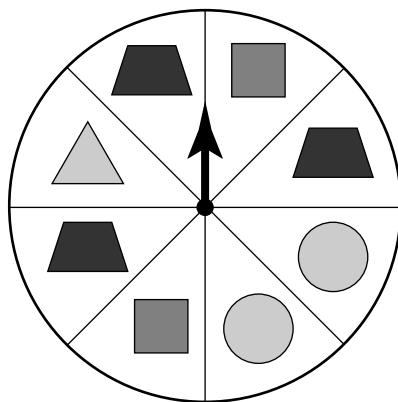
- 16** Derek tosses a coin 10 times. Which of these is the most likely result of Derek's tosses?

- (A) 3 heads, 7 tails
- (B) 5 heads, 5 tails
- (C) 7 heads, 3 tails
- (D) 9 heads, 1 tails



**17**

The spinner below is divided into equal sections.



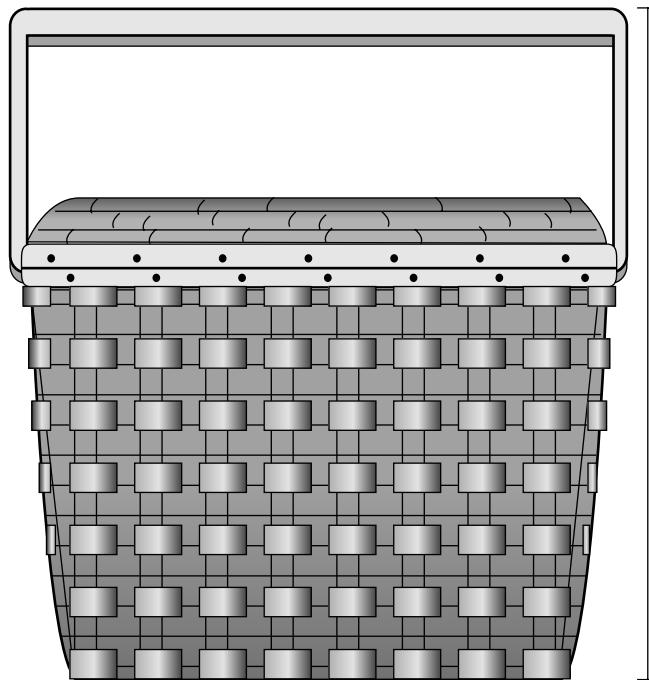
Lily spins the arrow once. On which shape will the arrow most likely land?

- (A) 
- (B) 
- (C) 
- (D) 

**18**



Use the inch side of your ruler to help you solve this problem.



What is the height of the basket including the handle?

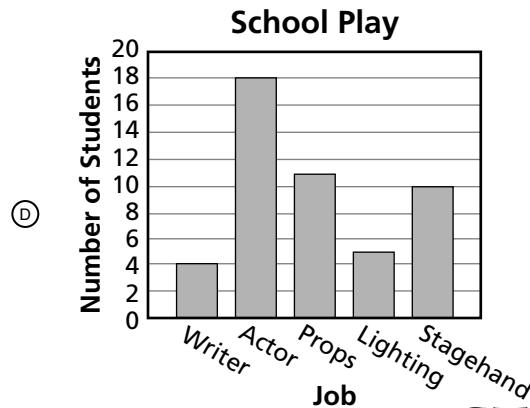
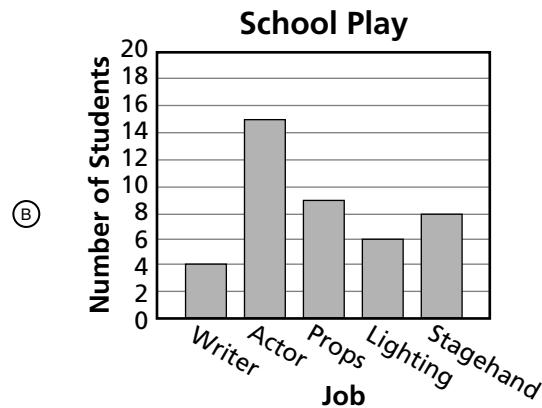
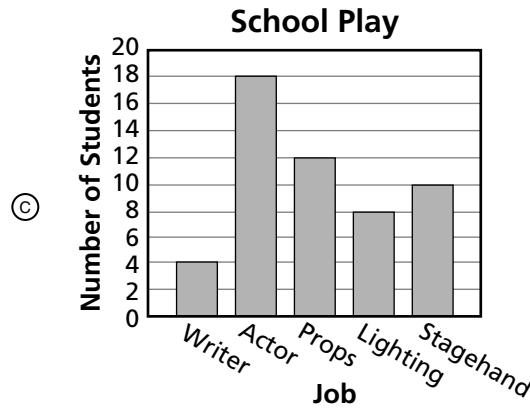
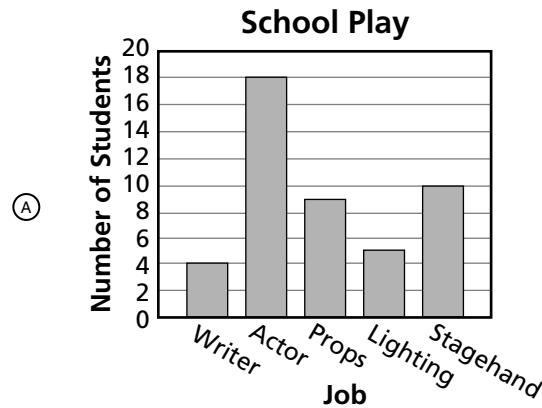
- (A) 3 inches
- (B)  $3\frac{1}{2}$  inches
- (C) 4 inches
- (D)  $4\frac{1}{2}$  inches

- 19** The tally chart below shows the number of students who signed up for different jobs in a school play.

### School Play

Job	Number of Students
Writer	
Actor	 
Props	 
Lighting	
Stagehand	 

Which bar graph correctly shows the information in the tally chart?



**STOP**



# Mathematics Grade 4

# Released Item Book

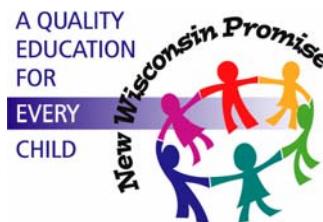


Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

**Wisconsin Knowledge and Concepts Examinations** **WI**  
***Criterion-Referenced Test***

# Guide to Grade 4

Released Item Books  
In READING and MATHEMATICS



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional, or learning disability.

## **Guide to Grade 4 Released Item Books in Reading and Mathematics**

This document contains information for using, scoring, and interpreting the released items in reading and mathematics.

August 2006  
(Document Version 1.0, August 28, 2006)

Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction.

## **Table of Contents**

<b>Introduction</b>	<b>1</b>
<b>Reading</b>	<b>2</b>
Reading Item Information	4
Reading Objectives and Subskills	5
Reading Depth of Knowledge	8
Reading Rubric for Constructed-Response Items	9
Reading Constructed-Response Item Scoring Guide	10
Anchor Papers for Reading Constructed-Response Item	11
<b>Mathematics</b>	<b>15</b>
Mathematics Item Information	18
Mathematics Objectives and Subskills	19
Mathematics Depth of Knowledge	23
Mathematics Rubric for Constructed-Response Items	24
Mathematics Constructed-Response Item Scoring Guides	25
Anchor Papers for Mathematics Constructed-Response Items	27

## **Guide to Released Item Books**

Please help us improve this document. We welcome your comments and questions.  
Please contact us at:

Wisconsin Department of Public Instruction  
Office of Educational Accountability  
125 S. Webster Street, P.O. Box 7841  
Madison, WI 53707-7841

Toll-free: (800) 441-4563  
Fax: (608) 266-8770

<http://www.dpi.wi.gov/oea/>

# Introduction

## What are released items?

The items in the Reading and Mathematics released item books are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in the released item books illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

## How do I use the released item books and this guide?

### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

This guide provides instructions for administering the released item books as practice tests and information for scoring the items, including scoring guides and anchor papers for the constructed-response items. The item information tables identify the answer key, what each item measures, depth of knowledge, and item difficulty. Item difficulty is presented as both the percentage of students who answered the item correctly and the scale score location of the item. The item's scale score location describes where the item functions along the ability scale. Items with higher scale score locations are considered more difficult than items with lower scale score locations. Students with scale scores above the scale score location of the item would have a greater probability of answering the item correctly than students with scale scores below the item's scale score location.

### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. Note that a student's score on the practice test cannot be converted to a total scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

## Reading

### Sample Directions for Administering the Reading Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, and scratch paper. Students' test books should be closed.*

**SAY** In this test, you will read some passages and answer both multiple-choice questions and short-answer questions about those passages. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Write your answer on the lines in your test book. You may also write in the space under the lines, but your answer must stay inside the boxed area. Answers or parts of answers written outside the boxed area will not be scored. You may use scratch paper to help you plan your answer, but remember to write your answer in the boxed area in your test book. After you have written your answer, be sure to read it to make sure you have written your ideas clearly and completely.

For both the multiple-choice questions and the short-answer questions, remember to look back at the reading passages to help you answer the questions. For some questions, you may need to go back to two reading passages to find the answer. Be sure to look back at both reading passages to help you answer these questions.

You will have 40 minutes to do the test. Work until you come to the word "STOP" at the bottom of the page. You may go back and check your answers. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** Please open your test book to Page 2.

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY** You may begin.

*Record the starting and stopping times.*

Record the Starting Time:	Add 40 Minutes:	Record the Stopping Time:
_____	_____ + 40 _____	_____

*Check to be sure that students are marking their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY ➤ Stop. This is the end of the test. Please close your test book.**

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Reading Item Information

Item	Answer Key	Objective/ Subskill	Depth of Knowledge Level	Format	2005 –06 Item Statistics				Scale Score Location
					A or 0	B or 1	C or 2	D or 3	
1	C	3.1	3	SR	4%	3%	*87%	6%	425
2	D	3.1	2	SR	34%	14%	11%	*40%	510
3	C	1.1	2	SR	12%	13%	*69%	5%	460
4	C	3.3	3	SR	3%	5%	*71%	20%	449
5	C	2.3	2	SR	12%	29%	*43%	14%	497
6	A	2.1	2	SR	*71%	7%	7%	14%	454
7	A	2.1	2	SR	*70%	13%	3%	13%	452
8	B	2.1	2	SR	7%	*83%	5%	3%	435
9	D	3.1	2	SR	4%	7%	3%	*85%	431
10	A	4.1	4	SR	*86%	3%	5%	5%	424
11		4.1	4	BCR	17%	53%	24%	4%	*
12	D	2.3	2	SR	12%	5%	18%	*64%	454
13	B	3.2	3	SR	30%	*54%	11%	3%	474
14	C	4.3	3	SR	4%	24%	*61%	9%	463
15	B	1.2	3	SR	9%	*44%	36%	9%	489
16	A	1.1	2	SR	*77%	14%	3%	4%	443
17	B	1.2	2	SR	7%	*83%	3%	5%	429
18	C	3.2	2	SR	10%	17%	*61%	10%	471
19	B	2.2	2	SR	12%	*73%	6%	6%	449
20	D	2.2	2	SR	14%	11%	12%	*61%	467
21	B	3.3	3	SR	7%	*66%	17%	8%	463

\*Scale score location not available.

Objective/Subskill and Depth of Knowledge Level information follows this table.

SR: selected response; BCR: brief constructed response.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
395 and below	396–439	440–488	489 and above

# Reading Objectives and Subskills

---

## Types of Text

---

The grade 4 reading assessment presents a variety of grade-appropriate reading passages representing literary, informational, and everyday text. Passages may be up to 1,200 words long and some passages may be paired with other, related passages. Students may be asked to read and answer questions about texts such as these:

Literary	Informational	Everyday
Realistic fiction, animal stories, poetry, drama, folktales, fables, biography	Nonfiction trade book excerpts, magazine articles	Charts, schedules, menus, tickets, product labels, safety notices, school-related texts, simple instructions

---

## Objectives, Subskills, and Descriptors

---

Objectives (labeled 1, 2, 3, and 4) and subskills (labeled 1.1, 1.2, etc.) denote general knowledge and skills that are assessed and reported on the WKCE-CRT. Bulleted descriptors are *examples* of specific knowledge or skills that may be included within each subskill. The subskills include knowledge and skills *such as, but not limited to* the descriptors.

### 1. Determine the meaning of words and phrases in context.

- 1.1. Use context clues to determine the meaning of words and phrases.
  - Categorize words to demonstrate understanding of word meaning.
  - Use context clues to determine the meaning of unfamiliar words.
  - Understand the meaning of words and phrases used figuratively.
  - Use context clues to determine the meaning of multiple-meaning words.
  - Use knowledge of synonyms and antonyms to determine the meaning of words.
  - Identify analogies to demonstrate understanding of word meaning.
  
- 1.2. Use knowledge of word structure to determine the meaning of words and phrases.
  - Recognize regular and irregular plural forms.
  - Recognize possessive forms.
  - Identify the meaning of contractions.
  - Use knowledge of compound words to determine the meaning of a word.
  - Identify how adding an affix changes the meaning of a word.
  - Identify the meaning of a word with an affix.
  - Use knowledge of root words to determine the meaning of a word.

1.3. Use word reference materials to determine the meaning of words and phrases.

- Identify and use parts of a book related to word meaning.
- Use primary dictionary guide words to locate definitions.
- Use an entry from a word reference to determine word meaning and pronunciation.

## **2. Understand text.**

2.1. Demonstrate understanding of literal meaning by identifying stated information in literary text.

- Identify stated information about story elements.

2.2. Demonstrate understanding of literal meaning by identifying stated information in informational text.

- Determine where information can be found in a text.
- Identify stated information about main ideas and supporting details.
- Identify stated information provided through text features.

2.3. Demonstrate understanding of explicitly stated sequence of events in literary and informational text.

- Identify first, next, and last events.
- Follow steps in a process.

## **3. Analyze text.**

3.1. Analyze literary text.

- Make inferences about story elements.
- Summarize important ideas and events.
- Analyze stated or implied theme, message, or main idea.
- Draw conclusions.
- Identify purpose.

3.2. Analyze informational text.

- Identify implied main ideas and supporting details.
- Identify implied relationships (such as cause/effect and compare/contrast).
- Summarize information.
- Identify purpose.
- Make inferences based on text features.
- Make inferences based on visual information.
- Make inferences about text structure.
- Identify pros and cons.

3.3. Analyze author's use of language in literary and informational text.

- Analyze the use of literary devices.
- Recognize and distinguish among genres.

**4. Evaluate and extend text.**

4.1. Evaluate and extend literary text.

- Extend themes and concepts to other situations.
- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.

4.2. Evaluate and extend informational text.

- Extend ideas and concepts to other situations.
- Evaluate comparisons and contrasts.
- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.
- Distinguish between facts and opinions.
- Evaluate the accuracy, currency, and credibility of information.

4.3. Evaluate and extend the author's use of language in literary and informational text.

- Evaluate the author's word choice and use of language.

## **Reading Depth of Knowledge**

These depth of knowledge levels are intended to reflect the level of cognitive demand placed on students by test items. As the level of cognitive demand increases, so does the mental effort and integration of information required to answer a test item successfully. Each level represents important cognitive skills, and each level requires the use of cognitive skills in lower levels. For example, a student who is asked to make connections between two texts (level 4) would also need to recall pertinent details from the texts (level 1), understand stated information in the texts (level 2), and make inferences and draw conclusions about each text (level 3). The levels assume grade-appropriate text, vocabulary, and tasks. Test items should represent a range of depth of knowledge levels, and items within each level may represent a range of difficulty as indicated by percentage of students who answered the item correctly or scale score location.

### **Level 1: Recognizing and Recalling**

Students demonstrate a grade-appropriate ability to recognize or recall basic facts, terms, or definitions. For example, a student might be asked to identify an explicitly stated main idea in a text.

### **Level 2: Using Fundamental Concepts and Procedures**

Students demonstrate a grade-appropriate ability to use basic facts, definitions, skills, or concepts. For example, a student might be asked to use information in a text to complete a graphic organizer.

### **Level 3: Concluding and Explaining**

Students demonstrate understanding of grade-appropriate text by using stated and implied information and text elements to draw conclusions. Students explain and convey ideas effectively. For example, a student might be asked to provide details and examples from a text to support a conclusion.

### **Level 4: Evaluating, Extending, and Making Connections**

Students demonstrate their knowledge of concepts when evaluating or interpreting grade-level text. Students make connections among texts, common experiences, and issues. For example, a student might be asked to evaluate an author's effectiveness in achieving an intended purpose.

# **Reading Rubric for Constructed-Response Items**

## **3 points**

- The response demonstrates *thorough understanding* of the reading concept embodied in the task.
- The response is *accurate, complete, insightful, and fulfills all the requirements* of the task.
- Necessary support and/or examples are included.
- Information is clearly *text-based*.

## **2 points**

- The response demonstrates *partial understanding* of the reading concept embodied in the task.
- The response is *accurate* and *fulfills most of the requirements* of the task.
- Necessary support and/or examples may not be complete or clearly *text-based*.

## **1 point**

- The response demonstrates *an incomplete understanding* of the reading concept embodied in the task.
- The response provides *some information that is text-based*, but does not fulfill the requirements of the task.
- Information provided is *too general* or *too simplistic*.
- Necessary support and/or examples may be incomplete or omitted.

## **0 points**

- The response demonstrates *no understanding* of the reading concept embodied in the task.
- The response is *inaccurate, confused, or irrelevant*.
- The student has *failed to respond to the task*.

# Reading Constructed-Response Item Scoring Guide

Forms: Public Release	Item #: 11	Item Type: BCR	TB Page #: 6	AB Page #: n/a
Reporting Category: Reading				Max Score Pts:
Objective: 4. Evaluates Text				3
Subskill: 4.1. Evaluates and extends literary text				
Descriptor: Makes predictions. (i.e., if the story/text were continued.)				

## Item Stem

**What do you think would have happened if the brothers had been given another chance and had not been turned into stone? Use details and examples from the passage to carefully support your answer. Write your explanation on the lines below.**

**Responses should be evaluated according to the guidelines outlined below for each score point.**

### 3 points

- The response demonstrates a **thorough understanding** of the reading concept embodied in the task by using strong text-based information to predict how the brothers would have behaved if they had been given another chance to get along.
- The response presents a **complete and accurate text-based** prediction. The response may offer a positive or negative prediction as long as it is **carefully explained** and supported.
- The response is **well-supported with details** from the passage. **For example:** The brothers would probably keep fighting as they had always done. It didn't seem to matter to them that their father had warned them they would be turned into stone if they fought again. They were too emotional and quick to blame each other. **OR** If they were given another chance, they might be able to avoid fighting again. Matfao realized that fighting was wrong before the end of the story, but it was too late. He seems calmer than his brother. Maybe he would be able to convince his brother that fighting was wrong.

### 2 points

- The response demonstrates **partial understanding** of the story and the concept of using text-based information to predict by referring to the brothers' past behavior to predict what they would have done if they had been given another chance.
- The response uses **accurate** details or conclusions to predict but it is **not as complete or as carefully explained** as a 3 point response.
- The response provides information that is **generally text-based** but **fails to include enough specific detail** to support the prediction. **For example:** The brothers would keep on fighting because that is all they had ever done.

### 1 point

- The response **demonstrates incomplete understanding** of the story and the concept of using text-based information to predict.
- The response makes a prediction based on relevant details or ideas in the passage but **fails to provide an explanation**.
- The student's prediction is too **general, vague or simplistic** to fulfill the requirements of the task. **For example:** The brothers would probably keep on fighting.

## Anchor Papers for Reading Constructed-Response Items

What do you think would have happened if the brothers had been given another chance and had not been turned into stone? Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

I think they would just fight again because they will never get along. They never can agree on anything at all. When ever something bad happens they blame it on each other because they think the other person did it.

### Score Point 3

>Response demonstrates a thorough understanding with a complete and accurate text-based prediction about how the brothers would have behaved.

>Response is well-supported with details from the passage such as, "they can never agree on anything" and "When ever something bad happens they blame it on each other".

What do you think would have happened if the brothers had been given another chance and had not been turned into stone? Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

I think they might fight again, and they will get turned in to stone because most likely they were fighting all their life and they will probably fight again.

Score Point 2

>Response demonstrates a partial understanding using text-based information to predict the brother's behavior based on their past behavior.

>Response is accurate but not as complete as a 3 point response.  
For example: "...they might fight again...because...they were fighting all their life...".

What do you think would have happened if the brothers had been given another chance and had not been turned into stone? Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

I think that if they were not turned to stone they would still be fighting.

Score Point 1

>Response demonstrates incomplete understanding of the story and the concept of using text-based information to predict.

>Prediction is too general and simplistic with no explanation.  
For example: "...they would still be fighting."

What do you think would have happened if the brothers had been given another chance and had not been turned into stone? Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

They would live longer and  
soon die

Score Point 0

>Response demonstrates no understanding of the task.

>Response is irrelevant.

# Mathematics

## Sample Directions for Administering the Mathematics Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, scratch paper, and the following manipulative:*

- Ruler

*NOTE: The use of calculators in Mathematics, Session 1 is not allowed for any student, as those sections of the test measure computation skills. Only students whose IEP or Section 504 plan allows for the accommodation of calculator usage may use a calculator for other sessions of the Mathematics test. The accommodated students must be tested in a separate room so as not to give the appearance of having an advantage.*

*Also required for the operational test, but not for this released item book:*

- Pattern blocks, 1 set
- L-shaped Pentomino, 1

*Students' test books should be closed.*

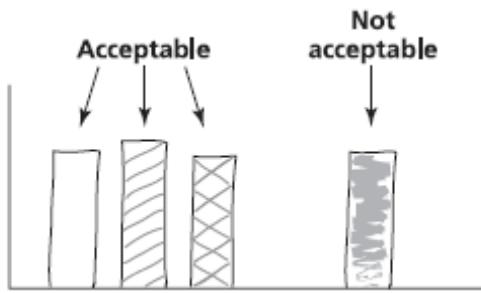
**SAY** Remember to use only a No. 2 pencil in this test. In Session 1, you will be answering multiple-choice questions and short answer questions. Multiple-choice questions are questions that ask you to choose the best answer. For the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

You may use scratch paper to work the multiple-choice questions, but remember to fill in the circle that goes with the answer you choose.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

For the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

Demonstrate by drawing the illustration below on the board.



**Now you will do Session 1 of the Mathematics test. Remember to read all of the directions and information in the test book. When you come to the word "STOP" at the bottom of the page, you have finished Session 1. You may go back and check your answers, but do not go on to Session 2 of the Mathematics test. When you have finished, sit quietly until everyone else has finished.**

**You will have 10 minutes to do Session 1. Make sure you stop at the end of Session 1.**

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY ▶ Please open your test book to Page 2.**

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY ▶ You may begin.**

*Record the starting and stopping times for Session 1.*

Record the Starting Time:	Add 10 Minutes:	Record the Stopping Time:
_____	+ 10	_____

*Check to be sure that students are marking and writing their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY ▶ Stop. Put down your pencil and close your test book. This is the end of Session 1.**

*Pause to be sure that all students have closed their test books.*

**SAY** Now, open your test book to the page labeled “Mathematics Session 2.”

In Session 2, you will be answering multiple-choice questions and short-answer questions. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

Remember, for the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

You will have 25 minutes to do Session 2. Remember to read all of the directions and information in this part of the test book. When you come to the word “STOP” at the bottom of the page, you have finished Session 2.

You may go back over Session 2 to check your answers, but do not go back to Session 1. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** You may begin.

*Record the starting and stopping times for Session 2.*

Record the Starting Time:	Add 25 Minutes:	Record the Stopping Time:
_____	+ 25	_____

**SAY** Stop. This is the end of Session 2. Please close your test book.

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Mathematics Item Information

Item	Answer Key	Calculator Allowed	Objective/Subskill	Depth of Knowledge Level	2005–06 Item Statistics					Scale Score Location
					Format	A or 0	B or 1	C or 2	D	
1	A	No	Bb	2	SR	*87%	7%	3%	3%	392
2	B	No	Bb	2	SR	8%	*61%	10%	15%	452
3		No	Bb	3	A-BCR	41%	58%			451
3		No	Ae	3	B-BCR	12%	47%	39%		433
4	D	No	Fa	3	SR	19%	11%	14%	*54%	497
5	C	No	Fb	2	SR	13%	7%	*71%	8%	443
6	D	No <sup>1</sup>	Fa	1	SR	5%	5%	3%	*87%	420
7	C	No <sup>1</sup>	Ba	2	SR	8%	2%	*64%	25%	462
8	A	No <sup>1</sup>	Ba	2	SR	*93%	1%	2%	3%	393
9	C	No <sup>1</sup>	Da	2	SR	13%	12%	*64%	9%	460
10	B	No <sup>1</sup>	Db	2	SR	12%	*82%	4%	1%	411
11	C	No <sup>1</sup>	Cb	3	SR	4%	4%	*89%	2%	342
12		No <sup>1</sup>	Db	3	A-BCR	48%	47%			470
12		No <sup>1</sup>	Ad	3	B-BCR	42%	29%	26%		484
13	A	No <sup>1</sup>	Cb	2	SR	*65%	19%	10%	5%	457
14	B	No <sup>1</sup>	Ea	2	SR	6%	*78%	5%	9%	427
15	A	No <sup>1</sup>	Cc	2	SR	*96%	1%	1%	0%	351
16	B	No <sup>1</sup>	Eb	3	SR	14%	*65%	12%	8%	463
17	D	No <sup>1</sup>	Eb	3	SR	2%	6%	20%	*70%	488
18	B	No <sup>1</sup>	Db	2	SR	2%	*85%	5%	7%	394
19	D	No <sup>1</sup>	Ea	2	SR	12%	2%	4%	*81%	424

<sup>1</sup>Only students whose IEP or Section 504 plan allows for the accommodation of calculator usage may use a calculator for this question.

Objective/Subskill and Depth of Knowledge Level information follows this table. SR: selected response; A-BCR: brief constructed response, part A; B-BCR: brief constructed response, part B.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
420 and below	421–437	438–483	484 and above

# Mathematics Objectives and Subskills

## Beginning of Grade 4

---

### How to use the Framework

The mathematics assessment framework is an indication of the knowledge and skills that will be assessed on the November WKCE-CRT. ***This information does not replace your local curriculum.*** However, you may wish to ensure that your local curriculum includes the knowledge and skills described in the framework.

This section of the framework describes the types of content that students may encounter on the WKCE-CRT

The knowledge and skills to be assessed are organized into objectives, subskills, and descriptors as shown below. WKCE-CRT results will be reported by objectives and subskill.

- A. **Objective:** A group of cognitively related skills.
  - A.a. **Subskill:** A group of related knowledge and skills that ***may include, but is not limited to,*** the descriptors which follow.
    - **Descriptor:** an example of a specific knowledge or skill that may be assessed.

---

### Objectives, Subskills, and Descriptors

---

#### Objective      Mathematical Processes

**A:**

Students will effectively use mathematical knowledge, skills, and strategies related to reasoning, communication, connections, representation, and problem solving.

**Descriptors, such as but not limited to**

- Use reasoning and logic to:
  - Perceive patterns
  - Identify relationships
  - Formulate questions
  - Pose problems
  - Make conjectures
  - Justify strategies
  - Test reasonableness of results
- Communicate mathematical ideas and reasoning using the vocabulary of mathematics in a variety of ways e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models.
- Connect mathematics to the real world, as well as within mathematics.
- Create and use representations to organize, record, and communicate mathematical ideas.
- Solve and analyze routine and non-routine problems.

---

#### Objective      Number Operations and Relationships

**B:**

**Subskill      Concepts**

**B.a.:**

**Descriptors, such as but not limited to**

- Recognize and apply place-value concepts to whole numbers less than 10,000.
- Read, write, and represent numbers using words, numerals, pictures (e.g. base ten blocks), number lines, arrays, expanded forms ( $243=200+40+3$ ), and symbolic renaming (e.g.,  $243=250-7$ ).
- Compare and order whole numbers less than 10,000
- Count by 2s, 3s, 5s, 10s, 25s and 100s starting with any multiple and 100s starting with any number.
  - Identify and name counting patterns
- Count, compare, and make change up to \$10.00 using a collection of coins and one-dollar bills..
- Identify a fractional part of a collection/set or parts of a whole.

**Subskill Computation**

**B.b.:**

**Descriptors, such as but not limited to**

- Use addition and subtraction in everyday situations and solve one-and two-step word problems
- Solve double-and triple-digit addition and subtraction problems with regrouping in horizontal and vertical format in problems with and without context.
- Demonstrate understanding of multiplication as grouping or repeated addition or arrays in problems with and without context (without context up to  $5 \times 9$ ; in context products up to 100).
- Demonstrate understanding of the concept of division as repeated subtraction, partitioning/sharing or measuring (dividend up to 45 and divisors up to 5).
- Use fractions to represent quantities when solving problems involving equal sharing or partitioning including fractions less than one as well as mixed numbers.

Represent with shaded circles, rods, squares or pictorial representations of objects (for a set).

- Estimate sums to tens, hundreds, and thousands and differences of ten and hundreds.
- Determine reasonableness of answers.

**Objective Geometry**

**C:**

**Subskill Describe figures**

**C.a.:**

**Descriptors, such as but not limited to;**

- Identify, describe, and compare properties of 2- and 3-dimensional figures such as squares, triangles, rectangles, pentagon, hexagon, octagon, pattern block shapes, circles, cubes, pyramids, rectangular prisms, tetrahedrons, cylinders, and spheres (e.g., comparing sides, faces, corners, and edges).

**Subskill Spatial relationships and transformations**

**C.b.:**

**Descriptors, such as but not limited to**

- Create and identify 2-dimensional geometric shapes by combining or decomposing other shapes.
- Identify cubes and square pyramid shapes from their nets (flat patterns).
- Apply concepts of single-motion geometry (e.g., slides, flips and turns) to match two identical shapes.

<b>Subskill</b>	<b>Coordinate Systems</b>
<b>C.c.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Use simple 2-dimensional coordinate systems to find locations on maps and to represent points and simple figures with coordinates using letters and numbers, (e.g., (E, 3)).</li> <li>• Identify and use relationships among figures (e.g., location, position and intersection).</li> </ul>
<b>Objective</b>	<b>Measurement</b>
<b>D:</b>	
<b>Subskill</b>	<b>Measurable attributes</b>
<b>D.a.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Describe attributes of length, time, temperature, liquid capacity, weight/mass, and volume and identify appropriate units to measure them. Units include: inches, feet, yards, miles, meters, centimeters, millimeters, cups quarts, gallons, liters, seconds, minutes, hours, days, months, years, ounces, pounds, grams, and degrees Fahrenheit/Celsius.</li> <li>• Compare attributes of length, volume, and weight by observation or when given actual measurements.</li> <li>• Make measurement conversions within a system (e.g., yards to feet, feet to inches, hours to minutes, days to hours, years to months, gallons to quarts).</li> </ul>
<b>Subskill</b>	<b>Direct measurement</b>
<b>D.b.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Read, interpret, and use measuring instruments to determine the measurement of objects with non-standard and standard units to the nearest centimeter, 1/4-inch.</li> <li>• Read thermometers to the nearest 5 degrees F/C.</li> <li>• Tell time to the nearest minute and translate time from analog to digital clocks and vice versa.</li> <li>• Determine and compare elapsed time in multiples of 15 minutes in problem-solving situations.</li> <li>• Investigate measurements of area and perimeter.</li> </ul>
<b>Subskill</b>	<b>Indirect measurement</b>
<b>D.c.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Apply estimation techniques using non-standard units.</li> </ul>
<b>Objective</b>	<b>Statistics and Probability</b>
<b>E:</b>	
<b>Subskill</b>	<b>Data analysis and statistics</b>
<b>E.a.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Answer and pose questions about collecting, organizing, and displaying data. Work with data in the context of real-world situations by formulating questions that lead to data collection and analysis and determining what data to collect and when and how to collect the data.</li> <li>• Collect, organize, and display data in simple bar graphs and charts, including translating data from one form to the other.</li> <li>• Draw reasonable conclusions based on simple interpretations of data.</li> </ul>

- Read, use information, and draw reasonable conclusions from data in graphs, tables, charts, and Venn diagrams.

**Subskill      Probability**  
**E.b.:**

**Descriptors, such as but not limited to**

- Determine if the occurrence of future events are more, less, or equally likely to occur.
- Design a fair and an unfair spinner.
- Predict the outcomes of a simple event using words to describe probability (e.g., flipping a coin that has a 1 out of 2 chance of getting a head).
- Describe and determine the number of combinations for choosing 2 out of 3 items (e.g., red hat, blue jacket and green jacket). What are the combinations of wearing a hat and a jacket?

**Objective      Algebraic Relationships**

**F:**

**Subskill      Patterns, relations and functions**  
**F.a.:**

**Descriptors, such as but not limited to**

- Recognize, extend, describe, create, and replicate a variety of patterns including attribute, number, and geometric patterns.

Such as:

- Picture patterns
- Patterns in tables and charts
- “What’s-my-rule?” patterns
- Patterns using addition and subtraction rules.

Focusing on relationships within patterns as well as extending patterns (e.g., patterns and relationships represented with pictures, tables and charts; “what’s-my-rule?” patterns using addition and subtraction rules).

- Determine odd or even.

**Subskill      Expressions, equations and inequalities**  
**F.b.:**

**Descriptors, such as but not limited to**

- Demonstrate an understanding that the “=” sign means “the same as” by solving open or true/false number sentences.
- Use notation to represent mathematical thinking: letter or box (variable); operation symbols (+, -, =).
- Demonstrate a basic understanding of equality and inequality using symbols (<, >, =) with simple addition and subtraction.

**Subskill      Properties**  
**F.c.:**

**Descriptors, such as but not limited to**

- Use properties and relationships of arithmetic to determine what number goes in a “box” to make a number sentence true,
  - Identity property of zero Ex:  $12 + 0 =$  “box”
  - Identity property of one Ex:  $5 \times 1 =$  “box”
  - Commutative property for addition of single-digits
  - Associative property
- Use simple equations in a variety of ways to demonstrate the properties above.

## **Mathematics Depth of Knowledge**

The representative examples for the following depth of knowledge categories are intended to reflect student performance expectations with regard to the level of mental effort and amount of information integrated by the student. Items are targeted at one of four levels of cognitive demand. Each level of demand is represented by items with a range of difficulty, as indicated by the percentage of students who answered the item correctly or by scale score value. Assuming grade-appropriate vocabulary and test items, these levels are viable and useful across all grades.

### **Level 1: Recognizing and Recalling**

Students recognize and recall basic facts, terms, concepts, and definitions of the content and processes of mathematics. For example, students may be required to do computation with whole numbers, fractions, decimals, and integers.

### **Level 2: Using Fundamental Concepts and Procedures**

Students describe or apply basic facts, terms, rules, concepts and definitions of the content and processes of mathematics.

### **Level 3: Concluding and Explaining**

Students demonstrate an understanding of complex ideas, draw conclusions based on this understanding, and communicate ideas and conclusions effectively.

### **Level 4: Evaluating, Extending, and Making Connections**

Students synthesize skills and techniques from various concepts of mathematics to solve multifaceted problems, and justify conclusions using mathematical definitions, properties, and principles. For example, students may be required to support mathematical arguments with definitions, properties, and principles.

## **Mathematics Rubric for Constructed-Response Items**

Step B of the constructed-response items is scored using a generic rubric.

- |                 |   |
|-----------------|---|
| <b>2 points</b> | The student demonstrates a thorough understanding of the mathematical concepts and/or procedures represented in the problem. The student uses appropriate mathematical procedures and/or concepts to explain or justify the response to Step A, and provides clear and complete explanations and interpretations containing words, calculations, or symbols, unless otherwise specified in the item stem.<br><br>The response may contain minor flaws that do <u>not</u> detract from the demonstration of a thorough understanding of the problem. |
| <b>1 point</b>  | The student demonstrates only a partial understanding of the mathematical concepts and/or procedures represented in the problem. The response lacks an essential understanding of the underlying mathematical concepts used to provide the response to Step A.<br><br>The response contains errors related to the misinterpretation of important aspects of the problem, misuse of mathematical procedures and/or concepts, or misinterpretation of results.  |
| <b>0 points</b> | The student provides a completely incorrect explanation or justification, or one that cannot be interpreted, or no response at all.   |

# Mathematics Constructed-Response Item Scoring Guides

Form: Public Release	Item #: 3	Item Type: BCR	TB Page: 4	AB Page #: n/a
Objective for Step A: B. Number Operations & Relationships				Max Score Pts:
Subskill: B.b. Number Computation				Step A: 0–1
Objective for Step B: A. Mathematical Processes				Step B: 0–2

## Step A: Response is limited to correct answer or range below

400

## Step B: Responses may include, but may not be limited to, the Answer Cues below

### 2 points

- Problem solving using repeated addition and/or multiplication
- Examples may include but are not limited to:

I multiplied  $10 \times 10$  to get the number of seats in A. There are 100 seats. Section C also has 100 seats because it is the same size as A. To find B, I multiplied  $10 \times 20$  and got 200. Then I added  $100 + 100 + 200 = 400$  seats.

OR

$$10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 = 100$$

$$10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 = 100$$

$$20 + 20 + 20 + 20 + 20 + 20 + 20 + 20 + 20 = \underline{200}$$

400

### 1 point

The response contains errors related to the misinterpretation of important aspects of the problem, misuse of mathematical procedures and/or concepts, or misinterpretation of results. Errors that might be observed include:

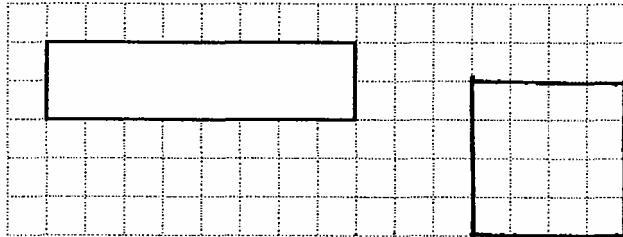
- Giving an incomplete answer such as writing nine 10's, saying "I counted," or neglecting to include one step in the process

### 0 points

The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.

Form: Public Release	Item #: 12	Item Type: BCR	TB Page: 9	AB Page #: n/a
Objective for Step A: D. Measurement				Max Score Pts:
Subskill: D.b. Direct Measurement				Step A: 0–1
Objective for Step B: A. Mathematical Processes				Step B: 0–2

**Step A: Response is limited to correct answer or range below**



**Step B: Responses may include, but may not be limited to, the Answer Cues below**

**2 points**

- Student response includes an explanation of how both shapes represent the same square units.
- Example:

The square covers the same space as the rectangle because they both cover 16 squares.

**OR**

Both cover the same number of squares.

**OR**

$$8 + 8 = 4 + 4 + 4 + 4 \text{ OR } 2 \times 8 = 4 \times 4$$

**1 point**

- Student response includes an incomplete but correct response.
- Student makes reference to the area of one shape only. Example: The square covers 16 squares.

**0 points**

The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.

## Anchor Papers for Mathematics Constructed-Response Items

### Item 3

A theater has 3 sections of seats. Section A and section C each have 10 rows of seats. Each row has 10 seats. Section B has 10 rows of seats, but each row has twice as many seats as section A.



A



B



C

#### Step A

How many seats does the theater have?

Answer: 400 seats

#### Step B

Use what you know about multiplication to explain how you found the number of seats in the theater.

Use words, numbers, and/or symbols in your answer.

Since  $10 \times 10 = 100$  and section A and C are the same it is just  $100 + 100$ , but B is  $10 \times 20 = 200$ . So all I had to do is  $200 + 200$  to get the answer 400.

#### Step A

Score Point 1

#### Step B

Score Point 2

> Thorough understanding: accounts for number of seats in each section, and adds to get the total

### Item 3

A theater has 3 sections of seats. Section A and section C each have 10 rows of seats. Each row has 10 seats. Section B has 10 rows of seats, but each row has twice as many seats as section A.



A



B



C

#### Step A

How many seats does the theater have?

Answer: 300 seats

#### Step B

Use what you know about multiplication to explain how you found the number of seats in the theater.

Use words, numbers, and/or symbols in your answer.

I counted the rows and seats.

Step A

Score Point 1

Step B

Score Point 1

> Acceptable method: "I counted"

< [incomplete answer: doesn't explain what is counted]

### Item 3

A theater has 3 sections of seats. Section A and section C each have 10 rows of seats. Each row has 10 seats. Section B has 10 rows of seats, but each row has twice as many seats as section A.



A



B



C

#### Step A

How many seats does the theater have?

Answer: 400 seats

#### Step B

Use what you know about multiplication to explain how you found the number of seats in the theater.

Use words, numbers, and/or symbols in your answer.

I just added  $400 + 400$  I got my answer

#### Step A

Score Point 1

#### Step B

Score Point 0

< [incorrect explanation]

### Item 3

A theater has 3 sections of seats. Section A and section C each have 10 rows of seats. Each row has 10 seats. Section B has 10 rows of seats, but each row has twice as many seats as section A.



A



B



C

#### Step A

How many seats does the theater have?

Answer: 4000 seats

#### Step B

Use what you know about multiplication to explain how you found the number of seats in the theater.

Use words, numbers, and/or symbols in your answer.

I know  $10 \times 10 = 100$  and  
 $100 + 100 = 200$  so I added  
 $100 + 100 + 200 = 400$

Step A

Score Point 0

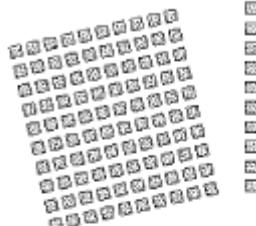
Step B

Score Point 2

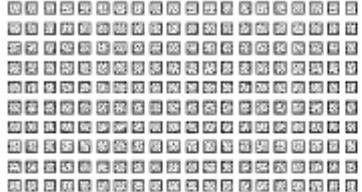
> Thorough understanding: uses addition and multiplication and adds correctly

### Item 3

A theater has 3 sections of seats. Section A and section C each have 10 rows of seats. Each row has 10 seats. Section B has 10 rows of seats, but each row has twice as many seats as section A.



A



B



C

#### Step A

How many seats does the theater have?

Answer: 100 seats

#### Step B

Use what you know about multiplication to explain how you found the number of seats in the theater.

Use words, numbers, and/or symbols in your answer.

I just did  $10 \times 10$  and got  
100 seats. 100 is my  
best answer

#### Step A

Score Point 0

#### Step B

Score Point 1

> Correct method: multiplication

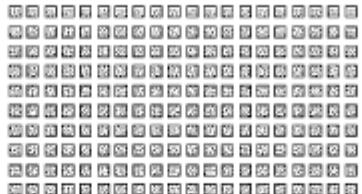
< [partial understanding: calculated one section only]

### Item 3

A theater has 3 sections of seats. Section A and section C each have 10 rows of seats. Each row has 10 seats. Section B has 10 rows of seats, but each row has twice as many seats as section A.



A



B



C

#### Step A

How many seats does the theater have?

Answer: 160 seats

#### Step B

Use what you know about multiplication to explain how you found the number of seats in the theater.

Use words, numbers, and/or symbols in your answer.

Because I No

#### Step A

Score Point 0

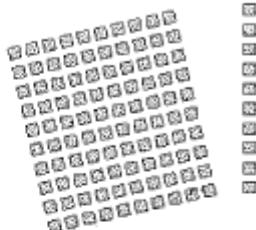
#### Step B

Score Point 0

< [incorrect justification]

### Item 3

A theater has 3 sections of seats. Section A and section C each have 10 rows of seats. Each row has 10 seats. Section B has 10 rows of seats, but each row has twice as many seats as section A.



A



B



C

#### Step A

How many seats does the theater have?

Answer: 90 seats

#### Step B

Use what you know about multiplication to explain how you found the number of seats in the theater.

Use words, numbers, and/or symbols in your answer.

I do not understand the problem.

Step A

Score Point 0

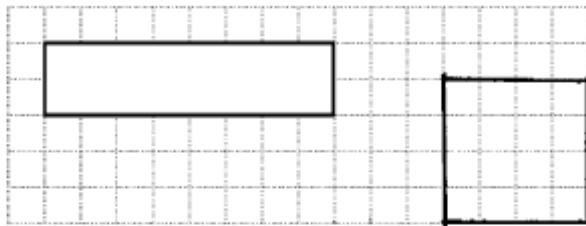
Step B

Score Point A

< [equivalent to condition code response: "I don't know"]

## Item 12

Look at the rectangle on the grid below.



### Step A

On the same grid, draw a square that covers the same amount of space as the rectangle shown. Use a heavy dark line to draw the square.

### Step B

Use what you know about measurement to explain why the square you drew covers the same amount of space as the rectangle.

Use words, numbers, and/or symbols in your answer.

The area of the rectangle was 16 so I made a square that's area was 16 too.

### Step A

Score Point 1

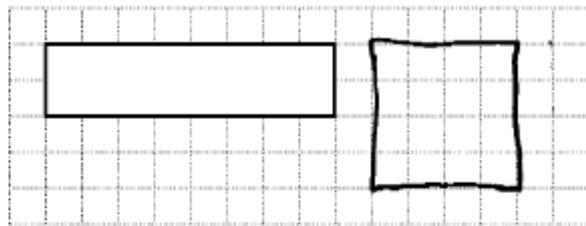
### Step B

Score Point 2

> Addresses both shapes and that each covers the same area

### Item 12

Look at the rectangle on the grid below.



#### Step A

On the same grid, draw a square that covers the same amount of space as the rectangle shown. Use a heavy dark line to draw the square.

#### Step B

Use what you know about measurement to explain why the square you drew covers the same amount of space as the rectangle.

Use words, numbers, and/or symbols in your answer.

I know that  $4 \times 4 = 16$ .

Step A

Score Point 1

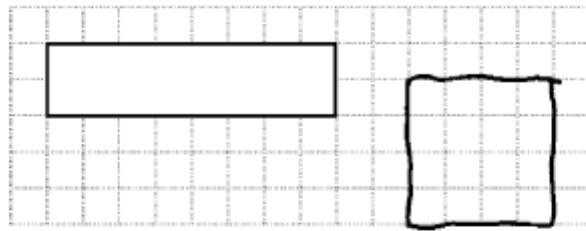
Step B

Score Point 1

> Correctly addresses the area of only one shape (square)

## Item 12

Look at the rectangle on the grid below.



### Step A

On the same grid, draw a square that covers the same amount of space as the rectangle shown. Use a heavy dark line to draw the square.

### Step B

Use what you know about measurement to explain why the square you drew covers the same amount of space as the rectangle.

Use words, numbers, and/or symbols in your answer.

base x height

### Step A

Score Point 1

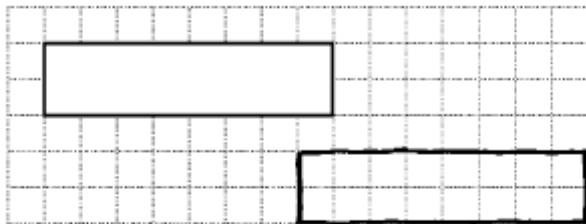
### Step B

Score Point 0

< [addresses neither shape (only tells how to get area)]

### Item 12

Look at the rectangle on the grid below.



#### Step A

On the same grid, draw a square that covers the same amount of space as the rectangle shown. Use a heavy dark line to draw the square.

#### Step B

Use what you know about measurement to explain why the square you drew covers the same amount of space as the rectangle.

Use words, numbers, and/or symbols in your answer.

I Just counted the numbers in side but frist  
I saw there wer to in the middle, and then  
counted across there was 8 so  $2 \times 8 = 16$   
so I know that there had to be 16

#### Step A

Score Point 0

#### Step B

Score Point 1

> Correctly addresses the area of only one shape (rectangle)

## Item 12

Look at the rectangle on the grid below.



### Step A

On the same grid, draw a square that covers the same amount of space as the rectangle shown. Use a heavy dark line to draw the square.

### Step B

Use what you know about measurement to explain why the square you drew covers the same amount of space as the rectangle.

Use words, numbers, and/or symbols in your answer.

I made <sup>2</sup> inside the rectangle

Step A

Score Point 0

Step B

Score Point 0

< [not a meaningful response]



**Guide to Grade 4 Released Item Books  
In READING and MATHEMATICS**

Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

**Wisconsin Knowledge and Concepts Examinations**  
**Criterion-Referenced Test**

**Released Item Book**

**Reading**

**Grade**

**5**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.

**Acknowledgments** CTB is indebted to the following for permission to use material in this book:

All trademarks and trade names found in this publication are the property of their respective companies and are not associated with the publisher of this publication.

"New Year's Hats for the Statues" from *The Sea of Gold* by Yoshiko Uchida, copyright © 1965 by Yoshiko Uchida. Used by permission of the Estate of Yoshiko Uchida, University of California, The Bancroft Library.

"Snowy Benches" from *Out of the Dark and Daylight* by Aileen Fisher, text copyright © 1980 by Aileen Fisher. Used by permission of Marian Reiner for the author.

"Snowball Wind" from *In the Woods, in the Meadow, in the Sky* by Aileen Fisher, text copyright © 1965 by Aileen Fisher. Used by permission of Marian Reiner for the author.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

Released Item Book

**What are released items?**

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

**How do I use this book?**

*Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

*Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

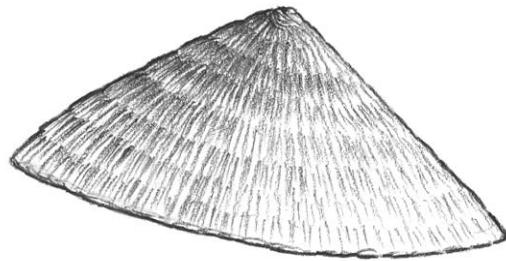
- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

*Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

**Directions**

Read the passage “New Year’s Hats for the Statues.” Then answer Numbers 1 through 14.



# New Year’s Hats for the Statues

by Yoshiko Uchida

Once a very kind old man and woman lived in a small house high in the hills of Japan. Although they were good people, they were very, very poor, for the old man made his living by weaving the reed hats that farmers wore to ward off the sun and rain, and even in a year’s time, he could not sell very many.

One cold winter day as the year was drawing to an end, the old woman said to the old man, “Good husband, it will soon be New Year’s Day, but we have nothing in the house to eat. How will we welcome the new year without even a pot of fresh rice?” A worried frown hovered over her face, and she sighed sadly as she looked into her empty cupboards.

But the old man patted her shoulders and said, “Now, now, don’t you worry. I will make some reed hats and take them to the village to sell. Then with the money I earn I will buy some fish and rice for our New Year’s feast.”

On the day before New Year’s, the old man set out for the village with five new reed hats that he had made. It was bitterly cold, and from early morning, snow tumbled from the skies and blew in great drifts about their small house. The old man shivered in the wind, but he thought about the fresh, warm rice and the fish turning crisp and brown over the charcoal, and he knew he must earn some money to buy them. He pulled his wool scarf tighter about his throat and plodded on slowly over the snow-covered roads.

“New Year’s Hats for the Statues” from *The Sea of Gold* by Yoshiko Uchida, copyright © 1965 by Yoshiko Uchida. Used by permission of the Estate of Yoshiko Uchida, University of California, The Bancroft Library.

When he got to the village, he trudged up and down its narrow streets calling, "Reed hats for sale! Reed hats for sale!" But everyone was too busy preparing for the new year to be bothered with reed hats. They scurried by him, going instead to the shops where they could buy sea bream and red beans and herring roe for their New Year's feasts. No one even bothered to look at the old man or his hats.

As the old man wandered about the village, the snow fell faster, and before long the sky began to grow dark. The old man knew it was useless to linger, and he sighed with longing as he passed the fish shop and saw the rows of fresh fish.

"If only I could bring home one small piece of fish for my wife," he thought glumly, but his pockets were even emptier than his stomach.

There was nothing to do but to go home again with his five unsold hats. The old man headed wearily back toward his little house in the hills, bending his head against the biting cold of the wind. As he walked along, he came upon six stone statues of Jizo, the guardian god of children. They stood by the roadside covered with snow that had piled in small drifts on top of their heads and shoulders.

"*Mah, mah*, you are covered with snow," the old man said to the statues, and setting down his bundle, he stopped to brush the snow from their heads. As he was about to go on, a fine idea occurred to him.

"I am sorry these are only reed hats I could not sell," he apologized, "but at least they will keep the snow off your heads." And carefully he tied one on each of the Jizo statues.

"Now if I had one more there would be enough for each of them," he murmured as he looked at the row of statues. But the old man did not hesitate for long. Quickly he took the hat from his own head and tied it on the head of the sixth statue.

"There," he said, looking pleased. "Now all of you are covered." Then, bowing in farewell, he told the statues that he must be going. "A happy New Year to each of you," he called, and he hurried away content.

When he got home the old woman was waiting anxiously for him. "Did you sell your hats?" she asked. "Were you able to buy some rice and fish?"

The old man shook his head. "I couldn't sell a single hat," he explained, "but I did find a very good use for them." And he told her how he had put them on the Jizo statues that stood in the snow.



"Ah, that was a very kind thing to do," the old woman said. "I would have done exactly the same." And she did not complain at all that the old man had not brought home anything to eat. Instead she made some hot tea and added a precious piece of charcoal to the brazier so the old man could warm himself.

That night they went to bed early, for there was no more charcoal and the house had grown cold. Outside the wind continued to blow the snow in a white curtain that wrapped itself about the small house. The old man and woman huddled beneath their thick quilts and tried to keep warm.

"We are fortunate to have a roof over our heads on such a night," the old man said.

"Indeed we are," the old woman agreed, and before long they were both fast asleep.

About daybreak, when the sky was still a misty gray, the old man awakened for he heard voices outside.

"Listen," he whispered to the old woman.

"What is it? What is it?" the old woman asked.

Together they held their breath and listened. It sounded like a group of men pulling a very heavy load.

"*Yoi-sah! Hoi-sah! Yoi-sah! Hoi-sah!*" the voices called and seemed to come closer and closer.

"Who could it be so early in the morning?" the old man wondered. Soon, they heard the men singing:

*Where is the home of the kind old man,*

*The man who covered our heads?*

*Where is the home of the kind old man,*

*Who gave us his hats for our heads?*

The old man and woman hurried to the window to look out, and there in the snow they saw the six stone Jizo statues lumbering toward their house. They still wore the reed hats the old man had given them and each one was pulling a heavy sack.

"*Yoi-sah! Hoi-sah! Yoi-sah! Hoi-sah!*" they called as they drew nearer and nearer.

“They seem to be coming here!” the old man gasped in amazement. But the old woman was too surprised even to speak.

As they watched, each of the Jizo statues came up to their house and left his sack at the doorstep.

The old man hurried to open the door, and as he did, the six big sacks came tumbling inside. In the sacks the old man and woman found rice and wheat, fish and beans, wine and bean paste cakes, and all sorts of delicious things that they might want to eat.

“Why, there is enough here for a feast every day all during the year!” the old man cried excitedly.

“And we shall have the finest New Year’s feast we have ever had in our lives,” the old woman exclaimed.

“Ojizo Sama, thank you!” the old man shouted.

“Ojizo Sama, how can we thank you enough?” the old woman called out.

But the six stone statues were already moving slowly down the road, and as the old man and woman watched, they disappeared into the whiteness of the falling snow, leaving only their footprints to show that they had been there at all.

---

### 1 What is the passage mostly about?

- (A) An old man is rewarded for a good deed.
- (B) Jizo statues come to life and help the hungry.
- (C) A heavy snowfall makes life difficult for an old couple.
- (D) An old woman wants her husband to earn more money.



**2** Why did the old man go to the village to sell the reed hats?

- (A) He wanted to surprise his wife with a gift.
- (B) The hats were worn during the New Year's feast.
- (C) He wanted to earn money for food for the New Year's feast.
- (D) The farmers needed the hats for shelter from the winter rain.

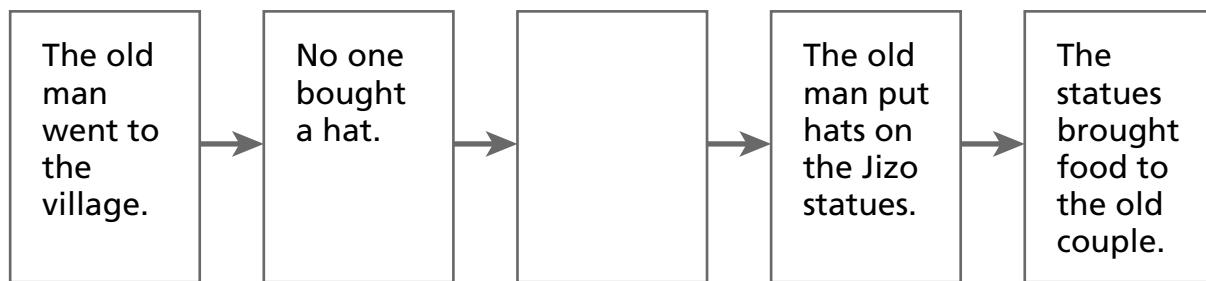
**3** Read this sentence from the passage.

"If only I could bring home one small piece of fish for my wife," he thought glumly.

If glum means sad, glumly means

- (A) with sadness
- (B) feeling less sad
- (C) to stop being sad
- (D) feeling sadness again

**4** Here are some of the events in the passage.



Which of these events belongs in the empty box?

- (A) The old man made some reed hats.
- (B) The old man started to walk home.
- (C) The old man wished the statues a happy year.
- (D) The old man and woman heard a strange noise.

**5** Read this sentence from the passage.

For the old man made his living by weaving the reed hats that farmers wore to ward off the sun and rain.

**What does ward off mean in this statement?**

- (A) hold up
- (B) substitute for
- (C) frighten away
- (D) protect against

**6** Why didn't the old woman complain when her husband brought home nothing to eat?

- (A) She was too cold to eat anything.
- (B) She was full from drinking the tea.
- (C) She knew the statues would bring food.
- (D) She knew that her husband tried his best.

**7** How did the old man and woman feel as they huddled under the quilts in their cold house?

- (A) frightened by the wind
- (B) lucky to have their home
- (C) bitter about their poverty
- (D) excited about the holiday

**8** Read this sentence from the passage.

Outside the wind continued to blow the snow in a white curtain that wrapped itself about the small house.

**What does the comparison of snow to a curtain suggest?**

- (A) the beauty of the snow
- (B) the coldness of the snow
- (C) the freshness of the snow
- (D) the movement of the snow

**9** Read this dictionary entry.

**draw** *v.* 1. To move steadily. 2. To attract. 3. To sketch. 4. To tie in a game. (Past tense — *drew*)

**Now read this sentence from the passage.**

“*Yoi-sah! Hoi-sah! Yoi-sah! Hoi-sah!*” they called as they drew nearer and nearer.

**Which definition of draw is used in this sentence?**

- (A) definition 1
- (B) definition 2
- (C) definition 3
- (D) definition 4



**10** Who was singing a song about looking for the old man?

- (A) the Jizo statues
- (B) a group of children
- (C) farmers wearing reed hats
- (D) people celebrating New Year's Day

**11** Which feature of this passage best suggests it is a folktale?

- (A) It has a snowy setting.
- (B) The statues come to life.
- (C) The main characters are poor.
- (D) It takes place in a little village.

**12** What would probably happen next if the passage continued?

- (A) The couple would move to the village.
- (B) The old man would make more reed hats.
- (C) The couple would enjoy a New Year's feast.
- (D) The old man would look for more Jizo statues.

**13** Based on the passage, which of these qualities is most important?

- (A) courage
- (B) honesty
- (C) kindness
- (D) strength

**14**

Explain what might have happened if the old man had ignored the statues. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

---

---

---

---

---

---

---

---

---

---

---



**Go On**

## Directions

Read the poems “Snowy Benches” and “Snowball Wind”. Then answer Numbers 15 through 22.

# Snowy Benches

by Aileen Fisher

Do parks get lonely  
in winter, perhaps,  
when benches have only  
snow on their laps?



# Snowball Wind

by Aileen Fisher

The wind was throwing snowballs.  
It plucked them from the trees  
and tossed them all around the woods  
as boldly as you please.

I ducked beneath the spruces  
which didn't help a speck;  
the wind kept throwing snowballs  
and threw one down my neck.

“Snowy Benches” from *Out of the Dark and Daylight* by Aileen Fisher, text copyright © 1980 by Aileen Fisher. Used by permission of Marian Reiner for the author.

“Snowball Wind” from *In the Woods, in the Meadow, in the Sky* by Aileen Fisher, text copyright © 1965 by Aileen Fisher. Used by permission of Marian Reiner for the author.

**15** What is suggested in “Snowy Benches”?

- (A) The winter will soon be over.
- (B) Park benches are usually empty.
- (C) The snow hushes the city noises.
- (D) It is too cold for people to sit outside.

**16** How does writing “Snowy Benches” as a question affect the reader?

- (A) It shows the reader that the poet is confused.
- (B) It warns the reader that the poem will be difficult.
- (C) It invites the reader to think about parks in winter.
- (D) It makes the reader want to learn more about parks.

**17** Which word from “Snowy Benches” makes parks seem as if they were people?

- (A) benches
- (B) lonely
- (C) snow
- (D) winter

**18** Where does “Snowball Wind” take place?

- (A) in a field
- (B) in a forest
- (C) on a ski slope
- (D) on a playground

**19** What is the snowfall compared to in “Snowball Wind”?

- (A) a gust of wind
- (B) a snowball fight
- (C) a cold winter day
- (D) a game of hide and seek

**20** Read these lines from “Snowball Wind.”

I ducked beneath the spruces  
which didn’t help a speck;

What does a speck mean in this phrase?

- (A) at all
- (B) at last
- (C) a small spot
- (D) a piece of dirt



**21**

How are the statues in “New Year’s Hats for the Statues” and the benches in “Snowy Benches” similar?

- (A) Both are located in a park.
- (B) Both are treated with respect.
- (C) Both seem to have human qualities.
- (D) Both are made of the same kind of stone.

**22**

How is the poet’s attitude in “Snowy Benches” similar to the old man’s attitude in “New Year’s Hats for the Statues”?

- (A) Both seem to enjoy the winter season.
- (B) Both try to imagine how other people feel.
- (C) Both feel sorry for things outside in the cold.
- (D) Both believe in being friendly to other people.



# Reading Grade 5

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

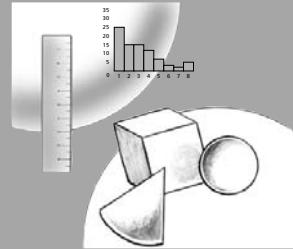
**Wisconsin Knowledge and Concepts Examinations**  
**Criterion-Referenced Test**

**Released Item Book**

**Mathematics**

**Grade**

**5**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### **What are released items?**

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### **How do I use this book?**

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

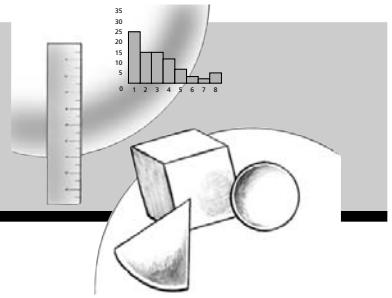
- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

# Mathematics

## Session 1



- 1** Look at the number sentence below.

$$6 \times 4 = \square$$

Which of these does not make the number sentence true?

- (A)  $12 \times 2$
- (B)  $12 + 12$
- (C)  $24 \div 1$
- (D)  $24 - 4$

- 2** Look at the table below.

**Population of Fairhill**

Year	Number of People
1990	1,495
2000	3,618

Based on the information in the table, what was the change in the number of people living in Fairhill from 1990 to 2000?

- (A) 2,123
- (B) 2,283
- (C) 5,113
- (D) 5,312

- 3** Sam completed  $\frac{2}{7}$  of a puzzle and Sheree completed  $\frac{3}{7}$  of the same puzzle.

What fraction of the entire puzzle did they complete?

- (A)  $\frac{5}{7}$
- (B)  $\frac{5}{14}$
- (C)  $\frac{6}{7}$
- (D)  $\frac{6}{14}$



**4**

Ms. Flynn drinks 8 glasses of water each day. The number sentence below can be used to find the number of days that it takes Ms. Flynn to drink 32 glasses of water.

Let  $\square$  represent the number of days.

$$32 \div \square = 8$$

How many days does it take Ms. Flynn to drink 32 glasses of water?

- (A) 3
- (B) 4
- (C) 6
- (D) 7

**5** The sales receipt below shows the groceries that Jose purchased from the supermarket.

Sales Receipt	
Bananas	\$0.89
Bread	\$1.09
Cereal	\$3.79
Salmon	\$6.39

What is the estimated cost of Jose's groceries? Round the answer to the nearest dollar.

- (A) \$10.00
- (B) \$11.00
- (C) \$12.00
- (D) \$14.00



- 6** Kathy gave the cashier \$5.00 for a soda that cost \$0.75.

**Step A**

How much change did Kathy receive?

**Answer:** \$\_\_\_\_\_

**Step B**

Explain how you found the amount of change that Kathy received. Use words and/or numbers in your answer.

---

---

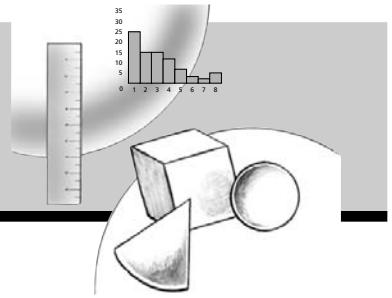
---

---



# Mathematics

## Session 2



- 7** Look at the number pattern below.

35, 48,   ?, 74, 87, . . .

What number is missing from this pattern?

- (A) 51
- (B) 59
- (C) 60
- (D) 61

- 8** The data below show the number of minutes that 5 students each spent on homework during one day.

22, 17, 58, 49, 49

What is the range of these times?

- (A) 27 minutes
- (B) 32 minutes
- (C) 41 minutes
- (D) 49 minutes

- 9** Erica fills bowls with floating candles. The table below shows the relationship between the number of bowls she uses and the number of candles in each bowl.

Floating Candles

Number of Bowls	Number of Candles
4	24
6	36
8	48
9	?

Using the pattern in the table, how many candles does Erica put in 9 bowls?

- (A) 50
- (B) 54
- (C) 60
- (D) 63



**10**



Use the inch side of your ruler to help you solve this problem.

Look at the line segment below.

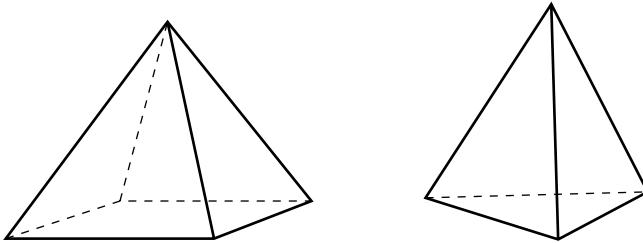
---

What is the length of the line segment to the nearest  $\frac{1}{2}$  inch?

- (A) 5 inches
- (B)  $5\frac{1}{2}$  inches
- (C) 6 inches
- (D)  $6\frac{1}{2}$  inches

**11**

Look at the geometric figures below.



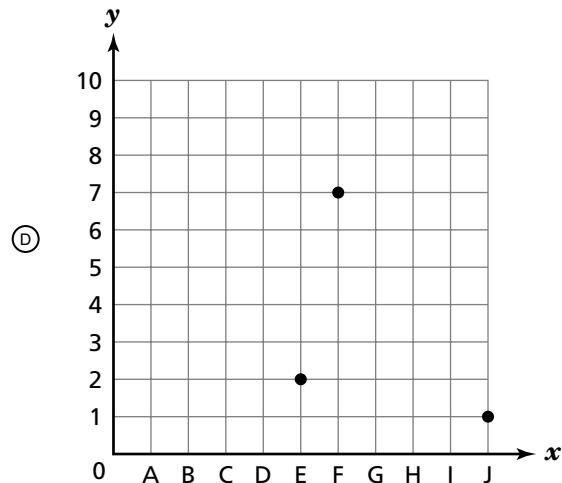
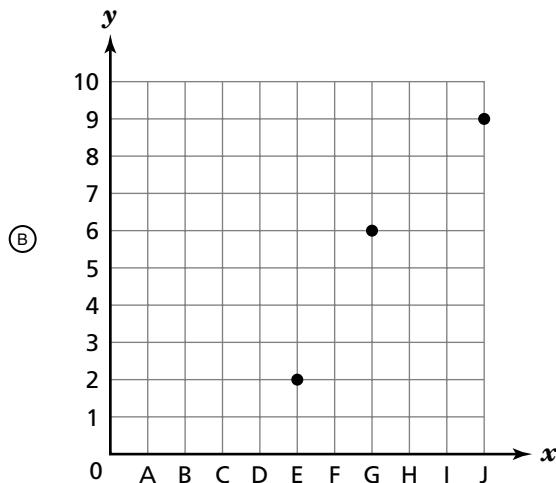
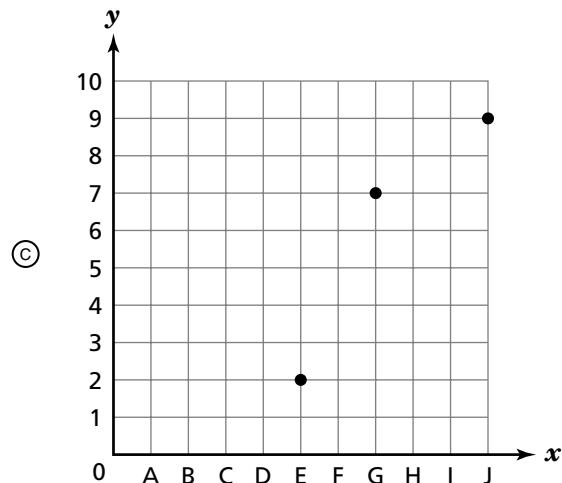
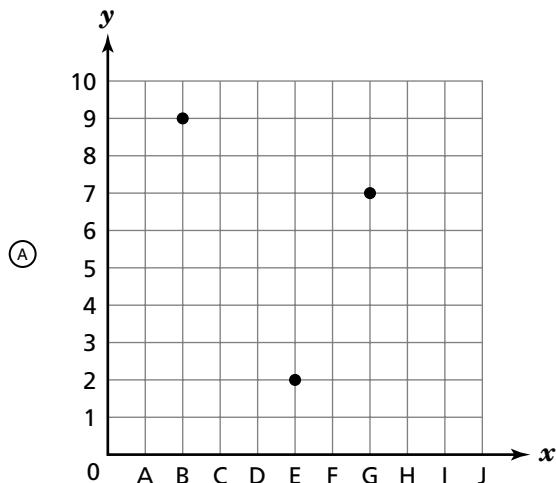
Which statement about both figures is true?

- (A) Both figures have square bases.
- (B) Both figures have only six edges.
- (C) Both figures have triangular faces.
- (D) Both figures have only four vertices.

**12** Look at the ordered pairs below.

$$(E, 2) \quad (G, 7) \quad (J, 9)$$

Which coordinate grid shows the ordered pairs plotted correctly?



**13**

Mr. Lee's class made a fruit salad. They cut 9 apples into 6 pieces each.

**Step A**

Write a number sentence that shows the total number of apple pieces that Mr. Lee's class used.

**Answer:** \_\_\_\_\_

**Step B**

Explain why the number sentence you wrote shows the number of apple pieces Mr. Lee's class used. Use words and/or numbers in your answer.

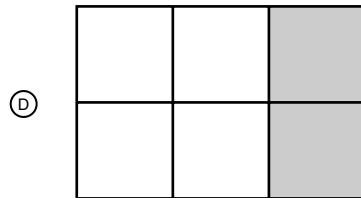
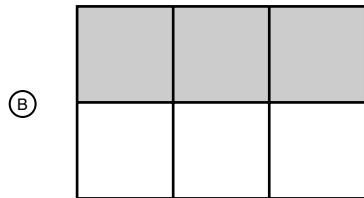
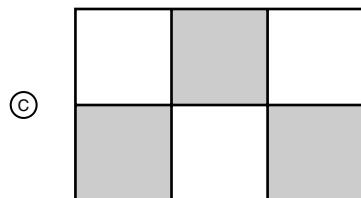
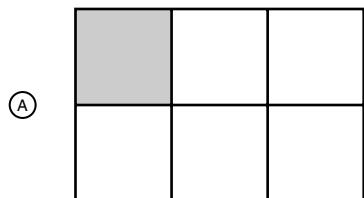
---

---

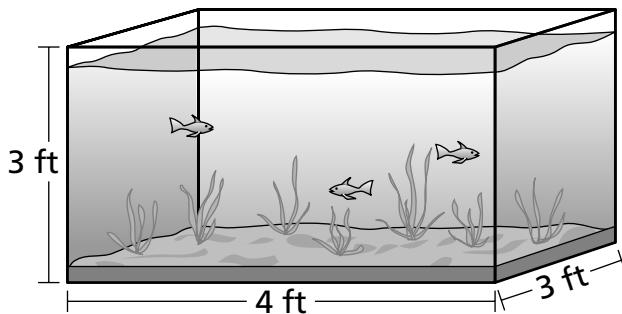
---

---

- 14** Which figure has a shaded area of  $\frac{1}{3}$ ?



- 15** The aquarium shown below is located in Mr. Darcy's office.

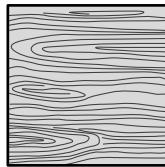


Note: The figure is not drawn to scale.

Which of these units would be best for measuring the capacity of the aquarium?

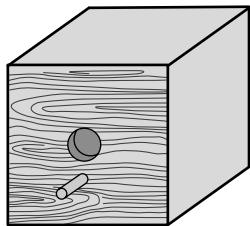
- (A) cup
- (B) pint
- (C) gallon
- (D) ounce

- 16** The bottom of Cindy's birdhouse is shown below.

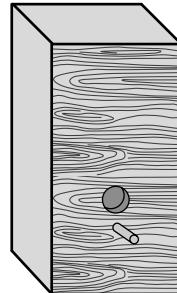


Which of these cannot be Cindy's birdhouse?

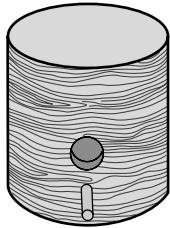
(A)



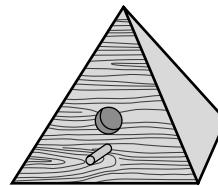
(C)



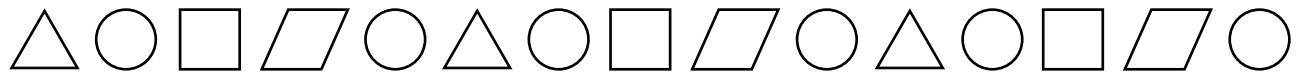
(B)



(D)



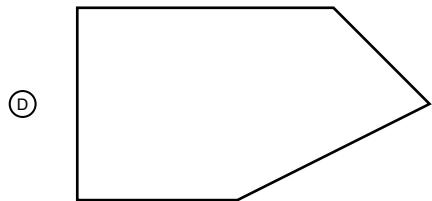
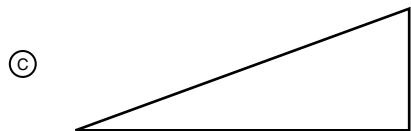
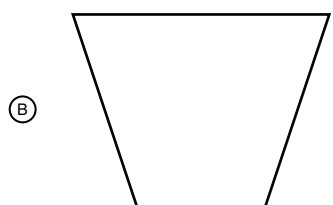
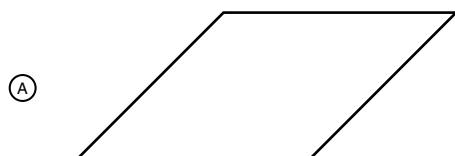
- 17** Look at the shape pattern below.



Which of these letter patterns follows the same rule as the shape pattern shown?

- (A) A B C D A B C D A B C D A B C
- (B) A B C D B A B C D B A B C D B
- (C) A B A C A D A B A C A D A B A
- (D) A B B A B A B B A B A B B A B

- 18** Which of these shapes has one line of symmetry?



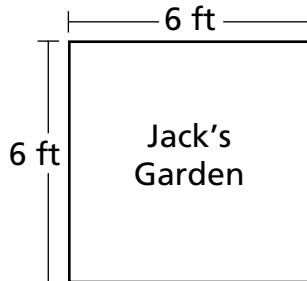
- 19** The data below shows the number of books that some students read in a week.

2, 1, 4, 7, 6

What is the range of the books read?

- (A) 4
- (B) 5
- (C) 6
- (D) 7

- 20** Jack wants to build a fence around his square garden.



How many feet of fence will Jack need?

- (A) 12 feet
- (B) 18 feet
- (C) 24 feet
- (D) 36 feet

**STOP** 

# Mathematics Grade 5

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

**Wisconsin Knowledge and Concepts Examinations** **WI**  
***Criterion-Referenced Test***

# Guide to Grade 5

## Released Item Books In READING and MATHEMATICS



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional, or learning disability.

## **Guide to Grade 5 Released Item Books in Reading and Mathematics**

This document contains information for using, scoring, and interpreting the released items in reading and mathematics.

August 2006  
(Document Version 1.0, August 28, 2006)

Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction.

## **Table of Contents**

<b>Introduction</b>	<b>1</b>
<b>Reading</b>	<b>2</b>
Reading Item Information	4
Reading Objectives and Subskills	5
Reading Depth of Knowledge	8
Reading Rubric for Constructed-Response Items	9
Reading Constructed-Response Item Scoring Guide	10
Anchor Papers for Reading Constructed-Response Item	11
<b>Mathematics</b>	<b>18</b>
Mathematics Item Information	22
Mathematics Objectives and Subskills	23
Mathematics Depth of Knowledge	27
Mathematics Rubric for Constructed-Response Items	28
Mathematics Constructed-Response Item Scoring Guides	29
Anchor Papers for Mathematics Constructed-Response Items	31

## **Guide to Released Item Books**

Please help us improve this document. We welcome your comments and questions.  
Please contact us at:

Wisconsin Department of Public Instruction  
Office of Educational Accountability  
125 S. Webster Street, P.O. Box 7841  
Madison, WI 53707-7841

Toll-free: (800) 441-4563

Fax: (608) 266-8770

<http://www.dpi.wi.gov/oea/>

# Introduction

## What are released items?

The items in the Reading and Mathematics released item books are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in the released item books illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

## How do I use the released item books and this guide?

### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

This guide provides instructions for administering the released item books as practice tests and information for scoring the items, including scoring guides and anchor papers for the constructed-response items. The item information tables identify the answer key, what each item measures, depth of knowledge, and item difficulty. Item difficulty is presented as both the percentage of students who answered the item correctly and the scale score location of the item. The item's scale score location describes where the item functions along the ability scale. Items with higher scale score locations are considered more difficult than items with lower scale score locations. Students with scale scores above the scale score location of the item would have a greater probability of answering the item correctly than students with scale scores below the item's scale score location.

### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. Note that a student's score on the practice test cannot be converted to a total scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

## Reading

### Sample Directions for Administering the Reading Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, and scratch paper. Students' test books should be closed.*

**SAY** In this test, you will read some passages and answer both multiple-choice questions and short-answer questions about those passages. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Write your answer on the lines in your test book. You may also write in the space under the lines, but your answer must stay inside the boxed area. Answers or parts of answers written outside the boxed area will not be scored. You may use scratch paper to help you plan your answer, but remember to write your answer in the boxed area in your test book. After you have written your answer, be sure to read it to make sure you have written your ideas clearly and completely.

For both the multiple-choice questions and the short-answer questions, remember to look back at the reading passages to help you answer the questions. For some questions, you may need to go back to two reading passages to find the answer. Be sure to look back at both reading passages to help you answer these questions.

You will have 40 minutes to do the test. Work until you come to the word "STOP" at the bottom of the page. You may go back and check your answers. When you have finished, sit quietly until everyone else has finished.

**SAY** Are there any questions?

*When you are sure that all students understand the directions, continue.*

**SAY** Please open your test book to Page 2.

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY** You may begin.

*Record the starting and stopping times.*

Record the Starting Time:	Add 40 Minutes:	Record the Stopping Time:
_____	_____ + 40 _____	_____

*Check to be sure that students are marking their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY ➤ Stop. This is the end of the test. Please close your test book.**

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Reading Item Information

Item	Answer Key	Objective/Subskill	Depth of Knowledge Level	Format	2005 –06 Item Statistics				Scale Score Location
					A or 0	B or 1	C or 2	D or 3	
1	A	3.1	3	SR	*70%	10%	6%	14%	471
2	C	2.1	1	SR	1%	2%	*95%	1%	390
3	A	1.2	2	SR	*79%	4%	3%	11%	443
4	B	2.3	2	SR	5%	*83%	9%	3%	443
5	D	1.1	2	SR	9%	3%	5%	*82%	440
6	D	3.1	2	SR	1%	1%	2%	*94%	399
7	B	2.1	2	SR	6%	*85%	5%	3%	460
8	D	3.3	3	SR	14%	30%	3%	*52%	509
9	A	1.3	2	SR	*78%	11%	6%	4%	453
10	A	2.1	1	SR	*92%	2%	2%	3%	423
11	B	3.3	4	SR	3%	*72%	14%	10%	460
12	C	4.1	3	SR	3%	8%	*84%	4%	445
13	C	4.1	3	SR	10%	4%	*79%	4%	468
14		4.1	3	BCR	8%	35%	47%	8%	441
15	D	3.1	2	SR	5%	47%	6%	*41%	581
16	C	4.3	3	SR	6%	3%	*84%	6%	422
17	B	3.3	2	SR	18%	*66%	10%	4%	494
18	B	2.1	1	SR	8%	*71%	2%	18%	481
19	B	3.3	2	SR	21%	*56%	20%	1%	531
20	A	1.1	2	SR	*74%	4%	17%	3%	466
21	C	3.1	3	SR	11%	24%	*58%	5%	504

Objective/Subskill and Depth of Knowledge Level information follows this table.

SR: selected response; BCR: brief constructed response.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
400 and below	401–443	444–496	497 and above

# Reading Objectives and Subskills

---

## Types of Text

---

The grade 5 reading assessment presents a variety of grade-appropriate reading passages representing literary text, informational text, and everyday text. Passages may be up to 1,500 words long and some passages may be paired with other passages. Students may be asked to read and answer questions about texts such as these:

Literary	Informational	Everyday
Realistic fiction, poetry, drama, biography, autobiography, historical fiction, myths	Magazine, textbook, and newspaper articles, government documents	Charts, schedules, simple forms, applications (for example, camp), product labels, safety notices, simple instructions

---

## Objectives, Subskills, and Descriptors

---

Objectives (labeled 1, 2, 3, and 4) and subskills (labeled 1.1, 1.2, etc.) denote general knowledge and skills that are assessed and reported on the WKCE-CRT. Bulleted descriptors are *examples* of specific knowledge or skills that may be included within each subskill. The subskills include knowledge and skills *such as, but not limited to* the descriptors.

### 1. Determine the meaning of words and phrases in context.

#### 1.1. Use context clues to determine the meaning of words and phrases.

- Use context clues to determine the meaning of unfamiliar words.
- Understand the meaning of words and phrases used figuratively.
- Use context clues to determine the meaning of multiple-meaning words.
- Use knowledge of synonyms and antonyms to determine the meaning of words.
- Identify analogies to demonstrate understanding of word meaning.

#### 1.2. Use knowledge of word structure to determine the meaning of words and phrases.

- Identify the meaning of contractions.
- Use knowledge of compound words to determine the meaning of a word.
- Identify how adding an affix changes the meaning of a word.
- Identify the meaning of a word with an affix.
- Use knowledge of root words to determine the meaning of a word.

1.3. Use word reference materials to determine the meaning of words and phrases.

- Use an entry from a word reference to determine word meaning and pronunciation.

## **2. Understand text.**

2.1. Demonstrate understanding of literal meaning by identifying stated information in literary text.

- Identify stated information about story elements.

2.2. Demonstrate understanding of literal meaning by identifying stated information in informational text.

- Identify stated information about main ideas and supporting details.
- Identify stated information provided through text features.

2.3. Demonstrate understanding of explicitly stated sequence of events in literary and informational text.

- Identify first, next, and last events.
- Follow steps in a process.

## **3. Analyze text.**

3.1. Analyze literary text.

- Make inferences about story elements.
- Summarize important ideas and events.
- Analyze stated or implied theme, message, or main idea.
- Draw conclusions.
- Identify purpose.
- Make inferences based on text features or visuals.

3.2. Analyze informational text.

- Identify implied main ideas and supporting details.
- Identify implied relationships (such as cause/effect and compare/contrast).
- Summarize information.
- Identify purpose.
- Make inferences based on text features.
- Make inferences based on visual information.
- Make inferences about text structure.

- Make inferences about the author's point of view.

**3.3. Analyze author's use of language in literary and informational text.**

- Analyze the use of literary devices.
- Recognize and distinguish among genres.
- Make inferences about the author's tone.
- Make inferences about the author's style.

**4. Evaluate and extend text.**

**4.1. Evaluate and extend literary text.**

- Extend themes and concepts to other situations.
- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.

**4.2. Evaluate and extend informational text.**

- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.
- Distinguish between facts and opinions.
- Evaluate the accuracy, currency, and credibility of information.

**4.3. Evaluate and extend the author's use of language in literary and informational text.**

- Evaluate the author's word choice and use of language.

## **Reading Depth of Knowledge**

These depth of knowledge levels are intended to reflect the level of cognitive demand placed on students by test items. As the level of cognitive demand increases, so does the mental effort and integration of information required to answer a test item successfully. Each level represents important cognitive skills, and each level requires the use of cognitive skills in lower levels. For example, a student who is asked to make connections between two texts (level 4) would also need to recall pertinent details from the texts (level 1), understand stated information in the texts (level 2), and make inferences and draw conclusions about each text (level 3). The levels assume grade-appropriate text, vocabulary, and tasks. Test items should represent a range of depth of knowledge levels, and items within each level may represent a range of difficulty as indicated by percentage of students who answered the item correctly or scale score location.

### **Level 1: Recognizing and Recalling**

Students demonstrate a grade-appropriate ability to recognize or recall basic facts, terms, or definitions. For example, a student might be asked to identify an explicitly stated main idea in a text.

### **Level 2: Using Fundamental Concepts and Procedures**

Students demonstrate a grade-appropriate ability to use basic facts, definitions, skills, or concepts. For example, a student might be asked to use information in a text to complete a graphic organizer.

### **Level 3: Concluding and Explaining**

Students demonstrate understanding of grade-appropriate text by using stated and implied information and text elements to draw conclusions. Students explain and convey ideas effectively. For example, a student might be asked to provide details and examples from a text to support a conclusion.

### **Level 4: Evaluating, Extending, and Making Connections**

Students demonstrate their knowledge of concepts when evaluating or interpreting grade-level text. Students make connections among texts, common experiences, and issues. For example, a student might be asked to evaluate an author's effectiveness in achieving an intended purpose.

# **Reading Rubric for Constructed-Response Items**

## **3 points**

- The response demonstrates *thorough understanding* of the reading concept embodied in the task.
- The response is *accurate, complete, insightful, and fulfills all the requirements* of the task.
- Necessary support and/or examples are included.
- Information is clearly *text-based*.

## **2 points**

- The response demonstrates *partial understanding* of the reading concept embodied in the task.
- The response is *accurate* and *fulfills most of the requirements* of the task.
- Necessary support and/or examples may not be complete or clearly text-based.

## **1 point**

- The response demonstrates *an incomplete understanding* of the reading concept embodied in the task.
- The response provides *some information that is text-based*, but does not fulfill the requirements of the task.
- Information provided is *too general* or *too simplistic*.
- Necessary support and/or examples may be incomplete or omitted.

## **0 points**

- The response demonstrates *no understanding* of the reading concept embodied in the task.
- The response is *inaccurate, confused, or irrelevant*.
- The student has *failed to respond to the task*.

# Reading Constructed-Response Item Scoring Guide

Forms: Public Release	Item #: 14	Item Type: BCR	TB Page #: 9	AB Page #: n/a
Reporting Category: Reading				
Objective: 4. Evaluates and Extends Text				Max Score Pts:
Subskill: 4.1. Evaluates and extends literary text				3
Descriptor: Makes predictions (i.e. if the text were extended )				

## Item Stem

Explain what might have happened if the old man had ignored the statues. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

## Responses should be evaluated according to the guidelines outlined below for each score point.

### 3 points

- The response **demonstrates a thorough understanding** of the reading concept embodied in the task by using text-based information to predict what might have happened if the old man had ignored the statues.
- The response **indicates understanding of the larger idea** of being rewarded for kindness or appreciating what one has.
- The student **clearly supports** the response with **highly relevant ideas and details** from the text. For example:
  - The statues rewarded the old man for the kindness he showed toward them. Giving his own hat to the sixth statue was especially kind. If he had ignored the statues, he and his wife probably would not have received bags of food for New Year's Day.
  - If the old man had not given his hats to the statues, he and his wife would probably have remained cold and hungry. But they still would have been thankful for what little they had. They showed this when they expressed thanks for the shelter of their home on the cold winter night.

### 2 points

- The response **demonstrates a partial understanding** of the passage and explains what might have happened if the old man had ignored the statues.
- The response **makes connections between relevant ideas in the text**, but may not indicate understanding of the larger idea of being rewarded for kindness or appreciating what one has.
- The student supports the response with **accurate details** from the text. For example:
  - If the old man had not given his hats to the statues, the couple probably would have remained cold and hungry.
  - The old man and his wife would not have received bags of food from the statues.

### 1 point

- The response **demonstrates an incomplete understanding** of the reading passage and does not fulfill all of the requirements of the task.
- The response refers to events in the passage but **does not make the connection** between the actions of the man and the actions of the statues.
- The student provides **limited or vague text-based details**. Text-based details may include ideas that are partial, too general, or too simplistic. For example:
  - They would have been hungry. (vague; who are "they"?)
  - The statues would be cold. (simplistic)

## Anchor Papers for Reading Constructed-Response Item

Explain what might have happened if the old man had ignored the statues. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

If the old man had ignored the statues they probably wouldn't have brought the 6 bags of rice, and wheat, fish and beans, and wine and steam paste cakes to the old man's house for being so kind. Then, the old man and his wife wouldn't have had any food for the New Year's feast, or the rest of the year like they do now.

### Score Point 3

>Response demonstrates a thorough understanding by using text-based information to predict what might have happened if the old man ignored the statues "they wouldn't have brought food" and clearly states the larger idea of being rewarded for kindness "being so kind"

>Student clearly supports the response with highly relevant ideas and details from the text "6 bags of rice and wheat....cakes," "no food for New Year's feast or rest of the year, like they do now"

Explain what might have happened if the old man had ignored the statues. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

If he had ignored the statues, supposedly as other villagers had. He and his wife would not have enjoyed New Year's Eve and they could starve because they wouldn't have any food. If he hadn't been so kind and generous he and his wife wouldn't be able to eat anything, they'd starve.

Score Point 3

- >Response demonstrates a thorough understanding by using text-based information to predict what might have happened if the old man ignored the statues "starve", and clearly states the larger idea of being rewarded for kindness "so kind and generous"
- >Student clearly supports the response with highly relevant ideas and details from the text "ignored as other villagers had," "enjoyed New Year's"

Explain what might have happened if the old man had ignored the statues. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

What might have happened if the old man ignored the statues would be that they would have the reed hats to keep until somebody bought them and they wouldn't have gotten food from the Jizo statues. Then, if they didn't sell the hats soon enough they could die of starvation.

Score Point 2

>Response demonstrates an understanding of what might have happened if the old man ignored the statues "die of starvation" but fails to clearly state the larger idea of being rewarded for kindness

>Student supports the response with accurate ideas from the text "would have the reed hats until somebody bought them," "no food from Jizo statues"

Explain what might have happened if the old man had ignored the statues. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

The statues wouldn't have come to life, and they wouldn't have gotten all of the food for their feast.

Score Point 2

- >Response demonstrates a partial understanding and explains what might have happened if the old man ignored the statues "wouldn't have gotten food"
- >Student makes connections between relevant ideas in the text, but does not indicate understanding of the larger idea of being rewarded for kindness
- >Response contains accurate details from the text "statues wouldn't have come to life," "food for their feast"

Explain what might have happened if the old man had ignored the statues. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

They would not have food for new years.

Score Point 1

- >Response demonstrates an incomplete understanding and does not fulfill all of the requirements of the task
- >Student uses text-based material to predict what might have happened if the old man had ignored the statues, but makes no connection between relevant ideas in the text, and does not indicate understanding of the larger idea of being rewarded for kindness
- >Response provides limited text-based detail "no food for New Year's"

Explain what might have happened if the old man had ignored the statues. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

The old man might not think  
he's good at making the hats, the  
statues were supportive.

Score Point 0

- >Response demonstrates no understanding of the reading concept embodied in the task
- >Response contains irrelevant text-based details "not good at making the hats," "statues were supportive"

Explain what might have happened if the old man had ignored the statues. Use details and examples from the passage to carefully support your answer. Write your answer on the lines below.

If the old man had ignored the statues he wouldn't have anything the statues are great love to help people.

Score Point 0

>Response contains text-based material, but with conclusions which are inaccurate "the man wouldn't have anything" and confused "statues are great love to help people"

# Mathematics

## Sample Directions for Administering the Mathematics Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, scratch paper, and the following manipulatives:*

- Ruler
- Calculator for Session 2  
(4-function calculator required; use of scientific calculator is student preference)

*NOTE: The use of a calculator is not allowed to solve the problems in Session 1.*

*Also required for the operational test, but not for this released item book:*

- Pattern blocks, 1 set

*Students' test books should be closed.*

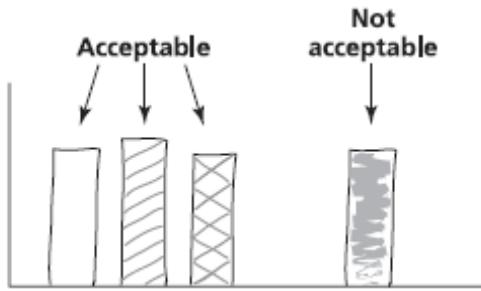
**SAY** Remember to use only a No. 2 pencil in this test. In Session 1, you will be answering multiple-choice questions and short answer questions. Multiple-choice questions are questions that ask you to choose the best answer. For the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

You may use scratch paper to work the multiple-choice questions, but remember to fill in the circle that goes with the answer you choose.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

For the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

Demonstrate by drawing the illustration below on the board.



**Now you will do Session 1 of the Mathematics test. Remember to read all of the directions and information in the test book. When you come to the word "STOP" at the bottom of the page, you have finished Session 1. You may go back and check your answers, but do not go on to Session 2 of the Mathematics test. When you have finished, sit quietly until everyone else has finished.**

**You will have 15 minutes to do Session 1. Make sure you stop at the end of Session 1.**

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** Please open your test book to Page 2.

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY** You may begin.

*Record the starting and stopping times for Session 1.*

Record the Starting Time:	Add 15 Minutes:  _____ + 15 _____	Record the Stopping Time:  _____
------------------------------	---	---

*Check to be sure that students are marking and writing their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY** Stop. Put down your pencil and close your test book. This is the end of Session 1.

*Pause to be sure that all students have closed their test books. Before proceeding to Session 2, make sure each student has a calculator.*

*During an actual test administration, students would be required to clear their calculators' memories immediately before and after each calculator-allowed session.*

**SAY** Now, open your test book to the page labeled “Mathematics Session 2.”

In Session 2, you will be answering multiple-choice questions and short-answer questions. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

Remember, for the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

You will have 25 minutes to do Session 2. Remember to read all of the directions and information in this part of the test book. When you come to the word “STOP” at the bottom of the page, you have finished Session 2.

You may go back over Session 2 to check your answers, but do not go back to Session 1. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** You may begin.

*Record the starting and stopping times for Session 2.*

Record the Starting Time:	Add 25 Minutes:	Record the Stopping Time:
_____	+ 25	_____

**SAY** Stop. This is the end of Session 2. Please close your test book.

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Mathematics Item Information

Item	Answer Key	Calculator Allowed	Objective/Subskill	Depth of Knowledge Level	2005–06 Item Statistics					Scale Score Location
					Format	A or 0	B or 1	C or 2	D	
1	D	No	Fb	2	SR	8%	6%	9%	*77%	459
2	A	No	Bb	2	SR	*68%	18%	11%	2%	473
3	A	No	Bb	2	SR	*65%	31%	2%	2%	496
4	B	No	Fb	2	SR	3%	*87%	5%	4%	437
5	C	No	Bb	2	SR	7%	10%	*75%	6%	457
6		No	Ba	2	A-BCR	17%	82%			434
6		No	Ab	3	B-BCR	13%	14%	72%		418
7	D	Yes	Fa	2	SR	7%	9%	6%	*77%	456
8	C	Yes	Ea	2	SR	10%	15%	*37%	36%	535
9	B	Yes	Fa	2	SR	8%	*46%	40%	4%	545
10	B	Yes	Db	2	SR	3%	*90%	3%	3%	388
11	C	Yes	Ca	2	SR	7%	3%	*80%	9%	443
12	C	Yes	Cc	2	SR	4%	4%	*90%	1%	405
13		Yes	Fb	2	A-BCR	47%	52%			486
13		Yes	Ad	3	B-BCR	22%	37%	39%		474
14	D	Yes	Ba	1	SR	29%	17%	5%	*47%	497
15	C	Yes	Da	1	SR	7%	9%	*72%	11%	452
16	B	Yes	Cb	2	SR	3%	*83%	1%	11%	445
17	B	Yes	Fa	3	SR	15%	*78%	4%	2%	457
18	B	Yes	Cb	1	SR	24%	*47%	16%	11%	521
19	C	Yes	Ea	2	SR	30%	18%	*33%	17%	560
20	C	Yes	Dc	3	SR	14%	2%	*70%	13%	470

Objective/Subskill and Depth of Knowledge Level information follows this table.

SR: selected response; A-BCR: brief constructed response, part A; B-BCR: brief constructed response, part B.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
444 and below	445–462	463–504	505 and above

# **Mathematics Objectives and Subskills**

## **Beginning of Grade 5**

---

### **How to use the Framework**

---

The mathematics assessment framework is an indication of the knowledge and skills that will be assessed on the November WKCE-CRT. ***This information does not replace your local curriculum.*** However, you may wish to ensure that your local curriculum includes the knowledge and skills described in the framework.

This section of the framework describes the types of content that students may encounter on the WKCE-CRT

The knowledge and skills to be assessed are organized into objectives, subskills, and descriptors as shown below. WKCE-CRT results will be reported by objectives and subskill.

- A. **Objective:** A group of cognitively related skills.
  - A.a. **Subskill:** A group of related knowledge and skills that ***may include, but is not limited to,*** the descriptors which follow.
    - **Descriptor:** an example of a specific knowledge or skill that may be assessed.

---

### **Objectives, Subskills, and Descriptors**

---

#### **Objective Mathematical Processes**

##### **A:**

Students will effectively use mathematical knowledge, skills, and strategies related to reasoning, communication, connections, representation, and problem solving.

##### **Descriptors, such as but not limited to**

- Use reasoning and logic to:
  - Perceive patterns
  - Identify relationships
  - Formulate questions
  - Pose problems
  - Make conjectures
  - Justify strategies
  - Test reasonableness of results
- Communicate mathematical ideas and reasoning using the vocabulary of mathematics in a variety of ways (e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models).
- Connect mathematics to the real world, as well as within mathematics.
- Create and use representations to organize, record, and communicate mathematical ideas.
- Solve and analyze routine and non-routine problems.

---

#### **Objective Number Operations and Relationships**

##### **B:**

#### **Subskill Concepts**

##### **B.a.:**

##### **Descriptors, such as but not limited to**

- Recognize and apply place-value concepts to whole numbers less than 1,000,000.
- Read, write, and represent numbers using words, numerals, pictures (e.g., base ten blocks), number lines, arrays, expanded forms ( $243=200+40+3$ ), and symbolic renaming (e.g.,  $243=250-7$ ). Compare and order numbers less than 10,000 represented in numbers, arrays, symbols ( $<$ ,  $>$ ,  $=$ ) and words.

- Use basic facts to determine the first ten multiples of 2-10 and determine factors for numbers up to 100.  
Recognize the divisibility potential of numbers (divisors of 2, 5, 10, 25)  
Count using whole numbers less than 10,000 and by any number 1-12 and ‘friendly numbers’ through 100 (e.g., 20, 25, etc.).
- Read, write, represent, count, compare, and order, and make change using a collection of coins and bills equal to and less than \$20.00.
- Read, write, and identify equivalent fractions ( $\frac{1}{4}$ s,  $\frac{1}{2}$ s,  $\frac{1}{8}$ s,  $\frac{1}{10}$ s,  $\frac{1}{16}$ s)

Represent fractions ( $\frac{1}{4}$ s,  $\frac{1}{2}$ s,  $\frac{1}{8}$ s,  $\frac{1}{10}$ s,  $\frac{1}{16}$ s) using numbers, pictures (e.g. drawings or base ten blocks), and number lines.

Order and compare fractions ( $\frac{1}{4}$ s,  $\frac{1}{2}$ s,  $\frac{1}{8}$ s,  $\frac{1}{10}$ s,  $\frac{1}{16}$ s) represented numerically or as models (including parts of a set and parts of a whole)

Rename improper fractions to mixed numbers.

**Subskill  
B.b.: Computation**

**Descriptors, such as but not limited to**

- Use all operations in everyday situations to solve single or multi-step word problems.
- Solve three-and four-digit addition and subtraction with regrouping; multiplication of two-digit by one-digit numbers; division with single-digit divisors and two-digit dividends and with two-step or mixed operation problems with single-digit numbers.
- Add and subtract decimals in the context of money.
- Solve problems using basic multiplication and division facts.
- Add and subtract fractions with like denominators.
- Estimate: multiplication of two-digit by one-digit problems, addition and subtraction of decimals using money, and division in context
- Determine reasonableness of answers.

**Objective  
C: Geometry**

**Subskill  
C.a.: Describe figures**

**Descriptors, such as but not limited to**

- Identify, describe, and compare properties of 2- and 3-dimensional figures, comparing sides, faces, vertices, and edges of regular figures including parallel and perpendicular lines and line segments.
- Determine the number of faces, edges, and vertices given an illustration of a 3-dimensional figure.

**Subskill  
C.b.: Spatial relationships and transformations**

**Descriptors, such as but not limited to**

- Use pattern blocks and dot paper (geoboards) to describe, model, and construct plane figures.

- Identify cubes, rectangular and triangular prisms, and rectangular and triangular pyramids from simple nets (flat patterns).
- Use slides, flips, and turns on figures. Identify congruent shapes using figures that have been manipulated by one or two motions (slides, flips and turns).
- Discern a shape with one line of symmetry.
- Identify and describe 3-dimensional figures from multiple perspectives.

**Subskill      Coordinate systems**

**C.c.:**

**Descriptors, such as but not limited to**

- Use simple 2-dimensional coordinate systems to identify or plot locations on maps and to represent points and simple figures with coordinates using letters and numbers, (e.g., (E, 3)).
- Identify and use relationships among figures (e.g., location, position and intersection).

**Objective      Measurement**

**D:**

**Subskill      Measurable attributes**

**D.a.:**

**Descriptors, such as but not limited to**

- Identify appropriate units to measure length, liquid capacity, volume, weight/mass, time, and temperature. Units include: inches, feet, yards, miles, millimeters, centimeters, meters, kilometers, ounces, cups quarts, gallons, liters, seconds, minutes, hours, days, months, years, ounces, pounds, grams, kilograms, and degrees Fahrenheit/Celsius.
- Compare attributes of length and weight by direct observation or when given actual measurements.
- Make measurement conversions within a system between units (e.g., feet and yards; inches and feet; quarts and gallons; meters and centimeters; minutes and hours; hours and days; months and years).

**Subskill      Direct measurement**

**D.b.:**

**Descriptors, such as but not limited to**

- Read, interpret, and use measuring instruments to determine the measurement of objects with non- standard and standard units to the nearest  $\frac{1}{4}$ - inch or centimeter.
- Read thermometers to the nearest five degrees F/C and read a scale to the nearest ounce or five grams.
- Translate time on an analog clock to a digital clock and vice versa.
- Determine and compare elapsed time in problem-solving situations.

**Subskill      Indirect Measurement**

**D.c.:**

**Descriptors, such as but not limited to**

- Estimate measurement using U.S. customary and metric measurements.
- Determine perimeter and area of regular shapes and the area of plane rectangular shapes. Determine perimeter and area of irregular shapes when given a reference tool such as a grid.

**Objective      Statistics and Probability**

**E:**

**Subskill      Data analysis and statistics**

**E.a.:**

**Descriptors, such as but not limited to**

- Formulate questions to collect, organize, and display data.
- Collect, organize, and display data in appropriate graphs or charts.
- Draw reasonable conclusions based on contextual data.
- Use data to predict outcomes or trends from graph or table.
- Read and interpret information from single bar graphs, line plots, picture graphs, and Venn diagrams.
- Describe a given set of data of seven items/numbers or fewer using the terms range, mode and median in problems with and without context.

**Subskill      Probability**  
**E.b.:**

**Descriptors, such as but not limited to**

- Determine if future events are more, less, or equally likely, impossible or certain to occur.
- Choose or design an event that is fair or unfair.
- Predict the outcomes of a simple event using words to describe probability and test predictions using data from a variety of sources.
- Describe and determine the number of combinations for choosing 2 out of 4 items (e.g., What are the possible combinations when selecting 2 items from a menu of 4 items (chips, cookie, pizza, banana, etc.))?

**Objective      Algebraic Relationships**

**F:**

**Subskill      Patterns, relations and functions**

**F.a.:**

**Descriptors, such as but not limited to**

- Recognize, extend, describe, create, and replicate a variety of patterns including attribute, numeric, and geometric patterns.
- Represent patterns and relationships with pictures, tables, and charts.
- Describe a rule that explains a functional relationship or pattern using addition, subtraction, or multiplication rules.
- Determine a future event in a pattern up to the eighth item when given the first five.

**Subskill      Expressions, equations and inequalities**

**F.b.:**

**Descriptors, such as but not limited to**

- Solve simple one-step open sentences involving all operations in context.
- Demonstrate a basic understanding of equality and inequality using symbols ( $<$ ,  $>$ ,  $=$ ) with all operations.
- Solve simple one-step open sentences including missing factor in problems with and without context (e.g., “box” or letter variable and whole number coefficients).
- Represent problem situations with one-step equations involving multiplication and division with simple open sentences.
- Represent problem situations with one-step equations or expressions using one of the four operations.

**Subskill      Properties**

**F.c.:**

**Descriptors, such as but not limited to**

- Use the commutative property of multiplication with positive single digits.
- Use the inverse relationship of division and multiplication with single digit, whole numbers.
- Demonstrate understanding of order of operations by solving two-step open sentences involving all operations.

## **Mathematics Depth of Knowledge**

The representative examples for the following depth of knowledge categories are intended to reflect student performance expectations with regard to the level of mental effort and amount of information integrated by the student. Items are targeted at one of four levels of cognitive demand. Each level of demand is represented by items with a range of difficulty, as indicated by the percentage of students who answered the item correctly or by scale score value. Assuming grade-appropriate vocabulary and test items, these levels are viable and useful across all grades.

### **Level 1: Recognizing and Recalling**

Students recognize and recall basic facts, terms, concepts, and definitions of the content and processes of mathematics. For example, students may be required to do computation with whole numbers, fractions, decimals, and integers.

### **Level 2: Using Fundamental Concepts and Procedures**

Students describe or apply basic facts, terms, rules, concepts and definitions of the content and processes of mathematics.

### **Level 3: Concluding and Explaining**

Students demonstrate an understanding of complex ideas, draw conclusions based on this understanding, and communicate ideas and conclusions effectively.

### **Level 4: Evaluating, Extending, and Making Connections**

Students synthesize skills and techniques from various concepts of mathematics to solve multifaceted problems, and justify conclusions using mathematical definitions, properties, and principles. For example, students may be required to support mathematical arguments with definitions, properties, and principles.

## **Mathematics Rubric for Constructed-Response Items**

Step B of the constructed-response items is scored using a generic rubric.

- |                 |   |
|-----------------|---|
| <b>2 points</b> | The student demonstrates a thorough understanding of the mathematical concepts and/or procedures represented in the problem. The student uses appropriate mathematical procedures and/or concepts to explain or justify the response to Step A, and provides clear and complete explanations and interpretations containing words, calculations, or symbols, unless otherwise specified in the item stem.<br><br>The response may contain minor flaws that do <u>not</u> detract from the demonstration of a thorough understanding of the problem. |
| <b>1 point</b>  | The student demonstrates only a partial understanding of the mathematical concepts and/or procedures represented in the problem. The response lacks an essential understanding of the underlying mathematical concepts used to provide the response to Step A.<br><br>The response contains errors related to the misinterpretation of important aspects of the problem, misuse of mathematical procedures and/or concepts, or misinterpretation of results.  |
| <b>0 points</b> | The student provides a completely incorrect explanation or justification, or one that cannot be interpreted, or no response at all.   |

## Mathematics Constructed-Response Item Scoring Guides

Form: Public Release	Item #: 6	Item Type: BCR	TB Page #: 5	AB Page #: n/a
Objective for Step A: B. Number Operations & Relationships				Max Score Pts:
Subskill: B.a. Number Concepts				Step A: 0–1
Objective for Step B: A. Mathematical Processes				Step B: 0–2

### **Step A: Response is limited to correct answer or range below**

\$4.25

### **Step B: Responses may include, but may not be limited to, the Answer Cues below**

**2 points**      The student indicates a correct and mathematically detailed process for determining change (e.g.  $\$5.00 - \$0.75 = \$4.25$ )

**1 point**      One of the following applies:

- The student indicates a correct but incomplete process for determining the amount of change (e.g. “I subtracted”)
- The student indicates a correct and complete process, but makes a computational error. (See Note below.)

**0 points**      The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.

Note: If an arithmetic error leads to loss of credit for Step A, and the process is otherwise correct, award full credit for Step B.

Form: Public Release	Item #: 13	Item Type: BCR	TB Page #: 10	AB Page #: n/a
Objective for Step A: F. Algebraic Relationships			Max Score Pts:	
Subskill: F.b. Expressions, Equations, and Inequalities			Step A: 0–1	
Objective for Step B: A. Mathematical Processes			Step B: 0–2	

### Step A: Response is limited to correct answer or range below

Either of the following:

- $6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 = 54$
- $9 \times 6 = 54$

### Step B: Responses may include, but may not be limited to, the Answer Cues below

**2 points**     Both of the following tasks are accomplished:

- The student uses addition or multiplication or division in an appropriate way. (See Note 1 below.)
- The student either uses words to explain the terms in the number sentence, or gives an alternative mathematical representation. (See Note 2 below.)

**1 point**     One of the following applies:

- The student accomplishes only the first of the above tasks.
- The student accomplishes both of the above tasks, but with a computational error. (See Note 3 below.)

**0 points**     The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.

Note 1: Give 1 point credit even if the student only repeats the number sentence.

Note 2: Give full credit to a response including a drawing of nine circles divided into 6 pieces each, or for one that uses repeated addition to explain multiplication.

Note 3: If an arithmetic error leads to loss of credit for Step A, and the process is otherwise correct, award full credit for Step B.

## Anchor Papers for Mathematics Constructed-Response Items

### Item 6

Kathy gave the cashier \$5.00 for a soda that cost \$0.75.

**Step A**

How much change did Kathy receive?

4.25

Answer: \$ \_\_\_\_\_

**Step B**

Explain how you found the amount of change that Kathy received. Use words and/or numbers in your answer.

I subtracted \$0.75 from \$5.00 and  
I got \$4.25.

---

---

Step A

Score Point 1

> Correct answer

Step B

Score Point 2

> Correct and complete response:

demonstrates subtraction verbally/numerically

**Item 6**

Kathy gave the cashier \$5.00 for a soda that cost \$0.75.

**Step A**

How much change did Kathy receive?

Answer: \$4.25

**Step B**

Explain how you found the amount of change that Kathy received. Use words and/or numbers in your answer.

$$\begin{array}{r} \$5.00 \\ - \$0.75 \\ \hline \$4.25 \end{array}$$

## Step A

Score Point 1

&gt; Correct answer

## Step B

Score Point 2

> Correct and complete response:  
demonstrates subtraction numerically

### Item 6

Kathy gave the cashier \$5.00 for a soda that cost \$0.75.

#### Step A

How much change did Kathy receive?

Answer: \$ 4.25

#### Step B

Explain how you found the amount of change that Kathy received. Use words and/or numbers in your answer.

You have to minus them.

---

---

---

Step A

Score Point 1

> Correct answer

Step B

Score Point 1

> Correct process: "minus"

< [incomplete response: "them" is ambiguous]

**Item 6**

Kathy gave the cashier \$5.00 for a soda that cost \$0.75.

**Step A**

How much change did Kathy receive?

Answer: \$ 4.25

**Step B**

Explain how you found the amount of change that Kathy received. Use words and/or numbers in your answer.

I got the answer from paper

---

---

---

## Step A

Score Point 1

&gt; Correct answer

## Step B

Score Point 0

&lt; [inadequate process]

**Item 6**

Kathy gave the cashier \$5.00 for a soda that cost \$0.75.

**Step A**

How much change did Kathy receive?

Answer: \$ 5.15

**Step B**

Explain how you found the amount of change that Kathy received. Use words and/or numbers in your answer.

I found the amount of change  
that she received by taking  
\$5.00 and minusing \$0.75.

## Step A

Score Point 0

&lt; [incorrect answer]

## Step B

Score Point 2

> Correct and complete response using subtraction:  
"taking \$5.00 and minusing \$0.75"

**Item 6**

Kathy gave the cashier \$5.00 for a soda that cost \$0.75.

**Step A**

How much change did Kathy receive?

Answer: \$ 3.75

**Step B**

Explain how you found the amount of change that Kathy received. Use words and/or numbers in your answer.

I did it in my head by subtraction.

## Step A

Score Point 0

&lt; [incorrect answer]

## Step B

Score Point 1

&gt; Correct method: subtraction

&lt; [incomplete response]

**Item 6**

Kathy gave the cashier \$5.00 for a soda that cost \$0.75.

**Step A**

How much change did Kathy receive?

Answer: \$ 5.75

**Step B**

Explain how you found the amount of change that Kathy received. Use words and/or numbers in your answer.

because I add the numbers.

---

---

---

Step A

Score Point 0

< [incorrect answer]

Step B

Score Point 0

< [incorrect process: "I add..."]

### Item 13

Mr. Lee's class made a fruit salad. They cut 9 apples into 6 pieces each.

#### Step A

Write a number sentence that shows the total number of apple pieces that Mr. Lee's class used.

Answer:  $9 \times 6 = 54$

#### Step B

Explain why the number sentence you wrote shows the number of apple pieces Mr. Lee's class used. Use words and/or numbers in your answer.

If there's 9 apples and each is cut into 6,  
you need to know how many slices. You could  
do it another way:  $6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 = 54$ .

Step A

Score Point 1

Step B

Score Point 2

- > The student understands the process of repeated addition
- > The student has correctly used a second number sentence to explain the first number sentence

**Item 13**

Mr. Lee's class made a fruit salad. They cut 9 apples into 6 pieces each.

**Step A**

Write a number sentence that shows the total number of apple pieces that Mr. Lee's class used.

Answer:  $9 \times 6 = 54$

**Step B**

Explain why the number sentence you wrote shows the number of apple pieces Mr. Lee's class used. Use words and/or numbers in your answer.

$9 \times 6 = 54$

---

---

---

Step A

Score Point 1

Step B

Score Point 1

&gt; The student shows understanding of multiplication

(repeats number sentence)

&lt; [the student does not explain the number sentence]

### Item 13

Mr. Lee's class made a fruit salad. They cut 9 apples into 6 pieces each.

#### Step A

Write a number sentence that shows the total number of apple pieces that Mr. Lee's class used.

Answer:  $9 \times 6 = 54$

#### Step B

Explain why the number sentence you wrote shows the number of apple pieces Mr. Lee's class used. Use words and/or numbers in your answer.

Because there if you ÷ it  
will take the answer.

Step A

Score Point 1

Step B

Score Point 0

< [the student doesn't demonstrate understanding of multiplication or division]

< [the student doesn't explain the terms in the number sentence]

### Item 13

Mr. Lee's class made a fruit salad. They cut 9 apples into 6 pieces each.

#### Step A

Write a number sentence that shows the total number of apple pieces that Mr. Lee's class used.

Answer: 54

#### Step B

Explain why the number sentence you wrote shows the number of apple pieces Mr. Lee's class used. Use words and/or numbers in your answer.

Because there were 9 apples and  
6 pieces from each apple so I did  
 $6 \times 9 = 54$

Step A

Score Point 0

Step B

Score Point 2

- > The student understands the process of multiplication
- > The student uses words to explain the terms in the number sentence (given in Step B)

### Item 13

Mr. Lee's class made a fruit salad. They cut 9 apples into 6 pieces each.

#### Step A

Write a number sentence that shows the total number of apple pieces that Mr. Lee's class used.

54

Answer: \_\_\_\_\_

#### Step B

Explain why the number sentence you wrote shows the number of apple pieces Mr. Lee's class used. Use words and/or numbers in your answer.

$$9 \times 6 = 54$$

Step A  
Score Point 0

Step B  
Score Point 1  
> The student shows understanding of multiplication  
(repeats number sentence)  
< [the student does not explain the number sentence]

### Item 13

Mr. Lee's class made a fruit salad. They cut 9 apples into 6 pieces each.

#### Step A

Write a number sentence that shows the total number of apple pieces that Mr. Lee's class used.

Answer:  $9+6=15$

#### Step B

Explain why the number sentence you wrote shows the number of apple pieces Mr. Lee's class used. Use words and/or numbers in your answer.

I got my answer by adding  $9+6=15$ .

---

---

---

Step A

Score Point 0

Step B

Score Point 0

< [the student doesn't demonstrate appropriate understanding]

< [the student doesn't explain the terms in the number sentence]

**Guide to Grade 5 Released Item Books  
In READING and MATHEMATICS**

Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

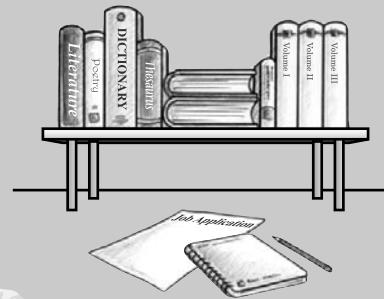
**Wisconsin Knowledge and Concepts Examinations**  
**Criterion-Referenced Test**

**Released Item Book**

**Reading**

**Grade**

**6**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.

**Acknowledgments** CTB is indebted to the following for permission to use material in this book:

All trademarks and trade names found in this publication are the property of their respective companies and are not associated with the publisher of this publication.

"Philippe and the Blue Parrot" by Nancy White Carlstrom, copyright © 1990 by Nancy White Carlstrom; First appeared in *Light: Stories of a Small Kindness*, published by Little, Brown & Co. Reprinted by permission of Curtis Brown, Ltd.

"It Bounces! It Floats! It's the Cranberry!" by Caroline Mott Ford, from *Children's Digest Magazine*'s October-November 1998 issue, text copyright © 1998 by Children's Better Health Institute, Benjamin Franklin Literary & Medical Society, Inc., Indianapolis, IN. Used by permission.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### **What are released items?**

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### **How do I use this book?**

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

## Directions

Read the passage “Philippe and the Blue Parrot.” Then answer Numbers 1 through 9.

# Philippe and the Blue Parrot

by Nancy White Carlstrom

When Philippe was a young boy, his mother told him a story about a beautiful blue parrot who stole a golden earring from the sun.

“Watch for it, Philippe, my boy,” she said.  
“And when you find that golden earring, we will never go hungry again.”

And so Philippe kept his head down as he walked to school through the streets of Port-au-Prince, always looking for a glint of gold.

Years passed. Philippe did well in his studies. He was especially good at art. When Philippe was thirteen, he decided to make a birthday gift for his mother.

He took his art supplies to the park, and there, leaning the canvas against a bench, he painted *Blue Parrot and the Sun*. As he waited for the paint to dry, he studied the blue smudges between his fingers and a drop of yellow shining on his black wrist.

“Is that for sale?”

Philippe was startled by the question. He had not heard the tourist walk up to him. The woman squinted her eyes at the bright colors and asked again.

“Is that for sale?” Before Philippe could answer, she added, “I’ll pay twenty-five dollars for it.”



Twenty-five dollars! That was more than Philippe had earned in his whole life. It would take a long time to make that much money, even if he could get a job. What wonderful things he could buy his mother.

And so Philippe sold *Blue Parrot and the Sun*.

Years passed. Philippe's paintings were sold in a Port-au-Prince gallery. Many tourists liked his work and bought the canvases.

Every time Philippe painted a *Blue Parrot and the Sun* for his mother, the gallery owner had a buyer. The price went up and Philippe could not resist. But every time he sold a Blue Parrot, he put aside some money for his mother.

Many years passed. Now Philippe's paintings could not be afforded by most tourists. His work hung in galleries and museums in Europe and the United States.

One day, he sat in his fine studio, ready to begin work on another *Blue Parrot and the Sun*. A journalist who had come to interview him stood nearby.

"Monsieur, your *Blue Parrot and the Sun* paintings are now very famous. Some critics say that they have a life and power that your other works lack. Why is that? Do you know?"

"Oh yes, I know," Philippe replied slowly. "It is because I paint each *Blue Parrot* for my mother."

"And how much will this new one sell for?" the journalist asked.  
"Thousands, I suppose?"

"Oh, this painting will not be for sale," Philippe answered. He knew he had said that before, but this time, he really meant it.

And he added: "I found the golden earring many years ago. Now it's time to give it back."

• • • • • • • • •

There is a story the art collectors tell about a famous painting called *Blue Parrot and the Sun*. Oh, there are many, but the one to hunt for has a small golden earring hidden in the picture. Yes, that is the one worth a fortune. Some say it hangs on the wall of a simple house in the Haitian countryside. Others are not so sure. It could be anywhere.



**1** Why did Philippe paint the first *Blue Parrot and the Sun*?

- (A) A gallery requested the painting.
- (B) He painted it for a school project.
- (C) He wanted to earn money for food.
- (D) He planned to give it away as a gift.

**2** What does the golden earring represent?

- (A) family
- (B) wealth
- (C) a mystery
- (D) a painting

**3** What happens right after Philippe finishes his first *Blue Parrot* painting?

- (A) A journalist interviews him.
- (B) A tourist asks to buy the painting.
- (C) He gives the painting to his mother.
- (D) He begins working on another painting.

**4** Which of these words best describes Philippe?

- (A) determined
- (B) lazy
- (C) powerful
- (D) selfish

**5** Where does the conclusion of this passage take place?

- (A) at a park
- (B) in a studio
- (C) in a gallery
- (D) at a museum

**6** What would most likely happen if Philippe sold his last *Blue Parrot and the Sun* painting?

- (A) He would begin painting another.
- (B) His mother would become upset with him.
- (C) His work would become even more famous.
- (D) The gallery would stop selling his paintings.

**7** Who most likely received Philippe's *Blue Parrot and the Sun* with the hidden golden earring?

- (A) a museum
- (B) his mother
- (C) a lucky tourist
- (D) an art collector

**8** Read these sentences from the passage.

"I found the golden earring many years ago.  
Now it's time to give it back."

Philippe most likely plans to give the golden earring back by

- (A) giving his mother a special gift
- (B) opening a new art studio in his hometown
- (C) making his paintings affordable to everyone
- (D) sharing the blue parrot story with the journalist

**9** Read this sentence from the passage.

And so Philippe kept his head down as he walked to school through the streets of Port-au-Prince, always looking for a glint of gold.

What does the word glint mean in this sentence?

- (A) blob
- (B) picture
- (C) sparkle
- (D) treasure



**Directions**

Read the passage “It Bounces, It Floats.” Then answer Numbers 10 through 19.

# It Bounces, It Floats

by Caroline Mott Ford



Do they bounce? You may think that's a silly question to ask about cranberries. Farmers think it's not silly. Good cranberries bounce; bad ones don't.

One of the early settlers of our country discovered this himself. According to legend, Peg Leg John, a New Jersey farmer, was packing cranberries in his barn. One box fell over. John noticed that all the spoiled and dried-out cranberries just remained where they fell. The fresh, ripe ones bounced.

Old Peg Leg John's method of sorting berries is still used by packers today. Each cranberry harvested must bounce over several wooden barriers. The high jumpers, able to leap over barriers in a single bound, make it to the finish line. These are the ones we want on our table for Thanksgiving.

Cranberry plants trail along the ground like a low-growing evergreen. They are a productive crop in Massachusetts, Wisconsin, Oregon, Washington, and New Jersey. In the New Jersey Pine Barrens, they often grow wild. There the bright red berries are nicknamed the “rubies of the pines.”

These amazing berries also float. Today, many growers harvest their crops by flooding their fields or cranberry bogs. A machine much like a paddle boat beats the plants, loosening the fruit. The ripe cranberries float to the surface and are collected

in a process called rafting. During rafting, the cranberry-gathering crew pushes the floating berries with long wooden tools to the end of the bog. The berries are gathered up and placed in boxes.

The flower of the cranberry plant looks like the beak of a crane. This is why the Pilgrims referred to it as a crane berry. Later, the common name became cranberry.

We can't be sure of the menu for the first Thanksgiving Day, but it's almost certain that cranberries were served. The fruit was an important food to the American Indians. They called it sassamanesh or ibimi. It was used in pemmican, a dried trail food. The Indians also used the tart scarlet berries in making red dye and medicines.

The early settlers stored barrels of the berries on ships for long ocean voyages. The high vitamin C content helped prevent scurvy<sup>1</sup> among the sailors.

Today, cranberries are used in juice as well as sauce. Cranberry juice is often mixed with other, sweeter fruit juices for a healthful, good-tasting drink.

Cranberries—they're truly super berries!

<sup>1</sup>scurvy: a disease that is caused by lack of vitamin C

**10** This passage is mostly about how cranberries

- (A) are used in recipes
- (B) are used by sailors
- (C) are nutritious and tasty
- (D) are grown and harvested

**11** According to the passage, why did the early settlers pack cranberries for their voyages?

- (A) to prevent scurvy
- (B) to eat as trail food
- (C) to squeeze into juice
- (D) to make clothing dye

**12** The author most likely wrote this passage in order to

- (A) describe how cranberries are packed in boxes
- (B) explain the health benefits of eating cranberries
- (C) encourage more people to drink cranberry juice
- (D) provide information about the history of cranberries

**13** Cranberries are nicknamed “rubies of the pines” because they

- (A) are bright red in color
- (B) grow in evergreen trees
- (C) are worth a lot of money
- (D) grow wild in some places

**14** According to the passage, what is the first step in harvesting cranberries?

- (A) placing the berries in boxes
- (B) flooding the cranberry bogs
- (C) beating the plants to loosen the fruit
- (D) pushing the berries with a wooden tool

**15** Which of these sentences from the passage expresses an opinion?

- (A) Old Peg Leg John’s method of sorting berries is still used by packers today.
- (B) The berries are gathered up and placed in boxes.
- (C) The flower of the cranberry plant looks like the beak of a crane.
- (D) The early settlers stored barrels of the berries on ships for long ocean voyages.



**16** In this passage, the cranberry is compared to a

- (A) bog
- (B) dye
- (C) jewel
- (D) vitamin

**17** The author most likely included the last sentence in the passage in order to

- (A) create a picture of a cranberry
- (B) clarify how cranberries are used
- (C) show enthusiasm for cranberries
- (D) describe the taste of cranberry juice

**18** This passage is an example of nonfiction because it

- (A) tells a story
- (B) includes illustrations
- (C) states facts about a topic
- (D) has been retold many times

**19**

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

**STOP** 

# Reading Grade 6

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

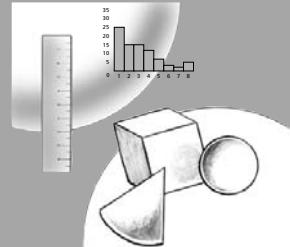
**Wisconsin Knowledge and Concepts Examinations  
Criterion-Referenced Test**

**Released Item Book**

**Mathematics**

**Grade**

**6**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### **What are released items?**

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### **How do I use this book?**

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

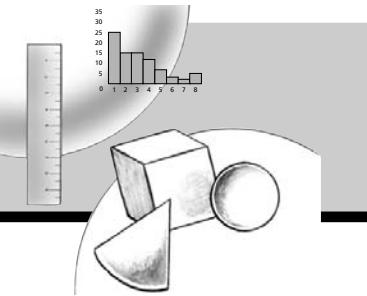
- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

# Mathematics

## Session 1



- 1** Look at the equation below.

$$72 \div \boxed{\quad} - 3 = 6$$

What value belongs in the box?

- (A) 8
- (B) 9
- (C) 12
- (D) 24

- 2** Which of these is equal to 4,035?

- (A)  $400 + 30 + 5$
- (B)  $4,000 + 30 + 5$
- (C)  $4,000 + 300 + 5$
- (D)  $4,000 + 300 + 50$

- 3**  $(6 + 3) \times 2 =$

- (A) 11
- (B) 12
- (C) 18
- (D) 36

- 4** Cameron baby-sits his brother 4 hours every Saturday. If Cameron baby-sits his brother on 12 different Saturdays, how many total hours does he baby-sit?

- (A) 3 hours
- (B) 16 hours
- (C) 46 hours
- (D) 48 hours

- 5**

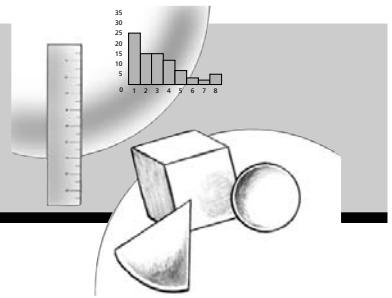
$$\begin{array}{r} 493 \\ - 326 \\ \hline \end{array}$$

- (A) 163
- (B) 167
- (C) 173
- (D) 177



# Mathematics

## Session 2



- 6** Look at the equation below.

$$4 \times (\square + 2) = 4 \times 12$$

What is the value of the missing number?

- (A) 3
- (B) 6
- (C) 10
- (D) 12

- 7** Look at the pattern below.

$$1, 5, 9, 13, \dots$$

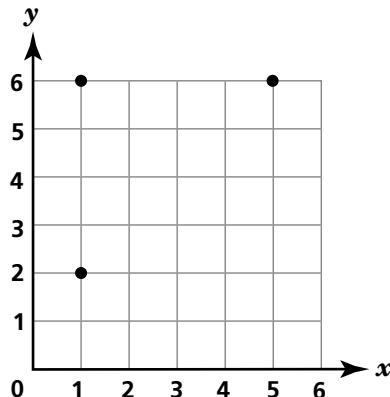
What is the eighth number in this pattern?

- (A) 17
- (B) 23
- (C) 29
- (D) 31

- 8** A tree is 66 inches in height. What is the height of the tree in feet?

- (A)  $5\frac{1}{2}$  feet
- (B)  $5\frac{3}{4}$  feet
- (C)  $6\frac{1}{4}$  feet
- (D)  $6\frac{1}{2}$  feet

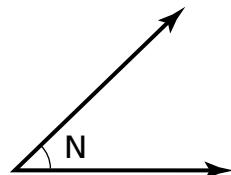
- 9** Look at the grid below. The location of three corners of a square are shown.



Which ordered pair represents the fourth point of the square?

- (A) (2, 5)
- (B) (5, 2)
- (C) (4, 0)
- (D) (0, 4)

- 10** Look at angle N shown below.



Which of these best describes angle N?

- (A) right
- (B) acute
- (C) obtuse
- (D) scalene

**11**

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

**Step A**

How much change did Geoffrey receive?

Answer: \$ \_\_\_\_\_

**Step B**

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

---

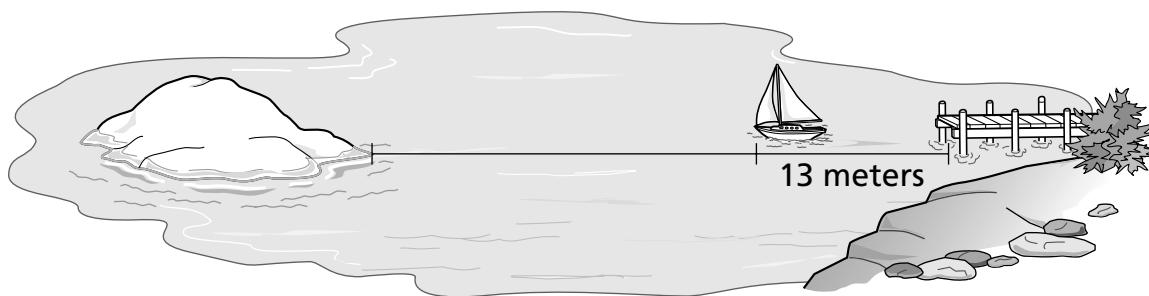
---

---

---

---

- 12** The boat below is 13 meters away from the dock.



About how many more meters does the boat need to travel to reach the island?

- (A) 13 meters
- (B) 26 meters
- (C) 39 meters
- (D) 52 meters

- 13** Bethany is using a spinner that has 9 equally spaced sections. There are 5 sections that have a star on them. The remaining sections do not have a star on them. When Bethany spins the arrow, what is the probability that it will not land on a star?

- (A)  $\frac{4}{5}$
- (B)  $\frac{4}{9}$
- (C)  $\frac{5}{4}$
- (D)  $\frac{5}{9}$

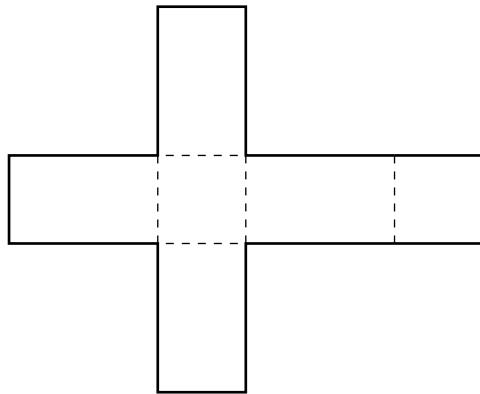
- 14** Look at the set of numbers below.

0 5 2 3 7 9 2

What is the mode of this set of numbers?

- (A) 2
- (B) 3
- (C) 4
- (D) 9

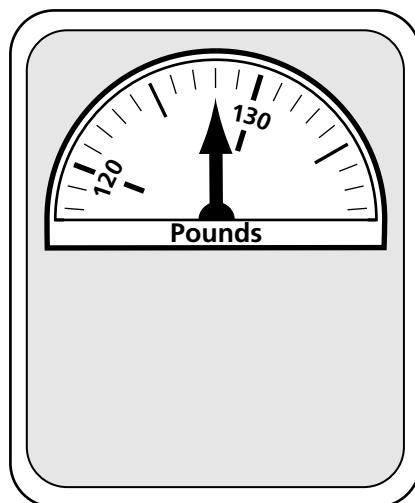
- 15** Look at the net (flat pattern) below.



If the net (flat pattern) is folded, which geometric shape is created?

- (A) rectangular prism
- (B) cube
- (C) rectangular pyramid
- (D) triangular prism

- 16** Look at the scale below.



What is the weight shown on the scale?

- (A) 123 pounds
- (B) 125 pounds
- (C) 128 pounds
- (D) 130 pounds

**17**

**Step A**

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.

**Step B**

Explain how your line shows the symmetry of your shape.

---

---

---

---

---



**18**

The table below shows the amount of rain that fell during each month of 2002 in Livermore, California.

### Rainfall in Livermore in 2002

Month	Rainfall (in inches)
January	0.72
February	0.62
March	1.65
April	0.16
May	0.68
June	0.00
July	0.00
August	0.00
September	0.00
October	0.00
November	2.65
December	7.01

What was the mean amount of monthly rainfall, rounded to the nearest hundredth of an inch, in Livermore in 2002?

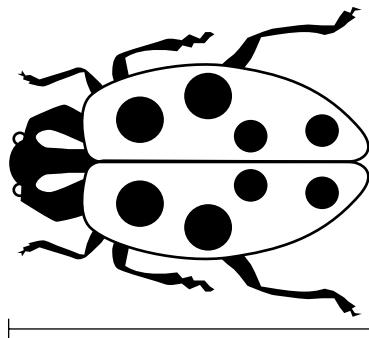
- (A) 0.00 inches
- (B) 0.39 inches
- (C) 1.12 inches
- (D) 1.93 inches

**19**



Use the centimeter side of your ruler to help you solve this problem.

Look at the picture of the bug below.



What is the length of the bug?

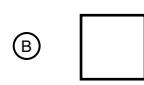
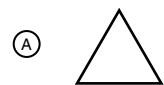
- (A) 4.5 centimeters
- (B) 4.8 centimeters
- (C) 5.0 centimeters
- (D) 5.2 centimeters

**20**

Look at the pattern of shapes below.



If the pattern continues, what will be the 7th shape?



***STOP***

# Mathematics Grade 6

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

**Wisconsin Knowledge and Concepts Examinations** **WI**  
***Criterion-Referenced Test***

# Guide to Grade 6

Released Item Books  
In READING and MATHEMATICS



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.

## **Guide to Grade 6 Released Item Books in Reading and Mathematics**

This document contains information for using, scoring, and interpreting the released items in reading and mathematics.

August 2006  
(Document Version 1.0, August 28, 2006)

Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction.

## **Table of Contents**

<b>Introduction</b>	<b>1</b>
<b>Reading</b>	<b>2</b>
Reading Item Information	4
Reading Objectives and Subskills	5
Reading Depth of Knowledge	8
Reading Rubric for Constructed-Response Items	9
Reading Constructed-Response Item Scoring Guide	10
Anchor Papers for Reading Constructed-Response Item	11
<b>Mathematics</b>	<b>20</b>
Mathematics Item Information	24
Mathematics Objectives and Subskills	25
Mathematics Depth of Knowledge	29
Mathematics Rubric for Constructed-Response Items	30
Mathematics Constructed-Response Item Scoring Guides	31
Anchor Papers for Mathematics Constructed-Response Items	33

## **Guide to Released Item Books**

Please help us improve this document. We welcome your comments and questions.  
Please contact us at:

Wisconsin Department of Public Instruction  
Office of Educational Accountability  
125 S. Webster Street, P.O. Box 7841  
Madison, WI 53707-7841

Toll-free: (800) 441-4563

Fax: (608) 266-8770

<http://www.dpi.wi.gov/oea/>

# Introduction

## What are released items?

The items in the Reading and Mathematics released item books are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in the released item books illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

## How do I use the released item books and this guide?

### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

This guide provides instructions for administering the released item books as practice tests and information for scoring the items, including scoring guides and anchor papers for the constructed-response items. The item information tables identify the answer key, what each item measures, depth of knowledge, and item difficulty. Item difficulty is presented as both the percentage of students who answered the item correctly and the scale score location of the item. The item's scale score location describes where the item functions along the ability scale. Items with higher scale score locations are considered more difficult than items with lower scale score locations. Students with scale scores above the scale score location of the item would have a greater probability of answering the item correctly than students with scale scores below the item's scale score location.

### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. Note that a student's score on the practice test cannot be converted to a total scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

## Reading

### Sample Directions for Administering the Reading Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, and scratch paper. Students' test books should be closed.*

**SAY** In this test, you will read some passages and answer both multiple-choice questions and short-answer questions about those passages. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Write your answer on the lines in your test book. You may also write in the space under the lines, but your answer must stay inside the boxed area. Answers or parts of answers written outside the boxed area will not be scored. You may use scratch paper to help you plan your answer, but remember to write your answer in the boxed area in your test book. After you have written your answer, be sure to read it to make sure you have written your ideas clearly and completely.

For both the multiple-choice questions and the short-answer questions, remember to look back at the reading passages to help you answer the questions. For some questions, you may need to go back to two reading passages to find the answer. Be sure to look back at both reading passages to help you answer these questions.

You will have 40 minutes to do the test. Work until you come to the word "STOP" at the bottom of the page. You may go back and check your answers. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** Please open your test book to Page 2.

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY** You may begin.

*Record the starting and stopping times.*

Record the Starting Time:	Add 40 Minutes:	Record the Stopping Time:
_____	+ 40	_____

*Check to be sure that students are marking their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY ➤ Stop. This is the end of the test. Please close your test book.**

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Reading Item Information

Item	Answer Key	Objective/ Subskill	Depth of Knowledge Level	Format	2005 –06 Item Statistics				Scale Score Location
					A or 0	B or 1	C or 2	D or 3	
1	D	2.1	2	SR	3%	3%	6%	*87%	439
2	B	3.3	3	SR	14%	*62%	9%	13%	507
3	B	2.3	1	SR	3%	*90%	4%	2%	433
4	A	3.1	3	SR	*80%	1%	14%	4%	443
5	B	2.1	1	SR	33%	*48%	14%	4%	524
6	A	4.1	3	SR	*48%	8%	34%	9%	538
7	B	4.1	3	SR	10%	*69%	13%	6%	512
8	A	3.1	2	SR	*80%	2%	9%	7%	447
9	C	1.1	2	SR	4%	5%	*80%	9%	545
10	D	3.2	2	SR	4%	3%	10%	*82%	451
11	A	2.2	1	SR	*69%	18%	7%	5%	488
12	D	3.2	3	SR	5%	14%	4%	*76%	470
13	A	2.2	2	SR	*74%	10%	2%	14%	456
14	B	2.3	1	SR	11%	*55%	25%	8%	531
15	C	4.2	2	SR	18%	8%	*65%	8%	499
16	C	1.1	1	SR	12%	6%	*51%	30%	519
17	C	4.3	3	SR	8%	19%	*53%	19%	515
18	C	3.3	1	SR	11%	3%	*79%	5%	471
19		3.2	3	BCR	15%	51%	26%	6%	562

Objective/Subskill and Depth of Knowledge Level information follows this table.  
 SR: selected response; BCR: brief constructed response.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
417 and below	418–456	457–513	514 and above

# Reading Objectives and Subskills

---

## Types of Text

---

The grade 6 reading assessment presents a variety of grade-appropriate reading passages representing literary, informational, and everyday text. Passages may be up to 1,500 words long and some passages may be paired with other, related passages. Students may be asked to read and answer questions about texts such as these:

Literary	Informational	Everyday
Realistic fiction, poetry, drama, biography, autobiography, historical fiction, myths	Magazine, textbook, and newspaper articles, government documents	Charts, schedules, simple forms, applications (for example, camp), product labels, safety notices, simple instructions

---

## Objectives, Subskills, and Descriptors

---

Objectives (labeled 1, 2, 3, and 4) and subskills (labeled 1.1, 1.2, etc.) denote general knowledge and skills that are assessed and reported on the WKCE-CRT. Bulleted descriptors are *examples* of specific knowledge or skills that may be included within each subskill. The subskills include knowledge and skills *such as, but not limited to* the descriptors.

### 1. Determine the meaning of words and phrases in context.

#### 1.1. Use context clues to determine the meaning of words and phrases.

- Use context clues to determine the meaning of unfamiliar words.
- Understand the meaning of words and phrases used figuratively.
- Use context clues to determine the meaning of multiple-meaning words.
- Use knowledge of synonyms and antonyms to determine the meaning of words.
- Identify analogies to demonstrate understanding of word meaning.

#### 1.2. Use knowledge of word structure to determine the meaning of words and phrases.

- Identify the meaning of contractions.
- Use knowledge of compound words to determine the meaning of a word.
- Identify how adding an affix changes the meaning of a word.
- Identify the meaning of a word with an affix.
- Use knowledge of root words to determine the meaning of a word.

#### 1.3. Use word reference materials to determine the meaning of words and phrases.

- Use an entry from a word reference to determine word meaning and pronunciation.

## **2. Understand text.**

- 2.1. Demonstrate understanding of literal meaning by identifying stated information in literary text.
  - Identify stated information about story elements.
- 2.2. Demonstrate understanding of literal meaning by identifying stated information in informational text.
  - Identify stated information about main ideas and supporting details.
  - Identify stated information provided through text features.
- 2.3. Demonstrate understanding of explicitly stated sequence of events in literary and informational text.
  - Identify first, next, and last events.
  - Follow steps in a process.

## **3. Analyze text.**

### **3.1. Analyze literary text.**

- Make inferences about story elements.
- Summarize important ideas and events.
- Analyze stated or implied theme, message, or main idea.
- Draw conclusions.
- Identify purpose.
- Make inferences based on text features or visuals.

### **3.2. Analyze informational text.**

- Identify implied main ideas and supporting details.
- Identify implied relationships (such as cause/effect and compare/contrast).
- Summarize information.
- Identify purpose.
- Make inferences based on text features.
- Make inferences based on visual information.
- Make inferences about text structure.
- Make inferences about the author's point of view.

### **3.3. Analyze author's use of language in literary and informational text.**

- Analyze the use of literary devices.
- Recognize and distinguish among genres.
- Make inferences about the author's tone.
- Make inferences about the author's style.

#### **4. Evaluate and extend text.**

##### 4.1. Evaluate and extend literary text.

- Extend themes and concepts to other situations.
- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.

##### 4.2. Evaluate and extend informational text.

- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.
- Distinguish between facts and opinions.
- Evaluate the accuracy, currency, and credibility of information.

##### 4.3. Evaluate and extend the author's use of language in literary and informational text.

- Evaluate the author's word choice and use of language.

## **Reading Depth of Knowledge**

These depth of knowledge levels are intended to reflect the level of cognitive demand placed on students by test items. As the level of cognitive demand increases, so does the mental effort and integration of information required to answer a test item successfully. Each level represents important cognitive skills, and each level requires the use of cognitive skills in lower levels. For example, a student who is asked to make connections between two texts (level 4) would also need to recall pertinent details from the texts (level 1), understand stated information in the texts (level 2), and make inferences and draw conclusions about each text (level 3). The levels assume grade-appropriate text, vocabulary, and tasks. Test items should represent a range of depth of knowledge levels, and items within each level may represent a range of difficulty as indicated by percentage of students who answered the item correctly or scale score location.

### **Level 1: Recognizing and Recalling**

Students demonstrate a grade-appropriate ability to recognize or recall basic facts, terms, or definitions. For example, a student might be asked to identify an explicitly stated main idea in a text.

### **Level 2: Using Fundamental Concepts and Procedures**

Students demonstrate a grade-appropriate ability to use basic facts, definitions, skills, or concepts. For example, a student might be asked to use information in a text to complete a graphic organizer.

### **Level 3: Concluding and Explaining**

Students demonstrate understanding of grade-appropriate text by using stated and implied information and text elements to draw conclusions. Students explain and convey ideas effectively. For example, a student might be asked to provide details and examples from a text to support a conclusion.

### **Level 4: Evaluating, Extending, and Making Connections**

Students demonstrate their knowledge of concepts when evaluating or interpreting grade-level text. Students make connections among texts, common experiences, and issues. For example, a student might be asked to evaluate an author's effectiveness in achieving an intended purpose.

# **Reading Rubric for Constructed-Response Items**

## **3 points**

- The response demonstrates *thorough understanding* of the reading concept embodied in the task.
- The response is *accurate, complete, insightful, and fulfills all the requirements* of the task.
- Necessary support and/or examples are included.
- Information is clearly *text-based*.

## **2 points**

- The response demonstrates *partial understanding* of the reading concept embodied in the task.
- The response is *accurate* and *fulfills most of the requirements* of the task.
- Necessary support and/or examples may not be complete or clearly text-based.

## **1 point**

- The response demonstrates *an incomplete understanding* of the reading concept embodied in the task.
- The response provides *some information that is text-based*, but does not fulfill the requirements of the task.
- Information provided is *too general* or *too simplistic*.
- Necessary support and/or examples may be incomplete or omitted.

## **0 points**

- The response demonstrates *no understanding* of the reading concept embodied in the task.
- The response is *inaccurate, confused, or irrelevant*.
- The student has *failed to respond to the task*.

# Reading Constructed-Response Item Scoring Guide

Forms: Public Release	Item #: 19	Item Type: BCR	TB Page #: 9	AB Page #: n/a
Reporting Category: Reading				
Objective: 3. Analyzes Text				
Subskill: 3.2. Analyzes informational text				
Descriptor: Summarizes information				Max Score Pts: 3

## Item Stem

**Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your response on the lines below.**

**Responses should be evaluated according to the guidelines outlined below for each score point.**

### 3 points

- The response **demonstrates a thorough understanding** of the process by which cranberries are harvested and how they are used today.
- The response **accurately and completely explains** how cranberries are harvested in the cranberry bogs and how their ability to float is essential for harvesting them this way. It should also explain how the berries are used today. The response may include selected facts from the text such as: growers flood their fields; a paddle boat-like machine beats the plant and loosens the ripe berries; the berries are collected by a crew who push the berries to the edges of the bogs; cranberries are used today in juice and sauce.
- The response is **very well supported with examples and information from the text**. The answer should include all of the information necessary to give a through summary of how cranberries are harvested how they are used today.

### 2 points

- The response **demonstrates a partial understanding** of how cranberries are harvested and used today.
- The response **accurately summarizes the essential information** but fails to explain how cranberries ability to float is essential to this process. The response may also lack one or more steps in the process used to harvest cranberries or fail to explain modern uses for the berries.
- The response provides information that is **generally text-based** but **fails to explain** why the process for harvesting cranberries is unique or fails to give a complete description of the process.

### 1 point

- The response **demonstrates an incomplete understanding** of the information presented in the passage about how cranberries are harvested and used today. The response contains **inaccurate or very incomplete information**. For example, the answer may explain **only** how farmers learned that cranberries bounce (incorrect) or only that cranberries can float (simplistic).
- The response **fails to provide enough specific text-based details** to explain the complete process for harvesting cranberries or how they are used today, although some information about cranberries is present.

## Anchor Papers for Reading Constructed-Response Item

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

In order to harvest cranberries, you need to see which ones are ripe. The ripe ones float and bounce. First, you have to float the cranberry bogs. Then, a machine beat the plants to loosen the fruit. After that, they take wooden tools and pull the cranberries to the end of the bog. This is called rafting. Finally, the ripe cranberries are sold for people to eat. Today, cranberries are used in juice and in sauce. They're especially eaten during Thanksgiving Day.

### Score Point 3

- >Response demonstrates a thorough understanding of the process by which cranberries are harvested and how they are used today.
- >Response accurately and completely explains how cranberries are harvested by using examples and information from the text.
- >Response demonstrates an understanding of the concept that cranberries have the ability to float, "The ripe ones float..."
- >Response includes how cranberries are used today, "...used in juice and sauce."

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Most growers harvest their crops by "flooding their fields or cranberry bogs". Then a machine beats the plants which shakes the berries loose. When they float, they are "rafted", or pushed toward the shore, where they are sorted. Then they are used for sauce and juice.

Score Point 3

- >Response demonstrates a thorough understanding of the process by which cranberries are harvested and how they are used today.
- >Response, although brief, accurately explains how cranberries are harvested by using examples and information from the text.
- >Response demonstrates an understanding of the concept that cranberries have the ability to float, "When they float..."
- >Response includes how cranberries are used today, "...they are used for sauce and juice."

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

First, you stand the fields or cranberry bogs. Secondly, A machine much like a paddle boat, beats the plants, loosing the fruit. Next, the ripe cranberries float to the surface and are collected in a process called rafting. During rafting, the cranberry-gathering crew pushes the floating berries with long wooden tools to the end of the bog. Lastly, the berries are gathered up and placed in boxes.

Score Point 2

- >Response demonstrates a partial understanding of how cranberries are harvested and used today.
- >Response accurately and completely explains how cranberries are harvested using examples and information from the text.
- >Response demonstrates an understanding of the concept that cranberries have the ability to float, "...the ripe cranberries float..."
- >Response fails to explain modern uses for the berries.

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Cranberries are harvested today by flooding the bogs, beating the plants to loosen the fruit. Then they are pushed into one end of the bogs with long wooden sticks. Then lifted on conveyor belts, then boxed. Cranberries are used today to make healthy fruit drinks, they are also used at thanksgiving.

Score Point 2

- >Response demonstrates a partial understanding of how cranberries are harvested and used today.
- >Response accurately summarizes how cranberries are harvested using examples and information from the text.
- >Response provides a modern use for the berries, "...used today to make healthy fruit drinks."
- >Response fails to demonstrate an understanding of the concept that cranberries have the ability to float.

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Cranberries are harvested today just like Peg Leg John many years ago. The cranberry is harvested on the ground. It look like a low-lying evergreen. After they have grown the farmer floods their field or cranberry bog. A machine beats the plants to make them loose their fruit and the good ones float to the top. The cranberry is a popular Thanksgiving Day food. Its not certain they were on the first Thanksgiving Day menu. Cranberries are also used in juice.

Score Point 2

- >Response demonstrates a partial understanding of how cranberries are harvested and used today.
- >Response provides some information to explain how cranberries are harvested, "farmers flood their field," and "a machine beats the plants to loosen the fruit," but fails to explain the collection process (rafting).
- >Response demonstrates an understanding of the concept that cranberries have the ability to float, "...the good ones float to the top."
- >Response provides a modern use for the berries, "...used in juice."

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Cranberries today are bounced to see if they are good or not. They also flooded the bogs and the good berries would float. We use cranberries today at Thanksgiving to eat.

Score Point 1

- >Response demonstrates incomplete understanding of the information presented in the passage about how cranberries are harvested and used today.
- >Response includes some accurate information, "...flood the bogs and the good berries would float."
- >Response includes irrelevant information, "Cranberries today are bounced to see if they are good or not" and information that is too general, "We use cranberries today at Thanksgiving to eat."

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Cranberries are very popular. They harvest them. This is how they harvest them. First, they use machines to loosen the berries. Then they drop them to see if they bounce. Last they package them.

Score Point 1

- >Response demonstrates incomplete understanding of the information presented in the passage about how cranberries are harvested and used today.
- >Response includes some accurate information, "they use machines to loosen the berries."
- >Response includes irrelevant information, "they drop them to see if they bounce."
- >Response fails to provide a modern use for the berries.

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

You can use cranberries to eat with a lot of things.

Score Point 0

- >Response demonstrates no understanding of the information presented in the passage about how cranberries are harvested and used today.
- >Response is too vague to receive credit.

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

They grow under water and then a mactien comes and pulls them up to the surface and they soak all them in to another macite.

Score Point 0

- >Response demonstrates no understanding of the information presented in the passage about how cranberries are harvested and used today.
- >Response is inaccurate and confused.

# Mathematics

## Sample Directions for Administering the Mathematics Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, scratch paper, and the following manipulatives:*

- Ruler
- Calculator for Session 2  
(4-function calculator required; use of scientific calculator is student preference)

*NOTE: The use of a calculator is not allowed to solve the problems in Session 1.*

*Also required for the operational test, but not for this released item book:*

- Tangrams, 1 set
- Protractor

*Students' test books should be closed.*

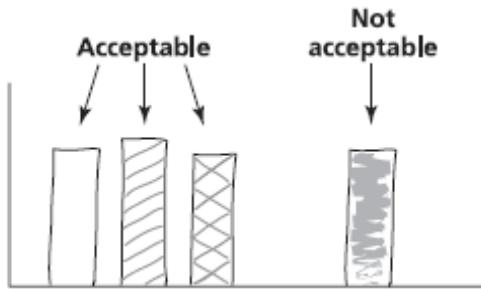
**SAY** Remember to use only a No. 2 pencil in this test. In Session 1, you will be answering multiple-choice questions and short answer questions. Multiple-choice questions are questions that ask you to choose the best answer. For the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

You may use scratch paper to work the multiple-choice questions, but remember to fill in the circle that goes with the answer you choose.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

For the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

Demonstrate by drawing the illustration below on the board.



**Now you will do Session 1 of the Mathematics test. Remember to read all of the directions and information in the test book. When you come to the word “STOP” at the bottom of the page, you have finished Session 1. You may go back and check your answers, but do not go on to Session 2 of the Mathematics test. When you have finished, sit quietly until everyone else has finished.**

**You will have 10 minutes to do Session 1. Make sure you stop at the end of Session 1.**

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** **You may begin.**

*Record the starting and stopping times for Session 1.*

Record the Starting Time:	Add 10 Minutes: <hr/> + 10 <hr/>	Record the Stopping Time: <hr/>
------------------------------	-------------------------------------	---------------------------------------

*Check to be sure that students are marking and writing their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY** **Please open your test book to Page 2.**

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY** **Stop. Put down your pencil and close your test book. This is the end of Session 1.**

*Pause to be sure that all students have closed their test books. Before proceeding to Session 2, make sure each student has a calculator.*

*During an actual test administration, students would be required to clear their calculators' memories immediately before and after each calculator-allowed session.*

**SAY** Now, open your test book to the page labeled “Mathematics Session 2.”

In Session 2, you will be answering multiple-choice questions and short-answer questions. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

Remember, for the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

You will have 35 minutes to do Session 2. Remember to read all of the directions and information in this part of the test book. When you come to the word “STOP” at the bottom of the page, you have finished Session 2.

You may go back over Session 2 to check your answers, but do not go back to Session 1. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** You may begin.

*Record the starting and stopping times for Session 2.*

Record the Starting Time:	Add 35 Minutes:	Record the Stopping Time:
_____	+ 35	_____

**SAY** Stop. This is the end of Session 2. Please close your test book.

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Mathematics Item Information

Item	Answer Key	Calculator Allowed	Objective/Subskill	Depth of Knowledge Level	2005–06 Item Statistics					Scale Score Location
					Format	A or 0	B or 1	C or 2	D	
1	A	No	Fb	2	SR	*47%	41%	7%	4%	548
2	B	No	Ba	1	SR	2%	*95%	1%	0%	417
3	C	No	Fc	2	SR	1%	2%	*94%	2%	422
4	D	No	Bb	1	SR	2%	7%	3%	*87%	459
5	B	No	Bb	1	SR	2%	*88%	6%	2%	439
6	C	Yes	Fc	4	SR	11%	12%	*65%	10%	503
7	C	Yes	Fa	2	SR	25%	3%	*65%	5%	508
8	A	Yes	Da	2	SR	*59%	15%	14%	12%	516
9	B	Yes	Cc	2	SR	27%	*64%	6%	3%	550
10	B	Yes	Ca	1	SR	8%	*81%	7%	3%	475
11		Yes	Bb	3	A-BCR	46%	52%			508
11		Yes	Aa	3	B-BCR	20%	25%	52%		480
12	B	Yes	Dc	2	SR	10%	*61%	23%	6%	542
13	B	Yes	Eb	2	SR	12%	*57%	5%	26%	530
14	A	Yes	Ea	1	SR	*64%	16%	9%	10%	528
15	A	Yes	Cb	2	SR	*51%	37%	7%	4%	532
16	C	Yes	Db	1	SR	1%	1%	*97%	1%	399
17		Yes	Cb	2	A-BCR	48%	49%			513
17		Yes	Ab	3	B-BCR	30%	43%	23%		525
18	C	Yes	Ea	2	SR	24%	11%	*46%	18%	559
19	B	Yes	Db	2	SR	3%	*75%	18%	3%	482
20	A	Yes	Fa	2	SR	*46%	2%	47%	5%	596

Objective/Subskill and Depth of Knowledge Level information follows this table.

SR: selected response; A-BCR: brief constructed response, part A; B-BCR: brief constructed response, part B.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
463 and below	464–484	485–531	532 and above

# Mathematics Objectives and Subskills

## Beginning of Grade 6

---

### How to use the Framework

---

The mathematics assessment framework is an indication of the knowledge and skills that will be assessed on the November WKCE-CRT. ***This information does not replace your local curriculum.*** However, you may wish to ensure that your local curriculum includes the knowledge and skills described in the framework.

This section of the framework describes the types of content that students may encounter on the WKCE-CRT

The knowledge and skills to be assessed are organized into objectives, subskills, and descriptors as shown below. WKCE-CRT results will be reported by objective and subskill.

**A. Objective:** A group of cognitively related skills.

**A.a. Subskill:** A group of related knowledge and skills that *may include, but is not limited to,* the descriptors which follow.

- **Descriptor:** an example of a specific knowledge or skill that may be assessed.

---

### Objectives, Subskills, and Descriptors

---

#### Objective   Mathematical Processes

**A:**

Students will effectively use mathematical knowledge, skills, and strategies related to reasoning, communication, connections, representation, and problem solving.

**Descriptors, such as but not limited to**

- Use reasoning and logic to:
  - Perceive patterns
  - Identify relationships
  - Formulate questions
  - Pose problems
  - Make conjectures
  - Justify strategies
  - Test reasonableness of results
- Communicate mathematical ideas and logical reasoning using the vocabulary of mathematics in a variety of ways (e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models).
- Connect mathematics to the real world, as well as within mathematics.
- Create and use representations to organize, record, and communicate mathematical ideas.
- Solve and analyze routine and non-routine problems.

---

#### Objective   Number Operations and Relationships

**B:**

**Subskill**  
**B.a.:**      Concepts

**Descriptors, such as but not limited to**

- Recognize and apply place-value concepts to whole numbers less than 10,000,000.
- Read, write, and represent numbers using words, numerals, pictures (base-ten blocks), number lines, arrays, expanded forms ( $12,436=10,000+2,000+400+30+6$ ), and symbolic renaming (e.g.,  $12,436=12,450-14$ ).

- Compare and order numbers less than 100,000 represented in numbers, arrays, symbols ( $<$ ,  $>$ ,  $=$ ) and words.
- Identify and use number theory concepts:
  - prime and composite numbers
  - divisibility potential of numbers (divisors of 1-10, 25).
  - least common multiples through 24
  - greatest common factors through 50
- Read, write and identify monetary amounts represented with visual models.  
Compare and order monetary amounts.  
Equate a monetary value with its benchmark fraction and percent (e.g.,  $\$0.25 = 1/4 = 25\%$ )
- Demonstrate basic understanding of proportionality in proportional contexts.
- Read, write, identify, order, and compare mixed fractions.  
Represent fractions using numbers, pictures, and number lines.  
Rename improper fractions to mixed numbers in lowest terms.  
Identify and represent equivalence between fractions, percents, and decimals.

**Subskill Computation**

**B.b.:**

**Descriptors, such as but not limited to**

- Use all operations in everyday situations to solve single- or multi-step word problems.
- Solve three- and four-digit addition and subtraction with regrouping, multiplication of three-digit by two-digit numbers, division with single-digit divisors and four-digit dividends with two-step or mixed operation problems.  
Compute with decimals in the context of money and make change.
- Solve problems using basic multiplication and division facts.
- Rename improper fractions.  
Add and subtract fractions with unlike denominators (halves, thirds, fourths, fifths, and tenths) with sums or differences between 0 and 1.
- Estimate using basic whole number operations, benchmark fractions, and benchmark decimals.
- Determine reasonableness of answers.

---

**Objective Geometry**

**C:**

**Subskill Describing figures**

**C.a.:**

**Descriptors, such as but not limited to**

- Recognize and name polygons with 3, 4, 5, 6 or 8 sides.
- Identify lines and line segments in a plane figure.
- Classify plane figures by characteristics of angles (acute, obtuse and right) and describe rays found in open-angle situations.

**Subskill Spatial relationships and transformations**

**C.b.:**

**Descriptors, such as but not limited to**

- Use tangrams to describe, model, and construct plane figures.
- Identify figures that are congruent and/or similar.
- Describe and compare cubes, rectangular, and triangular prisms and rectangular and triangular pyramids from nets (flat patterns).
- Use slides, flips, and turns on figures. Identify congruent shapes using figures that have been manipulated by one or two motions (slides, flips and turns).

- Identify lines of symmetry and the number of lines of symmetry in figures and design shapes that have at least one line of symmetry.
- Identify and describe 3-dimensional figures from multiple perspectives.

**Subskill      Coordinate systems**

**C.c.:**

- Identify and plot the coordinates of locations or objects on simple one quadrant grids using numbers only for coordinates, (e.g., (3, 2)).
- Locate the fourth coordinate pair when given three vertices of a rectangle or parallelogram on a coordinate grid.

**Objective      Measurement**

**D:**

**Subskill      Measurable attributes**

**D.a.:**

**Descriptors, such as but not limited to**

- Identify appropriate units to measure length, liquid capacity, volume, time, weight/mass, temperature, including mixed measures. Units include: inches, feet, yards (i.e., 1 foot 3 inches) miles, centimeters, millimeters, meters, kilometers, ounces, cups quarts, gallons, liters, hours, minutes, seconds (i.e., 1 hour 15 minutes), days, months, years, ounces, pounds, grams, kilograms, and degrees Fahrenheit/Celsius.
- Compare attributes of length, volume, and weight by observation or when given actual measurements.
- Make measurement conversions within a system between units (e.g., feet and yards; inches and yards; quarts and gallons; meters and centimeters; seconds and hours).

**Subskill      Direct measurement**

**D.b.:**

**Descriptors, such as but not limited to**

- Measure down to the nearest 1/8-inch, centimeter, or millimeter.
- Determine angle measurement to nearest five degrees using a protractor.
- Read and interpret measuring instruments to determine the measurement of objects with standard units (U.S. customary).
- Determine and compare elapsed time in problem-solving situations.

**Subskill      Indirect measurement**

**D.c.:**

**Descriptors, such as but not limited to**

- Estimate measurements using U.S. customary and metric measurement.
- Determine the area of regular shapes including right triangles.
- Determine distance between points using a scale.

**Objective      Statistics and Probability**

**E:**

**Subskill      Data analysis and statistics**

**E.a.:**

**Descriptors, such as but not limited to**

- Formulate questions to collect, organize and display data.
- Collect, organize and display data in appropriate graphs or charts.
- Draw reasonable conclusions based on contextual data.
- Use data to predict outcomes or trends from graphs and tables.
- Extract, interpret, and analyze data from single bar graphs, tables and charts, line plots, context, circle graphs, and Venn diagrams.

- Describe a given set of data of ten or fewer items/numbers using the terms mean, median, mode, and range to extract information from organized charts, tables, graphs, and Venn diagrams in problems with and without context.

**Subskill      Probability**  
**E.b.:**

**Descriptors, such as but not limited to**

- Determine the likelihood of future events, predict outcomes of future events, and test predictions using data from a variety of sources.
- Choose or design an event that is fair or unfair.
- Determine the probability of events in context using words, percents, or fractions.
- Describe and determine the number of combinations of selecting 3 items from 4 or more items.

**Objective      Algebraic Relationships**

**F:**

**Subskill      Patterns, relations and functions**  
**F.a.:**

**Descriptors, such as but not limited to**

- Recognize, extend, describe, create, and replicate a variety of patterns including attribute, numeric, and geometric patterns.
- Represent patterns and relationships with pictures, table, and charts.
- Describe a rule that explains a functional relationship or pattern using addition, subtraction, or multiplication rules.
- Determine a future event in a pattern up to the tenth item when given the first five.
- Solve simple two-step, two operation patterns (e.g., 5, 8, 6, 9, 7, 10, 8.....)  
(Pattern: +3-2....). Represent patterns and relationships with pictures, table, and charts.

**Subskill      Expressions, equations and inequalities**  
**F.b.:**

**Descriptors, such as but not limited to**

- Demonstrate basic understanding of equality and inequality using symbols ( $<$ ,  $>$ ,  $=$ ) with multi-step, mixed operations.
- Solve one-step equations with “box” variable and whole number coefficients in problems with and without context using whole number coefficients.
- Solve two-step multi-operation equations with “box” or letter variable and whole number coefficients with and without context (e.g.,  $3 * \text{“box”} + 1 = 7$ ).
- Represent problem situations with one or two-step equations or expressions. Solve simple two-step, two operation patterns.
- Solve two-step open sentences involving all operations.
- Solve equations involving any two operations.  
Ex:  $3 * 4 - 2 = ?$   
Ex:  $12/3 + 1 = \text{“box”}$   
Ex:  $5 * 2 - 1 = a$

**Subskill      Properties**  
**F.c.:**

**Descriptors, such as but not limited to**

- Use the commutative property of multiplication with positive single digits.
- Use the inverse relationship of division and multiplication with single whole digits.
- Simplify (evaluate) two-step numerical expressions using correct order of operations.
- Demonstrate understanding of distributive property.
- Demonstrate understanding of order of operations by solving two-step open sentences involving all operations.

## **Mathematics Depth of Knowledge**

The representative examples for the following depth of knowledge categories are intended to reflect student performance expectations with regard to the level of mental effort and amount of information integrated by the student. Items are targeted at one of four levels of cognitive demand. Each level of demand is represented by items with a range of difficulty, as indicated by the percentage of students who answered the item correctly or by scale score location. Assuming grade-appropriate vocabulary and test items, these levels are viable and useful across all grades.

### **Level 1: Recognizing and Recalling**

Students recognize and recall basic facts, terms, concepts, and definitions of the content and processes of mathematics. For example, students may be required to do computation with whole numbers, fractions, decimals, and integers.

### **Level 2: Using Fundamental Concepts and Procedures**

Students describe or apply basic facts, terms, rules, concepts and definitions of the content and processes of mathematics.

### **Level 3: Concluding and Explaining**

Students demonstrate an understanding of complex ideas, draw conclusions based on this understanding, and communicate ideas and conclusions effectively.

### **Level 4: Evaluating, Extending, and Making Connections**

Students synthesize skills and techniques from various concepts of mathematics to solve multifaceted problems, and justify conclusions using mathematical definitions, properties, and principles. For example, students may be required to support mathematical arguments with definitions, properties, and principles.

## **Mathematics Rubric for Constructed-Response Items**

Step B of the constructed-response items is scored using a generic rubric.

- |                 |   |
|-----------------|---|
| <b>2 points</b> | The student demonstrates a thorough understanding of the mathematical concepts and/or procedures represented in the problem. The student uses appropriate mathematical procedures and/or concepts to explain or justify the response to Step A, and provides clear and complete explanations and interpretations containing words, calculations, or symbols, unless otherwise specified in the item stem.<br><br>The response may contain minor flaws that do <u>not</u> detract from the demonstration of a thorough understanding of the problem. |
| <b>1 point</b>  | The student demonstrates only a partial understanding of the mathematical concepts and/or procedures represented in the problem. The response lacks an essential understanding of the underlying mathematical concepts used to provide the response to Step A.<br><br>The response contains errors related to the misinterpretation of important aspects of the problem, misuse of mathematical procedures and/or concepts, or misinterpretation of results.  |
| <b>0 points</b> | The student provides a completely incorrect explanation or justification, or one that cannot be interpreted, or no response at all.   |

# Mathematics Constructed-Response Item Scoring Guides

Form: Public Release	Item #: 11	Item Type: BCR	TB Page #: 6	AB Page #: n/a
Objective for Step A: B. Number Operations & Relationships			Max Score Pts: Step A: 0–1 Step B: 0–2	
Subskill: B.b. Number Computation				
Objective for Step B: A. Mathematical Processes				

## Sample correct response

Total cost of ice cream:  $3 \times \$1.78 = \$5.34$   
Total change:  $\$10 - \$5.34 = \$4.66$ .

## Step A: Response is limited to correct answer or range below

One of the following:

- \$4.66
- 4.66

## Step B: Responses may include, but may not be limited to, the Answer Cues below

**2 points**      Both of the following tasks are accomplished:

- The student shows understanding of how to calculate the cost of the ice creams.
- The student shows understanding of how to calculate the change.

**1 point**      One of the following applies:

- The student accomplishes only one of the above tasks.
- The student accomplishes both of the above tasks, but with a computational error. (See note below.)

**0 points**      The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.

Note: If an arithmetic error leads to loss of credit for Step A, and the process is otherwise correct, award full credit for Step B.

Form: Public Release	Item #: 17	Item Type: BCR	TB Page #: 9	AB Page #: n/a
Objective for Step A: C. Geometry				Max Score Pts:
Subskill: C.c. Transformations				Step A: 0–1
Objective for Step B: A. Mathematical Processes				Step B: 0–2

**Step A: Response is limited to correct answer or range below**



Note: Accept any other closed shape with exactly one line of symmetry, having the line of symmetry drawn on the shape.

**Step B: Responses may include, but may not be limited to, the Answer Cues below**

**2 points**      The student shows understanding of line symmetry: that folding or flipping the shape along the line of symmetry creates two congruent figures. [See Note.]

**1 point**      One of the following applies:

- The student states that the line of symmetry goes down the middle of the figure, without indicating that the two parts are congruent.
- The student explains why there is only one line of symmetry, without indicating why the two parts are symmetrical.

**0 points**      The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.

Note: The term “congruent” is not required: award full credit for any response indicating that folding the shape along the line of symmetry creates equal shapes/parts/halves/sides.

# Anchor Papers for Mathematics

## Constructed-Response Items

### Item 11

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

#### Step A

How much change did Geoffrey receive?

Answer: \$ 4.66

#### Step B

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

First, you have to do the problem  $\$1.78 \times 3$  to find out how much the ice cream cones cost, which is \$5.34. Then you have to subtract \$5.34 from \$10.00 to find out how much change Geoffrey received. The answer is \$4.66.

#### Step A

Score Point 1

#### Step B

Score Point 2

- > Student calculates the cost of ice creams
- > Student calculates the amount of change

**Item 11**

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

**Step A**

How much change did Geoffrey receive?

Answer: \$ 4.66

**Step B**

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

I x 1.78 by 3 the subtracted that  
# by 3

## Step A

Score Point 1

## Step B

Score Point 1

&gt; Student indicates calculating of the cost of the ice creams

&gt; [student does not indicate calculating of the amount of change]

### Item 11

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

#### Step A

How much change did Geoffrey receive?

Answer: \$ 4.60

#### Step B

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

I did was \$10.00 + 1.78 three times and I equal it and it got me to \$4.60.

---

---

---

Step A

Score Point 1

Step B

Score Point 0

< [no correct process]

### Item 11

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

#### Step A

How much change did Geoffrey receive?

Answer: \$ 5.85

#### Step B

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

First I multiplied  $1.78 \times 3 = 5.25$ . Then  
I subtracted  $10.00 - 5.25$ , and I got  
5.85.

Step A

Score Point 0

Step B

Score Point 2

> Student displays the correct process; computational error led to loss of credit in Step A, but no double jeopardy in Step B

### Item 11

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

#### Step A

How much change did Geoffrey receive?

Answer: \$ 5.34

#### Step B

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

I took  $\$1.78 \times 3 = \$5.34$  the reason  
I took the price by 3 is because  
Geoffrey wanted 3 ice cream  
cones.

Step A

Score Point 0

Step B

Score Point 1

> Student correctly calculates the cost of the ice creams

< [student does not indicate calculating the amount of change]

**Item 11**

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

**Step A**

How much change did Geoffrey receive?

Answer: \$ 5.40

**Step B**

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

I 1.78 + 2 x 2 = 5.40

---

---

---

---

Step A

Score Point 0

Step B

Score Point 0

< [incorrect process]

**Item 17**

**Step A**

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



**Step B**

Explain how your line shows the symmetry of your shape.

When you fold the figure in half on that line, the figure's sides match up exactly.

---

---

**Step A**

**Score Point 1**

> Acceptable shape with only one line of symmetry (isosceles triangle)

**Step B**

**Score Point 2**

> Concept of symmetry explained correctly (folded sides match exactly)

**Item 17**

**Step A**

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



**Step B**

Explain how your line shows the symmetry of your shape.

Well my triangle can only  
be split int to 2 vertically because  
of it's unequal sides.

Step A

Score Point 1

> Acceptable shape with only one line of symmetry (isosceles triangle)

Step B

Score Point 1

> Explains why there is only one line of symmetry

< [doesn't address the reasons for calling the parts symmetrical]

### Item 17

#### Step A

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



#### Step B

Explain how your line shows the symmetry of your shape.

It only has one line of symmetry  
because it shape is different in a way,

#### Step A

Score Point 1

> Acceptable shape with only one line of symmetry (violin)

#### Step B

Score Point 0

< [explanation lacks understanding of symmetry]

### Item 17

#### Step A

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



#### Step B

Explain how your line shows the symmetry of your shape.

You can draw a line through the middle  
of the shape and there will be two equal  
shapes left so it shows symmetry.

---

---

Step A

Score Point 0

< [shape acceptable, but no line of symmetry shown]

Step B

Score Point 2

> Concept of symmetry explained correctly (two equal shapes)

### Item 17

#### Step A

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



#### Step B

Explain how your line shows the symmetry of your shape.

On my shape it shows  
symmetry by you can  
cut it in an equal half and  
it will be perfect.

#### Step A

Score Point 0

< [shape has more than one line of symmetry]

#### Step B

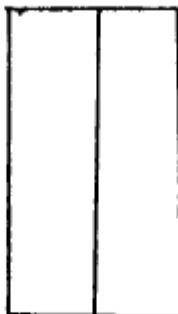
Score Point 2

> Concept of symmetry explained correctly (cut in equal halves)

### Item 17

**Step A**

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.

**Step B**

Explain how your line shows the symmetry of your shape.

It goes right down the middle

**Step A**

Score Point 0

< [shape has more than one line of symmetry]

**Step B**

Score Point 1

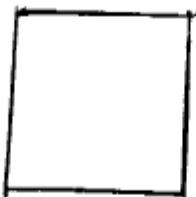
> Student states one requirement for symmetry

< [doesn't mention creation of 2 equal halves]

### Item 17

**Step A**

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.

**Step B**

Explain how your line shows the symmetry of your shape.

The line is straight across from  
the other line.

**Step A**

Score Point 0

< [shape has more than one line of symmetry]

**Step B**

Score Point 0

< [explanation lacks understanding of symmetry]

**Guide to Grade 6 Released Item Books  
In READING and MATHEMATICS**

Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

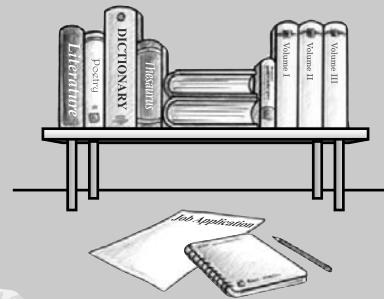
**Wisconsin Knowledge and Concepts Examinations**  
**Criterion-Referenced Test**

**Released Item Book**

**Reading**

**Grade**

**7**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.

**Acknowledgments** CTB is indebted to the following for permission to use material in this book:

All trademarks and trade names found in this publication are the property of their respective companies and are not associated with the publisher of this publication.

"Raggedy Pants and the Dinosaur Wall" by Eleanora E. Tate, copyright © 2001 by Eleanora E. Tate; first published in *Storyworks Magazine's November/December 2001 issue*. Used by permission of the author.

"The Pigeon and the Peacock" by Jill Esbaum, copyright © 2003 by Jill Esbaum; first published in *Cicada Magazine*. Used by permission of the author.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

**Released Item Book**

**What are released items?**

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

**How do I use this book?**

*Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

*Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

*Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

**Directions**

Read the passage “Raggedy Pants and the Dinosaur Wall.” Then answer Numbers 1 through 10.

# Raggedy Pants and the Dinosaur Wall

by Eleanora E. Tate



It's Libby Burns's fault that I'm dangling upside down on this Dinosaur Climbing Wall at our Jellyfish Festival. I'm dizzier than a seagull on a weathervane during a nor'easter.<sup>1</sup> Every single drop of blood has drained to my head and is sloshing around in my brain. Feels like my tummy's trying to push . . . up? down? How did I get here?

When I get my eyes halfway steadied, I notice that Miz Pennyfeather, our librarian, is down below shaking her head at me. So are my folks, my older sister Raisin, my little sister Hattie, and some other kids. Hattie has her mouth open so wide that I can see her back teeth. That's because she's shouting, "Maizell, you look like a bat! Libby's getting ahead of you! Come on, straighten up and climb right!"

Easy for her to say, safe and upright on the ground. With my beaded braids banging me in the eyeballs, I struggle around in my climbing harness, find another handhold, and finally get turned right-side up. Of course, then all the blood shoots down to my feet. My brain deflates so fast I have to lean my head against the wall. Everything's going jibbity jibbity jibbity.

I think I'm going to throw up, too, right on Miz Pennyfeather's hat. Then she'd never let me be a library helper for sure!

---

<sup>1</sup>**nor'easter:** a storm that comes from the northeast

With one hand I hitch up my shorts and cautiously check to make sure they haven't ripped out the back. I bought them at the Henny Penny Store, where you can get great bargains. The stuff usually won't tear up or break apart, at least not right away. Hattie says I'm cheap, but Momma calls me frugal. I like that word.

Libby Burns is above me on the wall in her yellow shorts, too. When she saw me in my pretty yellow shorts last week, she went out and bought the exact same kind from somewhere in the mall. But hers cost \$30, she made sure to tell me. Her family's got money, which is okay, but she brags about it so much that she makes me and everybody else sick, sick, sick! She also loves to try to talk psychological in that way that intimidates and rules over folks. Torn shorts and "Miss It" Libby Burns are what got me into this predicament<sup>2</sup> in the first place.

It all started last month, when I went to her birthday party. Everyone was there. Her older brother jumped out at me in his shiny green skin-diving suit, goggles, and flippers, looking like the creature from the swamp. He scared me so bad I split the behind out of my jeans getting away.

Libby's called me Raggedy Pants ever since. She makes me madder than a cat with its tail caught in the gate. And finally, last week, I decided I'd had enough. We were on the blacktop after lunch, and she started in on me. And all these kids were laughing. I wanted to cry or run away. But I made myself stand glued to the floor. Finally I got the nerve to say, "Why don't you button your lip."

That got Libby, because her eyes sort of bugged out.

"I got a right to speak my mind," she said, like I was a mosquito she could squash with her words. And to tell you the truth, that's how I felt.

And then she started singing, "Raggedy Pants, Raggedy Pants, so scaredy cat you split your pants." And everyone started laughing again. So what was my choice? I could run away or show Libby Burns that I wasn't some bug she could stomp on. Actually, running seemed like a good idea. But I stayed right there, my sneakers glued to the cafeteria floor. I thought of my big sister Raisin, who never runs away from anything.

---

<sup>2</sup>**predicament:** difficult situation



"If I'm such a scaredy cat, how come I climbed the Big Rock just last week?" I asked. I made myself stare right at her bugged-out eyes. Big Rock is a climbing wall at the community center. I'd climbed up twice, in fact. I don't think Libby made it even once.

Libby stared at me, and that's when I unglued my sneakers and stomped away, my braids swinging just perfectly. I thought that was the end of it. And it was.

Until this morning, when my whole family came to the tenth annual South Carolina Jellyfish Festival, right here in Gumbo Grove, South Carolina, where we all live at the edge of the Atlantic Ocean. Everyone in town showed up, including Libby Burns. Raisin and I were standing at the Ferris wheel when Miss It strutted up and said, "Hey, scaredy cat, meet me at the Dinosaur Wall at 2:00. We'll see who's scared!"

I think the Dinosaur Wall must be the biggest climbing wall in the world. It was brought in from Durham, North Carolina, especially for our Jellyfish Festival.

"Don't do it, Maizell," Raisin said. "You have nothing to prove to Libby Burns."

But for once I knew Raisin was wrong. I'd have to try to climb the wall, no matter how scared I was. Otherwise, Libby would tell everybody I really was a Raggedy Pants and a scaredy cat. And she'd be right.

So that's how I got here, stuck up against this gigantic Dinosaur Wall with everybody looking up at me and laughing. This wall looks taller than the hotels on our oceanfront. I make myself look down quick. Raisin waves at me. She's not afraid of anything. I wish I could be like her, instead of "ole" scaredy cat Maizell me, right now.

Above me, Libby's behind now looks like one of those big sales balloons you see flying over a car lot. And that makes me laugh. When I laugh, then I don't feel so scared. Gathering up my courage, I follow Libby's lead, and the next thing I know, I'm going up that wall again, too.

As folks start screaming, "Go Maizell! Go Maizell!" I pull even with Libby at the top of the Dinosaur Wall. I refuse to look down anymore because I know by now that the ground is a million miles below.

Instead I look over at Libby. She's light-skinned but right now her face is red. She's puffing and sweating. Strands of her long black hair are stuck to her cheeks. When she glances at me, I get ready to hear her call me names. I try to think of something smart to say back. But what she says is, "I think I'm gonna throw up."

"Don't look down," I say back, to my surprise. "Take deep breaths. Let the rope slide you down."

But she says she's too scared, that she can't. The man on the ground with her guide rope is just standing there waiting. Now my man's waiting, too. So instead of my sliding down the wall and leaving her up there like I should, I stay with her. I'm saying, "Take it easy, watch your feet, you'll make it okay," and so on. Am I crazy encouraging her? I guess I'm feeling that maybe she'll think I'm a heroine, helping her like this. I'm thinking maybe she'll stop calling me names now. Maybe it's not her fault that she's so mean.

Just when we're both maybe fifteen feet from the bottom, she looks over at me again. "Raggedy Pants!" she screams and starts sliding down past me fast.

Was she faking all along? After me trying to be nice! I should have known not to feel sorry for her. So you know what? I yell right back, "Maybe so, but now YOUR pants are ripped up the back!"

She freezes with her mouth in an "o" shape. While she's reaching with one hand to feel her shorts, I slide right on down to the ground and win. Hattie and Raisin rush up and hug me.

Libby slides down, too. She gets out of that harness with her back to everybody and FLIES toward the nearest restroom building.

I want to laugh at her, she looks so crazy. But I realize I don't want to act mean the way Libby always does. I run after her.

"I was just kidding!" I holler.

Libby skids to a stop and glares at me.

But then she sits down on a nearby rock and gives me a half smile.

"Well," she says, "I guess I deserved it."

All of a sudden Libby Burns doesn't look so mean. We both know our race is over. Nobody won.

But nobody lost, either.



**1** Why is Maizell angry at Libby?

- (A) Libby calls her a name.
- (B) Libby's family is wealthy.
- (C) Libby's brother scared her.
- (D) Libby climbs the rock wall faster.

**2** In the passage, Maizell's character is revealed mostly

- (A) by her thoughts
- (B) by what others say about her
- (C) by her physical characteristics
- (D) by her conversations with her friends

**3** Why does Maizell climb the Dinosaur Wall?

- (A) to win a contest
- (B) to enjoy the festival
- (C) to encourage her friend
- (D) to prove she has courage

**4** Read this sentence from the passage.

"I got a right to speak my mind," she said, like I was a mosquito she could squash with her words.

The author most likely uses the underlined phrase in order to

- (A) compare Libby to an insect
- (B) show how small Maizell feels
- (C) compare how angry the girls are
- (D) show that Libby finds Maizell annoying

**5** Read this sentence from the passage.

Hattie says I'm cheap, but Momma calls me frugal.

What does the word frugal mean?

- (A) compassionate
- (B) lively
- (C) powerful
- (D) thrifty

**6** The author most likely intended this passage to show

- (A) the effects of teasing
- (B) the challenge of rock climbing
- (C) the difficulty of entering a competition
- (D) the reason people are fearful of heights

**7** If timidus means afraid, what does intimidate mean?

- (A) to distress
- (B) to confuse
- (C) to cause illness
- (D) to cause closeness

**8** Read these sentences from the passage.

Hattie has her mouth open so wide that I can see her back teeth. That's because she's shouting, "Maizell, you look like a bat! Libby's getting ahead of you! Come on, straighten up and climb right!" Easy for her to say, safe and upright on the ground.

What does Hattie mean by the underlined phrase?

- (A) Maizell is hanging upside down.
- (B) Maizell is dressed in black for the festival.
- (C) Maizell is running so fast it looks like she is flying.
- (D) Maizell's arms are flapping up and down as if she is flying.

**9** The author's style is characterized by comparisons like these found in "Raggedy Pants and the Dinosaur Wall":

dizzier than a seagull on a weathervane during a nor'easter  
like the creature from the swamp  
taller than the hotels on our oceanfront

Which of these sentences best explains the effect of these comparisons on the passage?

- (A) They create vivid images.
- (B) They create natural images.
- (C) They establish a frightening mood.
- (D) They reveal astonishing exaggerations.

**10** Why does Maizell decide to help Libby?

- (A) Maizell feels sorry for her.
- (B) Libby rips her new yellow shorts.
- (C) Libby admits she has been unkind.
- (D) Maizell wants to get back at Libby.



## **Directions**

**Read the poem “The Pigeon and the Peacock.” Then answer  
Numbers 11 through 19.**

# *The Pigeon and the Peacock*

by Jill Esbaum

At the end of our driveway,  
where streams of soapy water  
have pooled against the curb,  
struts a pigeon who's in love with himself.

He circles a puddle,  
cocking his head  
first one way,  
then another,  
admiring his iridescent<sup>1</sup> feathers  
and trying to determine his most flattering profile. 10

At the top of our driveway,  
where my brother waxes his car and  
buffs its windows to mirrored perfection,  
struts a peacock who's in love with himself. . . .

My brother, 15

He circles the car,  
cocking his head  
first one way,  
then another,  
practicing his lover-boy smile  
and striking a muscle pose in the windshield. 20

A car splashes by,  
dousing the pompous pigeon,  
and I tiptoe around the garage  
with a well-aimed hose. 25

**1**iridescent: shining

**11** Which pair of words best describes the brother in the poem?

- (A) busy, sensible
- (B) friendly, strong
- (C) humorous, lively
- (D) conceited, distracted

**12** How is the brother in the poem similar to the pigeon?

- (A) He acts like the pigeon.
- (B) He sounds like the pigeon.
- (C) They both get wet in the poem.
- (D) They both use a puddle for a mirror.

**13** Read the dictionary entry below.

**douse** *v.* 1. To put out; extinguish.  
2. To dip into water or other liquid.  
3. To soak with water or other liquid.  
4. To haul down quickly, especially a sail.

Now read these lines from the poem.

A car splashes by,  
dousing the pompous pigeon,

Which meaning of douse is used in these lines?

- (A) definition 1
- (B) definition 2
- (C) definition 3
- (D) definition 4



**Go On**

**14** How does the pigeon in the poem get wet?

- (A) it jumps off the curb
- (B) it falls into the puddle
- (C) a passing car sprays it with water
- (D) the speaker splashes it with the hose

**15** The last two stanzas of the poem compare the brother to a

- (A) sly fox
- (B) worker bee
- (C) vain peacock
- (D) playful puppy

**16** Read these lines from the poem.

A car splashes by,  
dousing the pompous pigeon,  
and I tiptoe around the garage  
with a well-aimed hose.

What will the speaker most likely do next?

- (A) wash the car
- (B) help the pigeon
- (C) frighten the pigeon
- (D) surprise the brother

**17**

Both “Raggedy Pants and the Dinosaur Wall” and “The Pigeon and the Peacock” show the human need for

- (A) acceptance
- (B) beauty
- (C) happiness
- (D) pleasure

**18**

What is the main idea shared by “Raggedy Pants and the Dinosaur Wall” and “The Pigeon and the Peacock”?

- (A) Enemies can become friends through understanding.
- (B) People should not brag about their accomplishments.
- (C) Brothers and sisters can remain friends even if they act differently.
- (D) People who think too much of themselves may eventually be humbled.

**19**

Explain one important way in which the characters in “Raggedy Pants and the Dinosaur Wall” and “The Pigeon and the Peacock” are similar. Be sure to thoroughly support your answer using details and examples from the passage and the poem. Write your answer on the lines below.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

**STOP** 

# Reading Grade 7

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

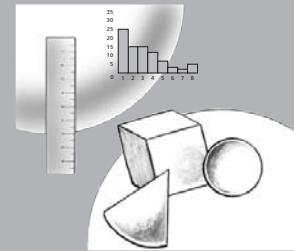
**Wisconsin Knowledge and Concepts Examinations  
Criterion-Referenced Test**

**Released Item Book**

**Mathematics**

**Grade**

**7**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### **What are released items?**

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### **How do I use this book?**

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

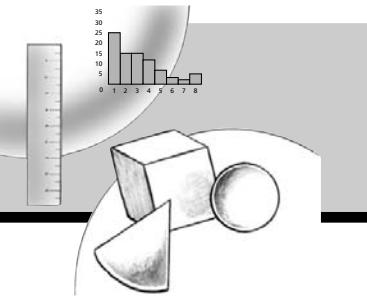
- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

# Mathematics

## Session 1



**1** What is 25% of 2,500?

- (A) 100
- (B) 500
- (C) 625
- (D) 1,000

**2** Look at the number pattern below.

14, 27, 40, 53, . . .

What is the next number in the pattern?

- (A) 65
- (B) 66
- (C) 67
- (D) 70

**3**  $15\frac{1}{12} - 2\frac{3}{8} =$

- (A)  $12\frac{17}{24}$
- (B)  $12\frac{3}{4}$
- (C)  $13\frac{1}{4}$
- (D)  $13\frac{17}{24}$



- 4** In 2000, the population of Madison was 208,054 and the population of Milwaukee was 596,974. What is the best estimate for the combined population of these cities?

- (A) a little less than 700,000
- (B) a little more than 700,000
- (C) a little less than 800,000
- (D) a little more than 800,000

- 5** Patrick does 5 hours of housework every week as part of his chores. His parents pay him \$5 per hour for any extra housework he does during the week. The table below shows the relationship between the number of hours of housework Patrick does in one week and the amount of money his parents pay him.

**Housework**

Number of Hours	Pay (in dollars)
5	0
6	5
7	10
10	25

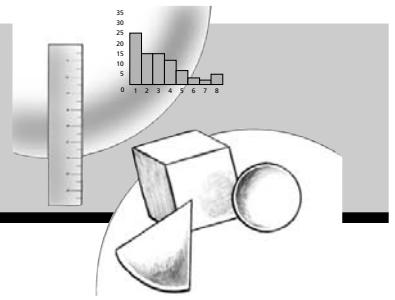
How much will Patrick's parents pay him for doing 12 hours of housework in one week?

- (A) \$35
- (B) \$40
- (C) \$55
- (D) \$60



# Mathematics

## Session 2



**6**

Josh recorded how fast he ran the 50-yard dash. Josh's times, in seconds, are listed below.

7.9      7.92      7.092      7

Which of these shows Josh's times ordered from least to greatest?

- (A) 7      7.9      7.92      7.092
- (B) 7.092      7.92      7.9      7
- (C) 7.92      7.9      7      7.092
- (D) 7      7.092      7.9      7.92

**7**

Use the inch side of your ruler to help you solve this problem.

Dean plans to make a box that holds CD cases like the one shown below.



What is the length of the CD case? Round the answer to the nearest  $\frac{1}{4}$  inch.

- (A)  $4\frac{3}{4}$  inches
- (B)  $4\frac{7}{8}$  inches
- (C) 5 inches
- (D)  $5\frac{1}{4}$  inches

**8**

Paul uses the expression below to calculate the cost to buy concert tickets, where  $n$  = the number of tickets he buys.

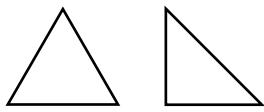
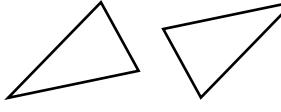
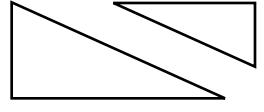
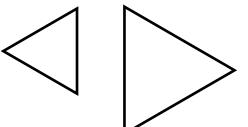
$$\$28 \times n$$

What does it cost for Paul to buy 4 concert tickets?

- (A) \$28
- (B) \$32
- (C) \$112
- (D) \$116

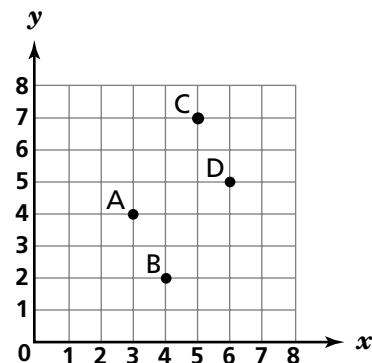
**9**

Which pair shows congruent triangles?

- (A) 
- (B) 
- (C) 
- (D) 

**10**

Mr. Ramirez told John to plot point A (3, 4), point B (4, 2), point C (5, 7), and point D (7, 5). The grid below shows where John plotted the points.



Which of John's points is plotted incorrectly?

- (A) A
- (B) B
- (C) C
- (D) D

**11**

Joan writes each letter of the word MATHEMATICS on separate pieces of paper. She puts the pieces of paper in a jar and asks a friend to pick one without looking.

**Step A**

What is the probability that Joan's friend will pick a paper with the letter "T"?

**Answer:** \_\_\_\_\_

**Step B**

Use what you know about probability to explain why your answer is correct. Use words, numbers, and/or symbols in your explanation.

---

---

---

---

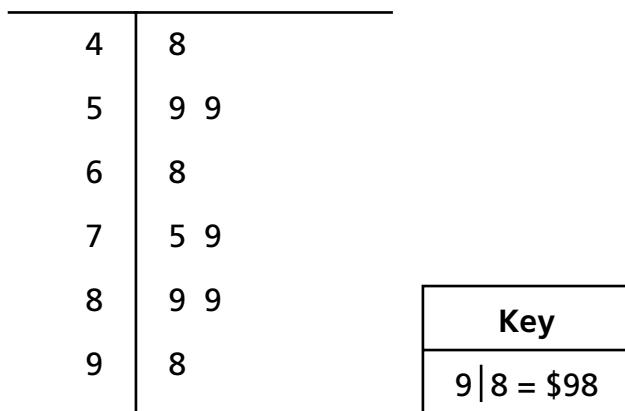
---

- 12** Which of these is equivalent to the expression  $(6 \times 2) + 0.59$ ?

- (A)  $6 \times (2 + 0.59)$
- (B)  $(2 \times 6) + 0.59$
- (C)  $(6 \times 2) \times 0.59$
- (D)  $2 + (6 \times 0.59)$

- 13** Tom researched the prices of new DVD players. The stem-and-leaf plot below shows the results of his research.

**Prices of DVD Players**



How many DVD players had a price of \$75 or less?

- (A) 3
- (B) 4
- (C) 5
- (D) 6



**14**

Celia bought one dozen 8-ounce chocolate bars for baking. How many pounds of chocolate did she buy?

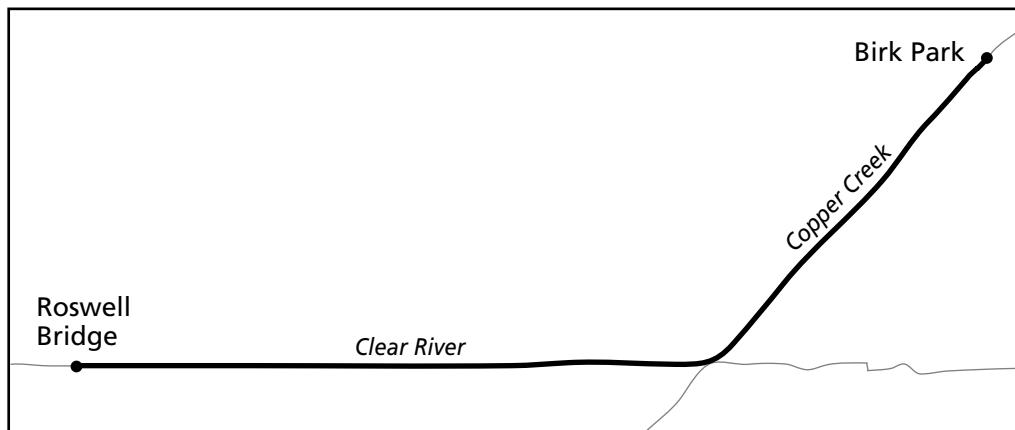
$$16 \text{ ounces} = 1 \text{ pound}$$

- (A) 2 pounds
- (B) 6 pounds
- (C) 8 pounds
- (D) 16 pounds

**15**

Use the centimeter side of your ruler to help you solve this problem.

Look at the map below.



Key
$1 \text{ cm} = \frac{1}{2} \text{ mi.}$

Jesse leaves Roswell Bridge in a canoe and floats down Clear River and Copper Creek to Birk Park. What is the distance that Jesse travels?

- (A) 6 miles
- (B) 7 miles
- (C) 13 miles
- (D) 14 miles

**16**

A piano teacher surveyed her students about the number of hours they practiced per week. The data below shows the results of her survey.

8    6    3    3    2    7    8    5    0    7    4    8    10

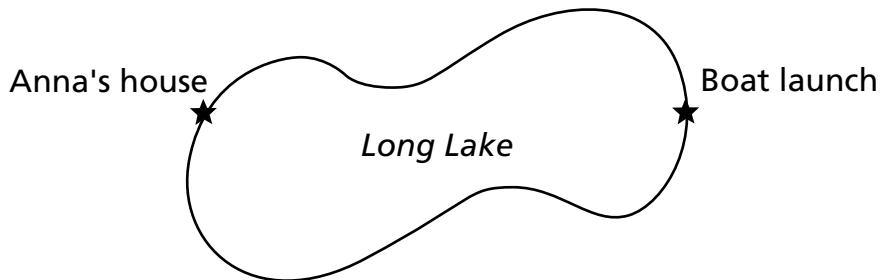
What is the mode of the data set?

- (A) 3
- (B) 6
- (C) 7
- (D) 8

**17**

Use the inch side of your ruler to help you solve this problem.

Anna paddled her canoe from her house to the boat launch on Long Lake, as shown on the map below.



Key
1 in. = $\frac{1}{2}$ mi.

About how far, in miles, did Anna paddle?

- (A)  $1\frac{1}{4}$  miles
- (B)  $1\frac{3}{4}$  miles
- (C)  $2\frac{1}{2}$  miles
- (D) 5 miles



**18**

Dan and Jen are making chocolate chip cookies for a bake sale. The chocolate chip cookie recipe is shown below.

### Chocolate Chip Cookies

1/2 cup butter  
1 egg  
3/4 cup sugar  
1 1/4 cups flour  
1/2 teaspoon salt  
1/2 teaspoon vanilla  
1/2 cup chocolate chips

This recipe makes 50 cookies.

#### Step A

Dan and Jen need to make 150 cookies for the bake sale. How many cups of flour will they need in order to make 150 cookies?

Answer: \_\_\_\_\_ cups of flour

#### Step B

Using the same recipe and what you know about fractions and whole numbers, write a similar word problem. The number of cookies needed must not be 50 or 150. Your word problem should ask for the number of cups of sugar that should be used. Solve your problem and show all your work.

---

---

---

---

---

**19**

Jamal surveyed 150 people about their favorite winter activities. The graph below shows the results of Jamal's survey.



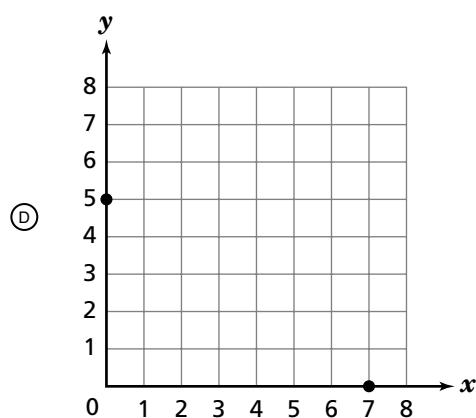
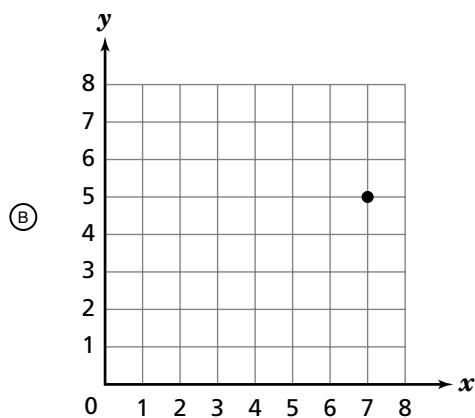
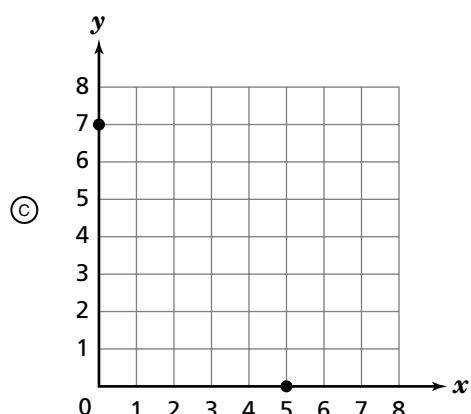
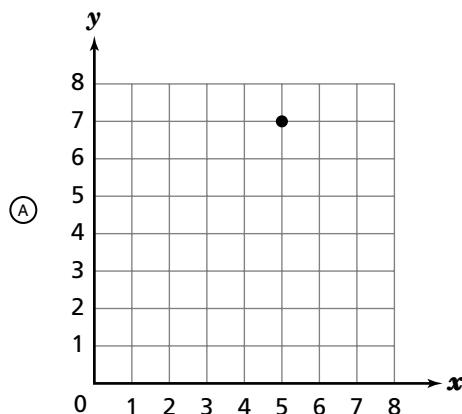
Which of these shows the total percent of people who selected activities that take place on ice?

- (A) 18%
- (B) 24%
- (C) 42%
- (D) 63%



**20**

Which of these is the correct representation of  $(5, 7)$ ?





# Mathematics Grade 7

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

**Wisconsin Knowledge and Concepts Examinations  
*Criterion-Referenced Test***

**WI**

# **Guide to**

## **Grade 7**

**Released Item Books  
In READING and MATHEMATICS**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional, or learning disability.

## **Guide to Grade 7 Released Item Books in Reading and Mathematics**

This document contains information for using, scoring, and interpreting the released items in reading and mathematics.

August 2006  
(Document Version 1.0, August 28, 2006)

Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction.

## **Table of Contents**

<b>Introduction.....</b>	<b>1</b>
<b>Reading .....</b>	<b>2</b>
Reading Item Information.....	4
Reading Objectives and Subskills.....	5
Reading Depth of Knowledge.....	8
Reading Rubric for Constructed-Response Items.....	9
Reading Constructed-Response Item Scoring Guide.....	10
Anchor Papers for Reading Constructed-Response Item.....	11
<b>Mathematics .....</b>	<b>16</b>
Mathematics Item Information .....	20
Mathematics Objectives and Subskills .....	21
Mathematics Depth of Knowledge .....	26
Mathematics Rubric for Constructed-Response Items .....	27
Mathematics Constructed-Response Item Scoring Guides.....	28
Anchor Papers for Mathematics Constructed-Response Items.....	30

## **Guide to Released Item Books**

Please help us improve this document. We welcome your comments and questions.  
Please contact us at:

Wisconsin Department of Public Instruction  
Office of Educational Accountability  
125 S. Webster Street, P.O. Box 7841  
Madison, WI 53707-7841

Toll-free: (800) 441-4563

Fax: (608) 266-8770

<http://www.dpi.wi.gov/oea/>

# Introduction

## What are released items?

The items in the Reading and Mathematics released item books are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in the released item books illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

## How do I use the released item books and this guide?

### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

This guide provides instructions for administering the released item books as practice tests and information for scoring the items, including scoring guides and anchor papers for the constructed-response items. The item information tables identify the answer key, what each item measures, depth of knowledge, and item difficulty. Item difficulty is presented as both the percentage of students who answered the item correctly and the scale score location of the item. The item's scale score location describes where the item functions along the ability scale. Items with higher scale score locations are considered more difficult than items with lower scale score locations. Students with scale scores above the scale score location of the item would have a greater probability of answering the item correctly than students with scale scores below the item's scale score location.

### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. Note that a student's score on the practice test cannot be converted to a total scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

## Reading

### Sample Directions for Administering the Reading Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, and scratch paper. Students' test books should be closed.*

**SAY** In this test, you will read some passages and answer both multiple-choice questions and short-answer questions about those passages. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Write your answer on the lines in your test book. You may also write in the space under the lines, but your answer must stay inside the boxed area. Answers or parts of answers written outside the boxed area will not be scored. You may use scratch paper to help you plan your answer, but remember to write your answer in the boxed area in your test book. After you have written your answer, be sure to read it to make sure you have written your ideas clearly and completely.

For both the multiple-choice questions and the short-answer questions, remember to look back at the reading passages to help you answer the questions. For some questions, you may need to go back to two reading passages to find the answer. Be sure to look back at both reading passages to help you answer these questions.

You will have 40 minutes to do the test. Work until you come to the word "STOP" at the bottom of the page. You may go back and check your answers. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** Please open your test book to Page 2.

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY** You may begin.

*Record the starting and stopping times.*

Record the Starting Time:	Add 40 Minutes:	Record the Stopping Time:
_____	_____ + 40 _____	_____

*Check to be sure that students are marking their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY ➤ Stop. This is the end of the test. Please close your test book.**

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Reading Item Information

Item	Answer Key	Objective/ Subskill	Depth of Knowledge Level	Format	2005 –06 Item Statistics				Scale Score Location
					A or 0	B or 1	C or 2	D or 3	
1	A	2.1	1	SR	*92%	2%	2%	4%	508
2	A	2.1	1	SR	*66%	23%	7%	4%	432
3	D	2.1	1	SR	8%	2%	1%	*88%	527
4	B	4.3	4	SR	8%	*69%	12%	11%	499
5	D	1.1	1	SR	22%	10%	13%	*55%	543
6	A	4.1	3	SR	*91%	4%	3%	2%	673
7	A	1.2	3	SR	*63%	22%	3%	11%	533
8	A	1.1	3	SR	*91%	2%	2%	4%	530
9	A	3.3	3	SR	*44%	22%	16%	18%	434
10	A	3.1	3	SR	*87%	3%	6%	3%	453
11	D	3.1	3	SR	15%	25%	21%	*39%	549
12	A	2.1	3	SR	*69%	3%	13%	15%	504
13	C	1.3	2	SR	5%	9%	*81%	5%	478
14	C	3.1	2	SR	4%	6%	*81%	7%	485
15	C	3.3	3	SR	8%	5%	*81%	5%	463
16	D	4.1	3	SR	9%	10%	14%	*65%	514
17	A	4.1	4	SR	*48%	8%	29%	13%	603
18	D	3.1	3	SR	30%	12%	5%	*52%	528
19		3.1	3	BCR	29%	31%	21%	16%	536

Objective/Subskill and Depth of Knowledge Level information follows this table.  
 SR: selected response; BCR: brief constructed response.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
433 and below	434–466	467–522	523 and above

# Reading Objectives and Subskills

---

## Types of Text

---

The grade 7 reading assessment presents a variety of reading passages representing literary, informational, and everyday text. Passages may be up to 1,500 words long and some passages may be paired with other, related passages. Students may be asked to read and answer questions about texts such as these:

Literary	Informational	Everyday
Short stories, novel excerpts, poetry, drama, biography, autobiography	Magazine, textbook, and newspaper articles, government documents, historical papers, reports, manuals, reviews, editorial cartoons	Charts, schedules, forms, timelines, applications, product use or warning labels, safety notices, simple instructions

---

## Objectives, Subskills, and Descriptors

---

Objectives (labeled 1, 2, 3, and 4) and subskills (labeled 1.1, 1.2, etc.) denote general knowledge and skills that are assessed and reported on the WKCE-CRT. Bulleted descriptors are *examples* of specific knowledge or skills that may be included within each subskill. The subskills include knowledge and skills *such as, but not limited to* the descriptors.

### 1. Determine the meaning of words and phrases in context.

#### 1.1. Use context clues to determine the meaning of words and phrases.

- Use context clues to determine the meaning of unfamiliar words.
- Understand the meaning of words and phrases used figuratively.
- Use context clues to determine the meaning of multiple-meaning words.
- Use knowledge of synonyms and antonyms to determine the meaning of words.
- Identify analogies to demonstrate understanding of word meaning.
- Understand connotative and denotative meaning of words.

#### 1.2. Use knowledge of word structure to determine the meaning of words and phrases.

- Identify the meaning of a word with an affix.
- Use knowledge of root words to determine the meaning of a word.

#### 1.3. Use word reference materials to determine the meaning of words and phrases.

- Use an entry from a word reference to determine word meaning and pronunciation.

## **2. Understand text.**

- 2.1. Demonstrate understanding of literal meaning by identifying stated information in literary text.
  - Identify stated information about story elements.
- 2.2. Demonstrate understanding of literal meaning by identifying stated information in informational text.
  - Identify stated information about main ideas and supporting details.
  - Identify stated information provided through text features.
- 2.3. Demonstrate understanding of explicitly stated sequence of events in literary and informational text.
  - Identify first, next, and last events.
  - Follow steps in a process.

## **3. Analyze text.**

### **3.1. Analyze literary text.**

- Make inferences about story elements.
- Summarize important ideas and events.
- Analyze stated or implied theme, message, or main idea.
- Draw conclusions.
- Identify purpose.
- Make inferences based on text features or visuals.
- Analyze diverse viewpoints.

### **3.2. Analyze informational text.**

- Identify implied main ideas and supporting details.
- Identify implied relationships (such as cause/effect and compare/contrast).
- Summarize information.
- Identify purpose.
- Make inferences based on text features.
- Make inferences based on visual information.
- Make inferences about text structure.
- Analyze diverse viewpoints.
- Use graphic organizers to analyze and classify information.

3.3. Analyze author's use of language in literary and informational text.

- Analyze the use of literary devices.
- Recognize and distinguish among genres.
- Make inferences about the author's tone.
- Make inferences about the author's style.
- Analyze the author's use of rhetorical devices.
- Distinguish among types of language (such as formal/informal, literary/technical, and serious/humorous).

#### **4. Evaluate and extend text.**

4.1. Evaluate and extend literary text.

- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.
- Evaluate diverse viewpoints and influences.
- Distinguish between important and unimportant details.
- Evaluate the credibility of story elements.
- Draw conclusions.

4.2. Evaluate and extend informational text.

- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.
- Distinguish between facts and opinions.
- Evaluate the accuracy, currency, and credibility of information.
- Evaluate diverse viewpoints and influences.
- Distinguish between important and unimportant facts.
- Draw conclusions.

4.3. Evaluate and extend the author's use of language in literary and informational text.

- Evaluate the author's word choice and use of language.
- Recognize bias and propaganda in language.

## **Reading Depth of Knowledge**

These depth of knowledge levels are intended to reflect the level of cognitive demand placed on students by test items. As the level of cognitive demand increases, so does the mental effort and integration of information required to answer a test item successfully. Each level represents important cognitive skills, and each level requires the use of cognitive skills in lower levels. For example, a student who is asked to make connections between two texts (level 4) would also need to recall pertinent details from the texts (level 1), understand stated information in the texts (level 2), and make inferences and draw conclusions about each text (level 3). The levels assume grade-appropriate text, vocabulary, and tasks. Test items should represent a range of depth of knowledge levels, and items within each level may represent a range of difficulty as indicated by percentage of students who answered the item correctly or scale score location.

### **Level 1: Recognizing and Recalling**

Students demonstrate a grade-appropriate ability to recognize or recall basic facts, terms, or definitions. For example, a student might be asked to identify an explicitly stated main idea in a text.

### **Level 2: Using Fundamental Concepts and Procedures**

Students demonstrate a grade-appropriate ability to use basic facts, definitions, skills, or concepts. For example, a student might be asked to use information in a text to complete a graphic organizer.

### **Level 3: Concluding and Explaining**

Students demonstrate understanding of grade-appropriate text by using stated and implied information and text elements to draw conclusions. Students explain and convey ideas effectively. For example, a student might be asked to provide details and examples from a text to support a conclusion.

### **Level 4: Evaluating, Extending, and Making Connections**

Students demonstrate their knowledge of concepts when evaluating or interpreting grade-level text. Students make connections among texts, common experiences, and issues. For example, a student might be asked to evaluate an author's effectiveness in achieving an intended purpose.

# **Reading Rubric for Constructed-Response Items**

## **3 points**

- The response demonstrates *thorough understanding* of the reading concept embodied in the task.
- The response is *accurate, complete, insightful, and fulfills all the requirements* of the task.
- Necessary support and/or examples are included.
- Information is clearly *text-based*.

## **2 points**

- The response demonstrates *partial understanding* of the reading concept embodied in the task.
- The response is *accurate* and *fulfills most of the requirements* of the task.
- Necessary support and/or examples may not be complete or clearly text-based.

## **1 point**

- The response demonstrates *an incomplete understanding* of the reading concept embodied in the task.
- The response provides *some information that is text-based*, but does not fulfill the requirements of the task.
- Information provided is *too general* or *too simplistic*.
- Necessary support and/or examples may be incomplete or omitted.

## **0 points**

- The response demonstrates *no understanding* of the reading concept embodied in the task.
- The response is *inaccurate, confused, or irrelevant*.
- The student has *failed to respond to the task*.

# Reading Constructed-Response Item Scoring Guide

Forms: Public Release	Item #: 19	Item Type: BCR	TB Page #: 11	AB Page #: n/a	
Reporting Category: Reading				Max Score Pts: 3	
Objective: 3. Analyzes Text					
Subskill: 3.2. Analyzes informational text					
Descriptor: Identifies/analyzes implied theme/message/main idea					

## Item Stem

**Explain one important way in which the characters in "Raggedy Pants and the Dinosaur Wall" and "The Pigeon and the Peacock" are similar. Be sure to thoroughly support your answer using details and examples from the passages. Write your answer on the lines below.**

**Responses should be evaluated according to the guidelines outlined below for each score point.**

### 3 points

- The response demonstrates a **thorough understanding** of one important similarity between characters in the passage and the poem.
- The response **indicates an understanding** of how the identified similarity between characters is important.
- The student supports the response with **highly relevant ideas and details** from the passage and the poem. For example:
  - Characters in both the story and the poem try to "get back" at someone. While Maizell pretends that Libby's pants are torn, the speaker in the poem aims a hose at the brother, intending to soak him.
  - Characters in both the story and the poem are full of themselves (egotistical/self/important). While the brother in the poem admires himself in the reflection of the car, Libby buys the same shorts as Maizell, and yet acts as if she is better/more important than Maizell.

### 2 points

- The response demonstrates a **partial understanding** of the passage and the poem, and identifies a similarity between the two characters.
- The response makes **connections between relevant ideas** in the poem and the passage, but **does not indicate an understanding of the larger idea** of how the identified similarity between characters is important.
- The student supports the response with **accurate details** from the text. For example:
  - Characters in both the story and the poem do mean things to other people. Maizell is mean to Libby and the speaker in the poem is mean to the brother
  - The brother in the poem looks at himself in the reflection of his car, and Libby buys the same shorts as Maizell in the story.

### 1 point

- The response demonstrates an **incomplete understanding** of the reading passage and the poem and does not fulfill all the requirements of the task.
- The response comments on **relevant events** in the passage and the poem, but **fails to make connections** between characters in the two texts.
- The student provides **limited or vague text-based details**. For example:
  - Some of the characters were pretty mean.
  - One of the characters does something for himself and so does someone in the poem.

## Anchor Papers for Reading Constructed-Response Item

Explain one important way in which the characters in "Raggedy Pants and the Dinosaur Wall" and "The Pigeon and the Peacock" are similar. Be sure to thoroughly support your answer using details and examples from the passage and the poem. Write your answer on the lines below.

The person is thinking that the whole world revolves around them. They get caught up in themselves and get a big reality check in the end, like getting sprayed with the hose or being made believe that your shorts ripped.

### Score Point 3

- >Demonstrates a thorough understanding of one important similarity between characters in the passage and the poem. (whole world revolves around them/get a big reality check)
- >Indicates an understanding of how the identified similarity between characters is important. (caught up in themselves)
- >Supports the response with highly relevant ideas and details from the passage and poem. (getting sprayed with the hose/made to believe your shorts ripped)

Explain one important way in which the characters in "Raggedy Pants and the Dinosaur Wall" and "The Pigeon and the Peacock" are similar. Be sure to thoroughly support your answer using details and examples from the passage and the poem. Write your answer on the lines below.

Libby and the brother are similar. They are both very full of them selves: Libby brags about how much money she has and acts like she's better than everyone else, and the brother struts around practicing his faces and striking poses.

Score Point 3

- >Demonstrates a thorough understanding of one important similarity between characters in the passage and the poem. (both very full of themselves)
- >Indicates an understanding of how the identified similarity between characters is important.
- >Supports the response with highly relevant ideas and details from the passage and poem. (brags about how much money she has/struts around striking poses)

Explain one important way in which the characters in "Raggedy Pants and the Dinosaur Wall" and "The Pigeon and the Peacock" are similar. Be sure to thoroughly support your answer using details and examples from the passage and the poem. Write your answer on the lines below.

The brother and libby are both acting all high and mighty. Then when the girl and the sister do some thing to them it brings them back down to earth.

Score Point 2

- >Demonstrates a partial understanding of the passage and the poem, and identifies a similarity between two of the characters. (both are acting all high and mighty)
- >Makes connections between relevant ideas in the poem and passage.
- >Supports the response with accurate details/examples from the text. (the girl and sister both "bring them back down to earth" is a summary of details from the passage)

Explain one important way in which the characters in "Raggedy Pants and the Dinosaur Wall" and "The Pigeon and the Peacock" are similar. Be sure to thoroughly support your answer using details and examples from the passage and the poem. Write your answer on the lines below.

I think the sister in the pigeon and the Peacock and Maizell both dislike people that think to much of them selves.

Score Point 1

- >Does not fulfill all of the requirements of the task. (does not support answer using details and examples from the passage and poem)
- >Comments on relevant events in the passage and poem, but fails to make connections between characters in the two texts.
- >Provides limited or vague text-based details. (lacks details)

Explain one important way in which the characters in "Raggedy Pants and the Dinosaur Wall" and "The Pigeon and the Peacock" are similar. Be sure to thoroughly support your answer using details and examples from the passage and the poem. Write your answer on the lines below.

there all about friends  
and foes

Score Point 0

- >Demonstrates no understanding of the reading concept embodied in the task.
- >Response is inaccurate, confused, or irrelevant. (too general)

# Mathematics

## Sample Directions for Administering the Mathematics Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, scratch paper, and the following manipulatives:*

- Ruler
- Calculator for Session 2  
(4-function calculator required; use of scientific calculator is student preference)

*NOTE: The use of a calculator is not allowed to solve the problems in Session 1.*

*Also required for the operational test, but not for this released item book:*

- Protractor

*Students' test books should be closed.*

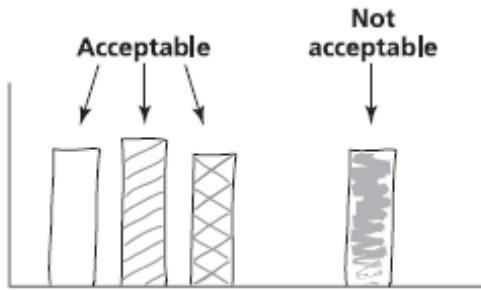
**SAY** Remember to use only a No. 2 pencil in this test. In Session 1, you will be answering multiple-choice questions and short answer questions. Multiple-choice questions are questions that ask you to choose the best answer. For the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

You may use scratch paper to work the multiple-choice questions, but remember to fill in the circle that goes with the answer you choose.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

For the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

Demonstrate by drawing the illustration below on the board.



**Now you will do Session 1 of the Mathematics test. Remember to read all of the directions and information in the test book. When you come to the word "STOP" at the bottom of the page, you have finished Session 1. You may go back and check your answers, but do not go on to Session 2 of the Mathematics test. When you have finished, sit quietly until everyone else has finished.**

**You will have 10 minutes to do Session 1. Make sure you stop at the end of Session 1.**

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY ▶ Please open your test book to Page 2.**

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY ▶ You may begin.**

*Record the starting and stopping times for Session 1.*

Record the Starting Time:	Add 10 Minutes: <hr/> + 10 <hr/>	Record the Stopping Time: <hr/>
---------------------------	-------------------------------------	------------------------------------

*Check to be sure that students are marking and writing their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY ▶ Stop. Put down your pencil and close your test book. This is the end of Session 1.**

*Pause to be sure that all students have closed their test books. Before proceeding to Session 2, make sure each student has a calculator.*

*During an actual test administration, students would be required to clear their calculators' memories immediately before and after each calculator-allowed session.*

**SAY** Now, open your test book to the page labeled “Mathematics Session 2.”

In Session 2, you will be answering multiple-choice questions and short-answer questions. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

Remember, for the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

You will have 35 minutes to do Session 2. Remember to read all of the directions and information in this part of the test book. When you come to the word “STOP” at the bottom of the page, you have finished Session 2.

You may go back over Session 2 to check your answers, but do not go back to Session 1. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** You may begin.

*Record the starting and stopping times for Session 2.*

Record the Starting Time:	Add 35 Minutes:	Record the Stopping Time:
_____	+ 35	_____

**SAY** Stop. This is the end of Session 2. Please close your test book.

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Mathematics Item Information

Item	Answer Key	Calculator Allowed	Objective/Subskill	Depth of Knowledge Level	2005–06 Item Statistics					Scale Score Location
					Format	A or 0	B or 1	C or 2	D	
1	C	No	Bb	2	SR	16%	19%	*53%	12%	555
2	B	No	Fa	2	SR	5%	*86%	5%	3%	476
3	A	No	Bb	2	SR	*32%	18%	35%	14%	571
4	D	No	Bb	1	SR	4%	9%	11%	*75%	500
5	A	No	Fa	2	SR	*73%	10%	4%	12%	518
6	D	Yes	Ba	1	SR	28%	17%	2%	*53%	542
7	C	Yes	Db	1	SR	16%	14%	*60%	9%	565
8	C	Yes	Fb	2	SR	5%	4%	*89%	2%	463
9	B	Yes	Cb	2	SR	9%	*65%	11%	14%	535
10	D	Yes	Cc	1	SR	3%	3%	4%	*88%	456
11		Yes	Eb	2	A-BCR	40%	57%			524
11		Yes	Ae	3	B-BCR	19%	19%	56%		504
12	B	Yes	Fc	2	SR	7%	*83%	8%	2%	492
13	C	Yes	Ea	2	SR	28%	26%	*37%	8%	588
14	B	Yes	Da	2	SR	14%	*69%	10%	7%	525
15	B	Yes	Dc	2	SR	9%	*67%	9%	15%	514
16	D	Yes	Ea	2	SR	6%	17%	6%	*70%	503
17	A	Yes	Dc	2	SR	*50%	15%	30%	4%	548
18		Yes	Ba	2	A-BCR	38%	60%			522
18		Yes	Ae	4	B-BCR	37%	35%	22%		552
19	C	Yes	Ea	2	SR	5%	6%	*86%	2%	479
20	A	Yes	Cc	1	SR	*80%	16%	2%	2%	484

Objective/Subskill and Depth of Knowledge Level information follows this table.  
 SR: selected response; A-BCR: brief constructed response, part A; B-BCR: brief constructed response, part B.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
479 and below	480–503	504–554	555 and above

# Mathematics Objectives and Subskills

## Beginning of Grade 7

---

### How to use the Framework

---

The mathematics assessment framework is an indication of the knowledge and skills that will be assessed on the November WKCE-CRT. ***This information does not replace your local curriculum.*** However, you may wish to ensure that your local curriculum includes the knowledge and skills described in the framework.

This section of the framework describes the types of content that students may encounter on the WKCE-CRT

The knowledge and skills to be assessed are organized into objectives, subskills, and descriptors as shown below. WKCE-CRT results will be reported by objectives and subskill.

**A. Objective:** A group of cognitively related skills.

**A.a. Subskill:** A group of related knowledge and skills that *may include, but is not limited to*, the descriptors which follow.

- **Descriptor:** an example of a specific knowledge or skill that may be assessed.

---

### Objectives, Subskills, and Descriptors

---

#### Objective   Mathematical Processes

**A:**

Students will effectively use mathematical knowledge, skills, and strategies related to reasoning, communication, connections, representation, and problem solving.

**Descriptors, such as but not limited to**

- Use reasoning and logic to:
  - Perceive patterns
  - Identify relationships
  - Formulate questions
  - Pose problems
  - Make conjectures
  - Justify strategies
  - Test reasonableness of results
- Communicate mathematical ideas and logical reasoning using the vocabulary of mathematics in a variety of ways (e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models).
- Connect mathematics to the real world, as well as within mathematics.
- Create and use representations to organize, record, and communicate mathematical ideas.
- Solve and analyze routine and non-routine problems.

---

#### Objective   Number Operations and Relationships

**B:**

**Sub-skill      Concepts**  
**B.a.:**

**Descriptors, such as but not limited to**

- Recognize and apply place-value concepts to numbers less than 10,000,000 with decimals to the thousandths place.
- Read, write, and represent numbers using words, numerals, number lines, arrays, and expanded form ( $12.09=10+2+.09$ ) and symbolic renaming ( $12.09=13-.91$ ).
- Compare and order a set of fractions or decimals (to the hundredths place) and use symbols ( $<$ ,  $>$ ,  $=$ ,  $\neq$ ,  $\leq$ ,  $\geq$ ).
- Identify and use number theory concepts:
  - prime and composite numbers
  - divisibility potential of numbers (divisors of 1-10, 25, and multiples of 10).
  - least common multiples
  - greatest common factor of two numbers
- Demonstrate understanding of fractions and benchmark percents in problems with context. (e.g., Joe got six questions correct and two were wrong, what percent did he get correct?).
- Apply proportional reasoning to a variety of problem situations (e.g., comparisons and/or rates).
- Identify equivalent forms of fractions, decimals and percents.

**Sub-skill      Computation**

**B.b.:**

- Use all operations in everyday situations (including monetary contexts) to solve single or multi-step word problems.
- Solve problems involving percents with and without context.
- Add and subtract decimals including thousandths with and without context.
- Multiply decimals including hundredths with and without context.
- Divide decimals including hundredths by single-digit divisors in problems with and without context.
- Demonstrate understanding of the concept of division of fractions in a contextual setting.
- Add, subtract, and multiply mixed numbers and fractions with like and unlike denominators.
- Estimate the sum, difference, and product of whole numbers, common fractions, mixed numbers, and decimals to thousandths and estimate benchmark fractions.
- Determine reasonableness of answers.

**Objective      Geometry**

**C:**

**Sub-skill      Describing figures**

**C.a.:**

**Descriptors, such as but not limited to**

- Name regular and irregular polygons up to eight sides and identify and justify by characteristics whether a shape is a polygon.
- Determine the number of faces, edges, and vertices given an illustration of a 3-dimensional figure.
- Classify shapes according to characteristics such as parallel and perpendicular lines; identify right, acute, and obtuse angles with varied orientations.
- Find the measure of the third angle of a triangle when given the measures of two interior angles.
- Decompose convex polygons into triangles using diagonals from a single vertex.

**Sub-skill      Spatial relationships and transformations**

**C.b.:**

**Descriptors, such as but not limited to**

- Draw and/or describe a similar figure when given a polygon drawn on graph paper with vertices at lattice points.

- Identify figures that are congruent and/or similar.
- Demonstrate understanding of similarity by finding the relationship between the sides of two figures.
- Draw or identify the image of a figure based on one or more transformations (reflection, rotation and/or translation).
- Design symmetrical shapes.
- Draw or identify lines of symmetry.
- Identify and describe 3-dimensional figures from multiple perspectives.

**Sub-skill      Coordinate systems**

**C.c.:**

**Descriptors, such as but not limited to**

- Identify, locate, plot coordinates in the four quadrants and transformations of points across the x- or y-axis.
- Locate or plot coordinates in the four quadrants using a geometric figure (e.g., transformations).

**Objective      Measurement**

**D:**

**Sub-skill      Measurable attributes**

**D.a.:**

**Descriptors, such as but not limited to**

- Select the appropriate unit of measure to estimate the length, liquid capacity, volume, and weight/mass of everyday objects using U.S. customary and metric.
- Convert units within a system (e.g., feet to yards; ounces to pounds; inches to feet; pints to quarts).
- Approximate conversions of units between metric and U.S. customary systems using a model or in context (quart/liter; yard/meter).

**Sub-skill      Direct measurement**

**D.b.:**

**Descriptors, such as but not limited to**

- Apply appropriate tools and techniques to measure down to the nearest 1/4-, 1/8- or 1/16-inch or nearest centimeter or millimeter.
- Determine and compare elapsed time in problem-solving situations.
- Measure and/or draw angles up to 180 degrees.

**Sub-skill      Indirect measurement**

**D.c.:**

**Descriptors, such as but not limited to**

- Estimate area given a reference.
- Determine perimeter/circumference and area of squares, rectangles, triangles, parallelograms and circles in real-world context.
- Determine the distance between points using a scale.

**Objective      Statistics and Probability**

**E:**

**Sub-skill      Data analysis and statistics**

**E.a.:**

**Descriptors, such as but not limited to**

- Summarize data sets in tables, charts, and diagrams with and or without context.
- Evaluate a set of data to generate or confirm/deny hypotheses.
- Extract, interpret, and analyze data from tables, simple stem-and-leaf plots, simple bar graphs, line plots, line graphs, simple circle graphs, charts, and diagrams.

- Create graph with one-variable data sets using simple stem-and-leaf plots, bar graphs, circle graphs, line plots, and line graphs; discuss appropriateness of graphs selected.
- Find mean, median (with odd set of data), mode, and range of a set of data with and without context.
- Evaluate sources of data in context and multiple representations of a given data set.

**Sub-skill      Probability**

**E.b.:**

**Descriptors, such as but not limited to**

- Determine the likelihood of an event and probability based on one independent event (e.g., spinning the arrow on a spinner).
- Use probabilities to estimate outcomes and evaluate fair and unfair simple events.
- Use data from simulations provided in charts/tables to solve and interpret probability problems.
- Describe and determine the number of combinations of selecting 3 items from 4 or more items.
- Solve problems involving sample spaces or diagrams.
- Analyze outcomes based on an understanding of theoretical and experimental probability.

**Objective      Algebraic Relationships**

**F:**

**Sub-skill      Patterns, relations and functions**

**F.a.:**

**Descriptors, such as but not limited to**

- Use two concurrent numeric patterns to describe and analyze functional relationships between two variables in two concurrent numeric patterns using addition and subtraction.
- Extend a given arithmetic sequence of pictures or numbers.
- Describe and interpret linear patterns in tables and graphs.
- Identify the rule to complete or extend a function table or any combination of the two using one operation (+, -, ×, ÷) and numbers (0 through 100) in the function table.
- Describe real-world phenomena represented by a graph. Describe real-world phenomena that a given graph might represent.

**Sub-skill      Expressions, equations and inequalities**

**F.b.:**

**Descriptors, such as but not limited to**

- Demonstrate understanding of equality and inequality and solve single-variable equations using symbols ( $<$ ,  $>$ ,  $=$ ).
- Solve single-variable, one-step equations and algebraic expressions with one variable and one operation and whole number coefficients with and without context.
- Describe in words the generalization for a given one-operation pattern.
- Solve two-step, multi-operation equations with letter variables and whole number coefficients with and without context (e.g.,  $3x + 1 = 7$ )
- Represent problem situations with one- or two-step equations or expressions.
- Describe in words the generalization for a given one-operation pattern.
- Evaluate formulas with and without context by solving for a specified variable.

**Sub-skill      Properties**

**F.c.:**

**Descriptors, such as but not limited to**

- Identify a pair of equivalent numerical expressions where the commutative property of either addition or multiplication has been used.
- Demonstrate understanding of up to three-step order of operations expression with and without context using parentheses and exponents.
- Demonstrate understanding of distributive property.

## **Mathematics Depth of Knowledge**

The representative examples for the following depth of knowledge categories are intended to reflect student performance expectations with regard to the level of mental effort and amount of information integrated by the student. Items are targeted at one of four levels of cognitive demand. Each level of demand is represented by items with a range of difficulty, as indicated by the percentage of students who answered the item correctly or by scale score value. Assuming grade-appropriate vocabulary and test items, these levels are viable and useful across all grades.

### **Level 1: Recognizing and Recalling**

Students recognize and recall basic facts, terms, concepts, and definitions of the content and processes of mathematics. For example, students may be required to do computation with whole numbers, fractions, decimals, and integers.

### **Level 2: Using Fundamental Concepts and Procedures**

Students describe or apply basic facts, terms, rules, concepts and definitions of the content and processes of mathematics.

### **Level 3: Concluding and Explaining**

Students demonstrate an understanding of complex ideas, draw conclusions based on this understanding, and communicate ideas and conclusions effectively.

### **Level 4: Evaluating, Extending, and Making Connections**

Students synthesize skills and techniques from various concepts of mathematics to solve multifaceted problems, and justify conclusions using mathematical definitions, properties, and principles. For example, students may be required to support mathematical arguments with definitions, properties, and principles.

## **Mathematics Rubric for Constructed-Response Items**

Step B of the constructed-response items is scored using a generic rubric.

- |                 |   |
|-----------------|---|
| <b>2 points</b> | The student demonstrates a thorough understanding of the mathematical concepts and/or procedures represented in the problem. The student uses appropriate mathematical procedures and/or concepts to explain or justify the response to Step A, and provides clear and complete explanations and interpretations containing words, calculations, or symbols, unless otherwise specified in the item stem.<br><br>The response may contain minor flaws that do <u>not</u> detract from the demonstration of a thorough understanding of the problem. |
| <b>1 point</b>  | The student demonstrates only a partial understanding of the mathematical concepts and/or procedures represented in the problem. The response lacks an essential understanding of the underlying mathematical concepts used to provide the response to Step A.<br><br>The response contains errors related to the misinterpretation of important aspects of the problem, misuse of mathematical procedures and/or concepts, or misinterpretation of results.  |
| <b>0 points</b> | The student provides a completely incorrect explanation or justification, or one that cannot be interpreted, or no response at all.   |

# Mathematics Constructed-Response Item Scoring Guides

Form: Public Release	Item #: 11	Item Type: BCR	TB Page #: 8	AB Page #: n/a
Objective for Step A: E. Statistics and Probability				Max Score Pts:
Subskill: E.b. Probability				Step A: 0–1
Objective for Step B: A. Mathematical Processes				Step B: 0–2

Sample correct response
Step A $\frac{2}{11}$
Step B I counted the letters in Mathematics and got 11. Then I counted the T's and got 2. So the chances of picking a T are $\frac{2}{11}$ .

Step A: Response is limited to correct answer or range below
Any of the following: <ul style="list-style-type: none"><li>• 2:11</li><li>• <math>\frac{2}{11}</math></li><li>• 2 out of 11</li><li>• 0.18</li><li>• 18%</li></ul>

Step B: Responses may include, but may not be limited to, the Answer Cues below	
<b>2 points</b>	<u>Both</u> of the following tasks are accomplished: <ul style="list-style-type: none"><li>• The student indicates a total of 11 letters in the word MATHEMATICS.</li><li>• The student indicates that the word contains 2 letter T's.</li></ul>
<b>1 point</b>	<u>One</u> of the following applies: <ul style="list-style-type: none"><li>• The student accomplishes only one of the above tasks.</li><li>• The student accomplishes both of the above tasks, but with a computational error. [See Note.]</li><li>• The response might show an understanding of outcomes, but not the correct way in which desired outcomes relate to possible outcomes, i.e. calling the result 11 out of 2 in the explanation.</li></ul>
<b>0 points</b>	The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.
Note: If an arithmetic error leads to loss of credit for Step A, and the process is otherwise correct, award full credit for Step B.	

Form: Public Release	Item #: 18	Item Type: BCR	TB Page #: 12	AB Page #: n/a
Objective for Step A: B. Number Operations & Relationships			Max Score Pts:	
Subskill: B.a. Number Concepts			Step A: 0–1	
Objective for Step B: A. Mathematical Processes			Step B: 0–2	

**Step A: Response is limited to correct answer or range below**

$3\frac{3}{4}$

**Step B: Responses may include, but may not be limited to, the Answer Cues below**

**2 points** Both of the following tasks are accomplished:

- The student creates a word problem stating a new number of cookies needed (must not be 150 nor 50), and asking for the number of cups of sugar that will be used.
- The student shows a mathematically correct solution to the problem, using ratios or proportions with the fraction  $\frac{3}{4}$ .

**1 point** One of the following applies:

- The student accomplishes only the first of the above tasks.
- The student accomplishes both of the above tasks, but with a computational error. [See Note.]
- The student accomplishes both of the above tasks, but uses 50 or 150 cookies, contrary to instructions.
- The student correctly calculates the number of cups of a different ingredient.
- The student gives and uses a different recipe, but calculates the number of cups of sugar correctly, according to the different recipe.

**0 points** The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.

Note: If an arithmetic error leads to loss of credit for Step A, and the process is otherwise correct, award full credit for Step B. The errors include (a) incorrectly calculated ratio of “recipe cookies” to “cookies needed”, (b) incorrect multiplication of the fraction  $\frac{3}{4}$ .

## Anchor Papers for Mathematics Constructed-Response Items

### Item 11

Joan writes each letter of the word MATHEMATICS on separate pieces of paper. She puts the pieces of paper in a jar and asks a friend to pick one without looking.

**Step A**

What is the probability that Joan's friend will pick a paper with the letter "T"?

Answer: 18%

**Step B**

Use what you know about probability to explain why your answer is correct. Use words, numbers, and/or symbols in your explanation.

I put the two 'T's over 11 which was the total number of letters.

I divided 2 by 11 and got .18.

I multiplied .18 by 100 to get 18%.

Step A

Score Point 1

> 18% is an acceptable response

Step B

Score Point 2

> Student indicates 11 letters total

> Student indicates that 2 letters are T's

### Item 11

Joan writes each letter of the word MATHEMATICS on separate pieces of paper. She puts the pieces of paper in a jar and asks a friend to pick one without looking.

#### Step A

What is the probability that Joan's friend will pick a paper with the letter "T"?

Answer: 18 %

#### Step B

Use what you know about probability to explain why your answer is correct. Use words, numbers, and/or symbols in your explanation.

Because t is used twice in the word.

---

---

---

---

Step A

Score Point 1

Step B

Score Point 1

> [student does not indicate 11 letters total]

> Student indicates that 2 letters are T's

### Item 11

Joan writes each letter of the word MATHEMATICS on separate pieces of paper. She puts the pieces of paper in a jar and asks a friend to pick one without looking.

#### Step A

What is the probability that Joan's friend will pick a paper with the letter "T"?

Answer: 2:11

#### Step B

Use what you know about probability to explain why your answer is correct. Use words, numbers, and/or symbols in your explanation.

Because it's 2 in 11ths.

---

---

---

#### Step A

Score Point 1

> 2:11 is an acceptable response

#### Step B

Score Point 0

> [student does not indicate 11 letters total]

> [student does not indicate that 2 letters are T's]

### Item 11

Joan writes each letter of the word MATHEMATICS on separate pieces of paper. She puts the pieces of paper in a jar and asks a friend to pick one without looking.

#### Step A

What is the probability that Joan's friend will pick a paper with the letter "T"?

Answer: 11:2

#### Step B

Use what you know about probability to explain why your answer is correct. Use words, numbers, and/or symbols in your explanation.

There are eleven letters in mathematics and 2  
Ts.

Step A

Score Point 0

> [11:2 is an incorrect response]

Step B

Score Point 2

> Student indicates 11 letters total

> Student indicates that 2 are T's

### Item 11

Joan writes each letter of the word MATHEMATICS on separate pieces of paper. She puts the pieces of paper in a jar and asks a friend to pick one without looking.

#### Step A

What is the probability that Joan's friend will pick a paper with the letter "T"?

Answer:  $\frac{1}{11}$

#### Step B

Use what you know about probability to explain why your answer is correct. Use words, numbers, and/or symbols in your explanation.

Since there are 11 letters in MATHEMATICS,  
when you choose 1 at random, the probability  
is  $\frac{1}{11}$ .

Step A  
Score Point 0

Step B  
Score Point 1  
> Student indicates 11 letters total  
> [student does not indicate that 2 are T's]

### Item 11

Joan writes each letter of the word MATHEMATICS on separate pieces of paper. She puts the pieces of paper in a jar and asks a friend to pick one without looking.

#### Step A

What is the probability that Joan's friend will pick a paper with the letter "T"?

Answer: 50%

#### Step B

Use what you know about probability to explain why your answer is correct. Use words, numbers, and/or symbols in your explanation.

I7 would be  
half.  
\_\_\_\_\_  
\_\_\_\_\_

Step A

Score Point 0

Step B

Score Point 0

> [student does not indicate 11 letters total]

> [student does not indicate that 2 are T's]

## Item 18

Dan and Jen are making chocolate chip cookies for a bake sale. The chocolate chip cookie recipe is shown below.

### Chocolate Chip Cookies

1/2 cup butter  
1 egg  
3/4 cup sugar  
1 1/4 cups flour  
1/2 teaspoon salt  
1/2 teaspoon vanilla  
1/2 cup chocolate chips

This recipe makes 50 cookies.

#### Step A

Dan and Jen need to make 150 cookies for the bake sale. How many cups of flour will they need in order to make 150 cookies?

Answer: 3 3/4 cups of flour

#### Step B

Using the same recipe and what you know about fractions and whole numbers, write a similar word problem. The number of cookies needed must not be 50 or 150. Your word problem should ask for the number of cups of sugar that should be used. Solve your problem and show all your work.

Bob and Sue are making cookies for a rummage sale.

How many cups of sugar will they need to make 250 cookies?

$$\frac{3}{4} \times 5 = 3 \frac{3}{4} \text{ cups sugar}$$

#### Step A

Score Point 1

#### Step B

Score Point 2

> Question is correctly framed

> Ratio of recipe to required number of cookies is correct;  
solution is correct

### Item 18

Dan and Jen are making chocolate chip cookies for a bake sale. The chocolate chip cookie recipe is shown below.

#### Chocolate Chip Cookies

1/2 cup butter  
1 egg  
3/4 cup sugar  
1 1/4 cups flour  
1/2 teaspoon salt  
1/2 teaspoon vanilla  
1/2 cup chocolate chips

This recipe makes 50 cookies.

#### Step A

Dan and Jen need to make 150 cookies for the bake sale. How many cups of flour will they need in order to make 150 cookies?

Answer: 3 3/4 cups of flour

#### Step B

Using the same recipe and what you know about fractions and whole numbers, write a similar word problem. The number of cookies needed must not be 50 or 150. Your word problem should ask for the number of cups of sugar that should be used. Solve your problem and show all your work.

Dan and Jen need to make 200 cookies for the bake sale. How many cups of sugar will they need?       $\frac{3}{4} \cdot 5 = \frac{3}{4} \cdot \frac{5}{1} = \frac{15}{4} = 3\frac{3}{4}$

#### Step A

Score Point 1

#### Step B

Score Point 1

> The question posed is correct

> [the multiplier of recipe quantities should have been 4 instead of 5]

### Item 18

Dan and Jen are making chocolate chip cookies for a bake sale. The chocolate chip cookie recipe is shown below.

#### Chocolate Chip Cookies

1/2 cup butter  
1 egg  
3/4 cup sugar  
1 1/4 cups flour  
1/2 teaspoon salt  
1/2 teaspoon vanilla  
1/2 cup chocolate chips

This recipe makes 50 cookies.

#### Step A

Dan and Jen need to make 150 cookies for the bake sale. How many cups of flour will they need in order to make 150 cookies?

Answer: 3 3/4 cups of flour

#### Step B

Using the same recipe and what you know about fractions and whole numbers, write a similar word problem. The number of cookies needed must not be 50 or 150. Your word problem should ask for the number of cups of sugar that should be used. Solve your problem and show all your work.

Dan and Jen are making cookies for a shelter they need 150 cookies but the recipe only makes 50 cookies with 3/4 cups of sugar, how many cups do they need?  $50 + 50 + 50 = 150$  then add  $3/4 + 3/4 + 3/4 = 9/4 = 2 \frac{1}{4}$  cups of sugar

#### Step A

Score Point 1

#### Step B

Score Point 1

- > The method is correct
- > [instructions clearly state not to use 150 cookies]

### Item 18

Dan and Jen are making chocolate chip cookies for a bake sale. The chocolate chip cookie recipe is shown below.

#### Chocolate Chip Cookies

1/2 cup butter  
1 egg  
3/4 cup sugar  
1 1/4 cups flour  
1/2 teaspoon salt  
1/2 teaspoon vanilla  
1/2 cup chocolate chips

This recipe makes 50 cookies.

#### Step A

Dan and Jen need to make 150 cookies for the bake sale. How many cups of flour will they need in order to make 150 cookies?

Answer: 3 3/4 cups of flour

#### Step B

Using the same recipe and what you know about fractions and whole numbers, write a similar word problem. The number of cookies needed must not be 50 or 150. Your word problem should ask for the number of cups of sugar that should be used. Solve your problem and show all your work.

25 cookies for the bake sale. How many cups of flour will they need in order to make 25 cookies?  
5 cups of flour. 5 cups = 10 cookies.

#### Step A

Score Point 1

#### Step B

Score Point 0

> [uses flour instead of sugar and shows no understanding of ratios]

### Item 18

Dan and Jen are making chocolate chip cookies for a bake sale. The chocolate chip cookie recipe is shown below.

#### Chocolate Chip Cookies

1/2 cup butter  
1 egg  
3/4 cup sugar  
1 1/4 cups flour  
1/2 teaspoon salt  
1/2 teaspoon vanilla  
1/2 cup chocolate chips

This recipe makes 50 cookies.

#### Step A

Dan and Jen need to make 150 cookies for the bake sale. How many cups of flour will they need in order to make 150 cookies?

Answer: 3  $\frac{1}{2}$  cups of flour

#### Step B

Using the same recipe and what you know about fractions and whole numbers, write a similar word problem. The number of cookies needed must not be 50 or 150. Your word problem should ask for the number of cups of sugar that should be used. Solve your problem and show all your work.

Dan needs to make 100 cookies for school treat how many cups of sugar does he need?  $\frac{3}{4} + \frac{3}{4} = \frac{6}{4} = 1\frac{1}{2}$

Step A

Score Point 0

Step B

Score Point 2

> Question is correctly formed

> Ratio of cookies to recipe is correct;  
solution is correct

### Item 18

Dan and Jen are making chocolate chip cookies for a bake sale. The chocolate chip cookie recipe is shown below.

#### Chocolate Chip Cookies

1/2 cup butter  
1 egg  
3/4 cup sugar  
1 1/4 cups flour  
1/2 teaspoon salt  
1/2 teaspoon vanilla  
1/2 cup chocolate chips

This recipe makes 50 cookies.

#### Step A

Dan and Jen need to make 150 cookies for the bake sale. How many cups of flour will they need in order to make 150 cookies?

Answer: 18 7.5 cups of flour

#### Step B

Using the same recipe and what you know about fractions and whole numbers, write a similar word problem. The number of cookies needed must not be 50 or 150. Your word problem should ask for the number of cups of sugar that should be used. Solve your problem and show all your work.

How many cups of sugar do you need to  
make 4 cookies for the kids?

$3/4 + 3/4 + 3/4 + 3/4 = 3 \text{ cups of sugar}$

#### Part A

Score Point 0

#### Part B

Score Point 1

> Correct method

> [the student misrepresented the number of cookies]

### Item 18

Dan and Jen are making chocolate chip cookies for a bake sale. The chocolate chip cookie recipe is shown below.

#### Chocolate Chip Cookies

1/2 cup butter  
1 egg  
3/4 cup sugar  
1 1/4 cups flour  
1/2 teaspoon salt  
1/2 teaspoon vanilla  
1/2 cup chocolate chips

This recipe makes 50 cookies.

#### Step A

Dan and Jen need to make 150 cookies for the bake sale. How many cups of flour will they need in order to make 150 cookies?

Answer:  $3\frac{1}{4}$  cups of flour

#### Step B

Using the same recipe and what you know about fractions and whole numbers, write a similar word problem. The number of cookies needed must not be 50 or 150. Your word problem should ask for the number of cups of sugar that should be used. Solve your problem and show all your work.

I just looked at the chart  
and and looked at the number is  $1\frac{1}{4}$   
so I multiply it by 3 so  $3 \times 50$  is 150  
and then I multiply is  $3 \times 1\frac{1}{4}$ .

Step A

Score Point 0

Step B

Score Point 0

> [only explains how the answer to Step A was reached]



**Guide to Grade 7 Released Item Books  
In READING and MATHEMATICS**

Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

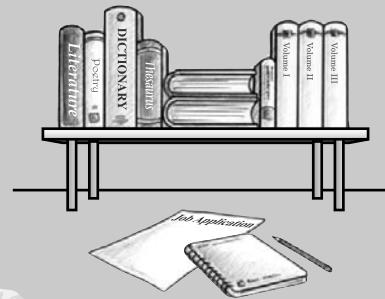
**Wisconsin Knowledge and Concepts Examinations  
Criterion-Referenced Test**

**Released Item Book**

**Reading**

**Grade**

**8**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.

- Acknowledgments** CTB is indebted to the following for permission to use material in this book:
- All trademarks and trade names found in this publication are the property of their respective companies and are not associated with the publisher of this publication.
- "Juan Bobo's Pig" retold by Joseph Sobol, copyright © 2000 by Joseph Sobol. Used by permission of Marian Reiner for the author.
- "Why Is It So Hard to Get Ketchup Out of the Bottle?" by Shawna Stuart Whyte, copyright © 2002 by Shawna Stuart Whyte, from *Cricket Magazine*'s May 2002 issue. Used by permission of Cricket Magazine Group.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### **What are released items?**

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### **How do I use this book?**

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

**Directions**

Read the passage “Juan Bobo’s Pig.” Then answer Numbers 1 through 9.

# Juan Bobo’s Pig

retold by Joseph Sobol

Have you heard the story of Juan Bobo and his pig?

Once upon a time in a little village in Puerto Rico, there was a little boy named Juan Bobo. One day Juan Bobo’s mother said to him, “*Juanito mijo*,<sup>1</sup> go and clean up the pig and make her look as beautiful as you can, so that when you take her to market this morning to sell her she will fetch a good price.”

Well, Juan Bobo always tried to do exactly as his mother told him. So he went and washed the pig with buckets of soapy water, and scrubbed her face with a warm washcloth—but she still didn’t look very beautiful.

So Juan Bobo went to his mother’s closet and got out her red taffeta<sup>2</sup> skirt with the elastic waistband, and he slipped that around the pig’s waist.

Then he went to the house of his great-aunt Margarita, who weighed almost three hundred pounds. He borrowed a blouse and a bright red wig, and he fit those onto the pig.

He outlined the pig’s eyes as best he could with black eyeliner and a touch of blue eye shadow; he put bright red lipstick on the pig’s lips; and he got two pairs of his mother’s high-heeled pumps and strapped those onto her trotters.

Now the pig looked *really beautiful* to Juan Bobo! So he put a rope around her neck and started to take her to market.

But halfway along the road to town they came upon a big muddy puddle. This big muddy puddle looked *really beautiful* to the pig. She threw herself down right in the middle of the big muddy puddle, and she rolled around a couple times, because it felt so good to her.

There was nothing Juan Bobo could do about it—because she was much bigger than he was, and sometimes she just forgot that Juan Bobo was supposed to be in charge. She kicked off her high-heeled pumps—all except one that got stuck sideways. She got the red taffeta skirt all covered with mud, she ripped one sleeve out of the blouse, tore off her wig, and completely ruined her mascara.

By the time Juan Bobo got the pig out of the puddle and all the way to town, she didn’t look so beautiful anymore. In fact, when the townspeople saw Juan Bobo and his pig, they laughed and laughed and laughed the two of them all the way back home.

So that today, in Puerto Rico, whenever somebody gets so dressed up that their friends almost—but not quite—don’t recognize them, people say that they are “all dressed up like Juan Bobo’s pig.”

<sup>1</sup>**Juanito mijo:** Juan, my son

<sup>2</sup>**taffeta:** a shiny, smooth fabric

“Juan Bobo’s Pig” retold by Joseph Sobol, copyright © 2000 by Joseph Sobol. Used by permission of Marian Reiner for the author.

**1** Juan dresses up the pig in order to

- (A) help sell it
- (B) keep it clean
- (C) make people laugh
- (D) please his great-aunt

**2** Read this statement from the passage.

He outlined the pig's eyes as best he could with black eyeliner and a touch of blue eye shadow;

**Which meaning of touch is used in this statement?**

- (A) a tiny dab
- (B) a soft nudge
- (C) an equal amount
- (D) an individual style

**3** The pig probably jumps into the puddle in order to

- (A) cool off in the mud
- (B) make Juan Bobo angry
- (C) make the townspeople laugh
- (D) remove the makeup from her face

**4** Why is Juan unable to get the pig out of the mud puddle?

- (A) The pig is stuck there, sideways.
- (B) He has forgotten to bring a rope.
- (C) The pig is much bigger than he is.
- (D) He must stay clean for the market.



**5** Which of these best states a possible lesson in this passage?

- (A) Respect your elders.
- (B) Think before you act.
- (C) Money is the root of evil.
- (D) Better safe than sorry.

**6** This passage is an example of

- (A) a folk tale
- (B) a fairy tale
- (C) science fiction
- (D) realistic fiction

**7** What is Juan's mother most likely to do when he returns home with the pig?

- (A) scold Juan for his foolish actions
- (B) find the people who laughed at Juan
- (C) punish the pig for causing problems for Juan
- (D) send Juan to ask his great-aunt for another blouse

**8** Which of these ideas about animals is best supported by the events in this passage?

- (A) Clean animals make wonderful pets.
- (B) Trained animals are worth more money.
- (C) Instincts determine an animal's behavior.
- (D) Animals reward their owners for kind treatment.

**9**

Explain how Juan might have prevented the problems he experiences in this passage. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---



**Go On**

## Directions

Read the passage “Why Is It So Hard to Get Ketchup Out of the Bottle?”  
Then answer Numbers 10 through 19.

# Why Is It So Hard to Get Ketchup Out of the Bottle?

by Shawna Stuart Whyte

The Super Double Cheeseburger Deluxe arrives at your table. You stare at the dripping burger and the tantalizingly crisp, golden French fries. The only thing that's missing is the ketchup, so you grab the bottle and prepare to slather<sup>1</sup> your entire plate. You unscrew the cap, but . . . what's this? Nothing is coming out! Why is ketchup so hard to pour out of the bottle?

Ketchup is a liquid, right? Not really. A solid? Nope. Actually, ketchup is a type of solution that sometimes acts as a liquid and other times acts as a solid. Ketchup and other solutions that have properties of both a solid and a liquid are called thixotropic solutions. Other thixotropic solutions that you may have in the house include yogurt and margarine. When yogurt sits undisturbed, it is a jellylike solid. When you stir it, it becomes more like a liquid. Margarine that has been refrigerated can become quite hard, but once it warms up, it becomes softer and more liquid—and much easier to spread on toast!



So why are thixotropic solutions so weird? Why can't they just make up their minds and be one or the other: solid or liquid? The answer is that molecules of a thixotropic substance tend to form in long chains. When these substances are stirred or shaken, the chains of molecules break apart into smaller segments, allowing the yogurt or ketchup to act more like a liquid. Imagine that a bottle of ketchup is like a bottle full of string. You can see that pouring string out of a bottle is not going to be easy! But if you shake the bottle, the “strings” break apart into small pieces, which come out of the neck more easily.

Thixotropic solutions are also found in more exotic locations than the kitchen. Quicksand is a thixotropic mixture of sand and water. It looks like any other patch of sand, but once someone steps in it, the loosely packed molecules give way, causing the unlucky adventurer to sink into the quicksand.

<sup>1</sup>slather: to cover thickly

Thixotropic mixtures of soil and water can be useful, however. Oil rigs use a thixotropic mix of clay and water to make “drilling mud.” This mixture is pumped down a drilling hole to keep the drill bit cool and lubricated. Drilling mud remains a liquid when it is being stirred by the drill, but acts as a solid around the sides of the drilling hole, which helps to keep the hole from collapsing.

Believe it or not, we have thixotropic fluid in our own bodies. This fluid is found in our elbows and knees, where two bones move against one another. It is called synovial fluid and it protects our bones and joints from damage. During normal movement, synovial fluid helps lubricate

the joint. But if the joint is hit or suddenly twisted, the fluid immediately becomes thicker. In this way, synovial fluid helps protect our joints from injury.

Now you know all about the mysterious, helpful, and sometimes frustrating behavior of thixotropic solutions, which, because of their unique<sup>2</sup> molecular structure, have some properties of both solids and liquids. Sometimes this can be helpful, as in the case of drilling mud and synovial fluid. Thixotropy can also be dangerous and deceiving, as in quicksand. Sometimes thixotropy is just plain curious—or irritating. It depends on how badly you want that ketchup out of the bottle.

---

<sup>2</sup>**unique:** one-of-a-kind

“Why Is It So Hard to Get Ketchup Out of the Bottle?” by Shawna Stuart Whyte, copyright © 2002 by Shawna Stuart Whyte, from *Cricket Magazine’s May 2002 issue*. Used by permission of Cricket Magazine Group.



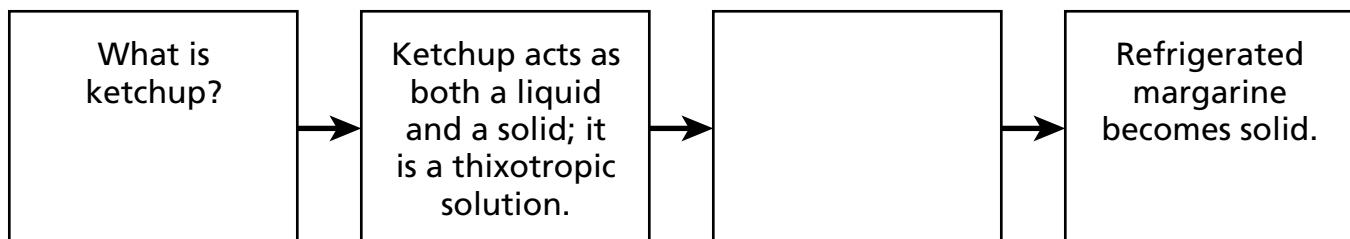
**10** The author most likely wrote this passage to

- (A) show a connection between science and real life
- (B) encourage readers to conduct scientific experiments
- (C) provide a detailed explanation of molecular structure
- (D) remind readers of how important it is to eat the right foods

**11** This passage is an example of nonfiction because it

- (A) includes personal opinions
- (B) asks and answers questions
- (C) mentions objects from everyday life
- (D) presents factual information on a topic

**12** Look at the boxes below, showing how details are arranged in paragraph 2 of the passage.



Which of these belongs in the empty box?

- (A) Yogurt is solid until it is stirred.
- (B) Margarine is more liquid when warmed.
- (C) Margarine is easier to spread on toast after it is warmed.
- (D) The ketchup bottle must be shaken before ketchup will pour out.

**13**

Read this sentence from the passage.

Thixotropic solutions are also found in more exotic locations than the kitchen.

What does exotic mean in this sentence?

- (A) comfortable
- (B) glamorous
- (C) private
- (D) strange

**14**

Read this dictionary entry.

**property** *n.* 1. Possession or possessions. 2. A quality belonging especially to something. 3. A piece of land or real estate. 4. The right of ownership.

Now read this sentence from the passage.

Ketchup and other solutions that have properties of both a solid and a liquid are called thixotropic solutions.

Which meaning of property is used in this sentence?

- (A) definition 1
- (B) definition 2
- (C) definition 3
- (D) definition 4

**15**

Which of these sentences from the passage is an opinion?

- (A) Ketchup and other solutions that have properties of both a solid and a liquid are called thixotropic solutions.
- (B) Margarine that has been refrigerated can become quite hard, but once it warms up, it becomes softer and more liquid—and much easier to spread on toast!
- (C) During normal movement, synovial fluid helps lubricate the joint.
- (D) Sometimes thixotropy is just plain curious—or irritating.

**16**

When does a thixotropic solution act more like a liquid?

- (A) when it is stirred
- (B) when it is cooled
- (C) when it is put away
- (D) when it is first opened



**17** When a joint is twisted, synovial fluid protects the joint by

- (A) warming it
- (B) lubricating it
- (C) forming into smaller pieces
- (D) becoming more like a solid

**18** The author most likely uses questions in this passage to

- (A) help the reader understand the scientific terms
- (B) surprise the reader with an unusual writing style
- (C) interest the reader in the topic of thixotropic solutions
- (D) test the reader who is unfamiliar with thixotropic solutions

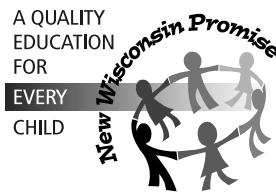
**19** Which of these phrases best states how the information in paragraph 5 is organized?

- (A) from cause to effect
- (B) from facts to opinions
- (C) by a main idea and supporting details
- (D) by the order in which events occurred



# Reading Grade 8

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

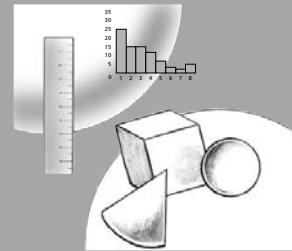
**Wisconsin Knowledge and Concepts Examinations  
Criterion-Referenced Test**

**Released Item Book**

**Mathematics**

**Grade**

**8**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### **What are released items?**

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### **How do I use this book?**

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

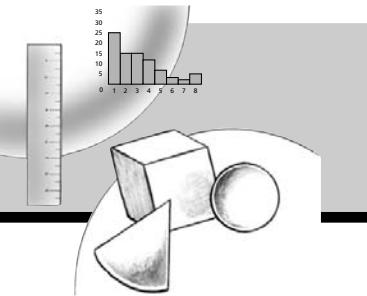
- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

# Mathematics

## Session 1



- 1** Look at the equation below.

$$4x - 2 = 18$$

What value of  $x$  makes this equation true?

- (A) 4
- (B) 5
- (C) 9
- (D) 16

- 2** Which of these is the best estimate of the value of  $4.382 \times 2.641 \times 6.438$ ?

- (A) 48
- (B) 72
- (C) 90
- (D) 105

- 3** Tawny weighed a culture of bacteria at regular intervals. Her data are recorded in the table below.

**Bacteria Culture**

Measurement Number	Mass (in micrograms)
1	1.7
2	3.4
3	6.8
4	13.6

If the pattern continues, what will be the mass of the culture the next time Tawny weighs it?

- (A) 15.3 micrograms
- (B) 17.0 micrograms
- (C) 20.4 micrograms
- (D) 27.2 micrograms



**Go On**



**4**

The expression below represents the number of flowers Ian used in his bouquets.

$$3(12 + 7)$$

Kate used the same number of flowers as Ian. Which expression represents the number of flowers that Kate used?

- (A)  $15 \times 7$
- (B)  $36 \times 7$
- (C)  $15 + 21$
- (D)  $36 + 21$

**5**

Look at the equation below.

$$5x - 3 = 12$$

What value of  $x$  makes this equation true?

- (A)  $\frac{9}{5}$
- (B) 3
- (C) 5
- (D) 6

**6**

A phone company charges 25 cents for each call plus 5 cents per minute.

### Phone Calls

Minutes ( $t$ )	Price ( $c$ ) (in cents)
0	25
1	30
2	35
3	40

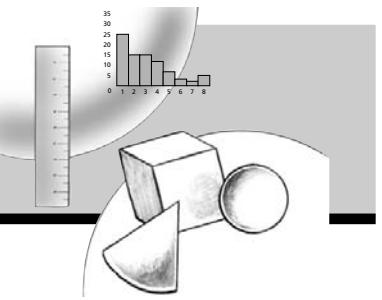
Which number sentence shows the relationship between the number of minutes ( $t$ ) and the price ( $c$ ), in cents?

- (A)  $c = 25t + 25$
- (B)  $c = 8t + 40$
- (C)  $c = 20 + 5t$
- (D)  $c = 5t + 25$



# Mathematics

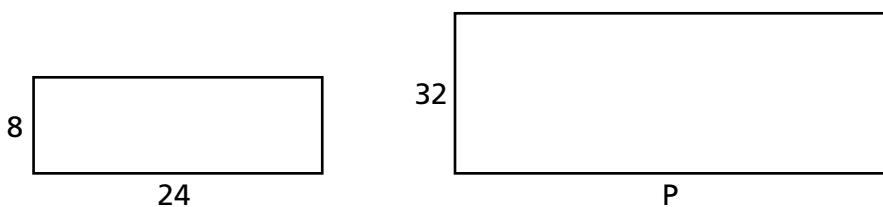
## Session 2



- 7** The distance between Earth and the sun is approximately ninety-one million, four hundred thousand miles. Which of these represents that number?

- (A) 9,140,000
- (B) 9,110,400
- (C) 91,000,400
- (D) 91,400,000

- 8** Look at the similar figures below.



Note: The figures are not drawn to scale.

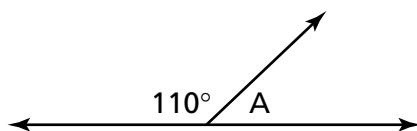
What is the length of side P?

- (A) 48
- (B) 64
- (C) 72
- (D) 96

- 9** Which of these is the best unit for estimating the mass of a pea?

- (A) grams
- (B) kilograms
- (C) centimeters
- (D) milliliters

- 10** Look at the drawing below.



Note: The figure is not drawn to scale.

What is the measure of angle A?

- (A)  $20^\circ$
- (B)  $45^\circ$
- (C)  $55^\circ$
- (D)  $70^\circ$

- 11** A bag contains 5 green crayons, 6 red crayons, and 1 white crayon. Gary picks 1 crayon without looking. What is the probability that the crayon Gary picks is not a white crayon?

- (A)  $\frac{1}{12}$
- (B)  $\frac{1}{11}$
- (C)  $\frac{5}{6}$
- (D)  $\frac{11}{12}$



**12**

Kate makes a batch of salsa in a large cylindrical pot. The inside of the pot is 9 inches in diameter, and it is filled with 4 inches of salsa. Kate plans to store the salsa in small cylindrical glass jars that are 3 inches in diameter and 4 inches high.

$$V = \pi r^2 h$$

**Step A**

How many glass jars will Kate need for all of the salsa? (Use 3.14 to approximate  $\pi$ .)

Answer: \_\_\_\_\_ glass jars

**Step B**

Explain how you determined the number of glass jars Kate will need. Use words and/or numbers in your explanation.

---

---

---

---

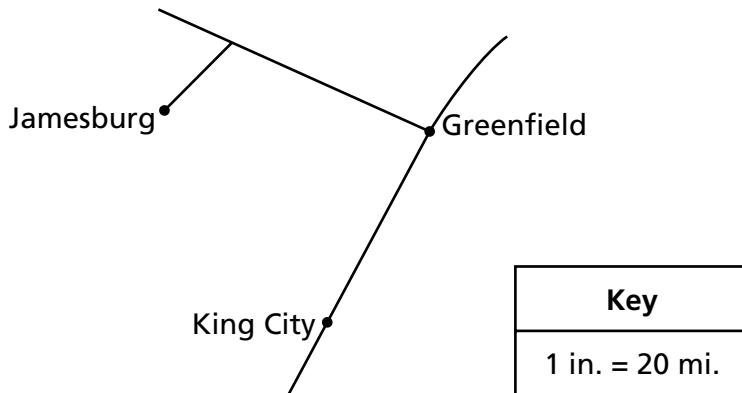
---

**13**



Use the inch side of your ruler to help you solve this problem.

Look at the road map below.



Teresa drove from Jamesburg through Greenfield to King City. What was the total distance, in miles, that she drove?

- (A) 25 miles
- (B) 35 miles
- (C) 45 miles
- (D) 55 miles

**14**

The original price for a pair of sneakers was \$70. John bought them on sale for 25% off. The sales tax was 6%. How much did John pay for the sneakers, including sales tax?

- (A) \$16.80
- (B) \$18.55
- (C) \$52.50
- (D) \$55.65



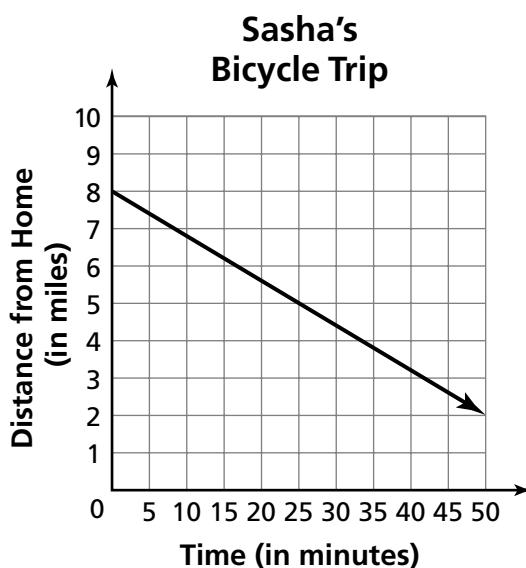
**15**

Bob plans to flip 3 coins at once. How many different ways can Bob have an outcome of 2 heads and 1 tail?

- (A) 3
- (B) 5
- (C) 6
- (D) 8

**16**

The graph below summarizes Sasha's bicycle trip.



Which statement best describes Sasha's bicycle trip?

- (A) Sasha stopped riding her bike.
- (B) Sasha stayed home and time ran out.
- (C) Sasha rode her bicycle towards home.
- (D) Sasha started her bicycle trip from home.

**17**

Scott has an old fish tank in the shape of a box. It fits exactly onto a rectangular stand that is 12 inches wide and 30 inches long. The tank can be filled with water to a depth of 15 inches.

**Step A**

What is the total volume of water that Scott's old fish tank can hold?

Answer: \_\_\_\_\_ cubic inches

**Step B**

Scott is buying a new fish tank that fits on the same stand as the old tank, but holds up to 7,200 cubic inches of water. Use what you know about volume to explain how to find the depth of the water in the new fish tank. Use words and/or numbers in your explanation.

---

---

---

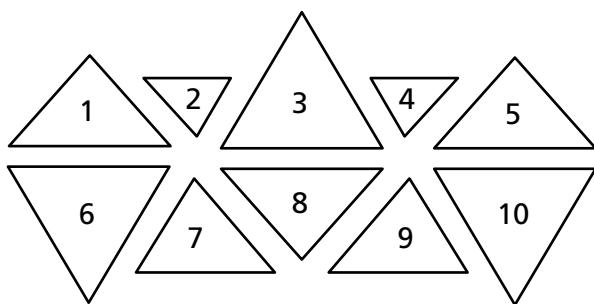
---

---



**18**

Look at the figures below.

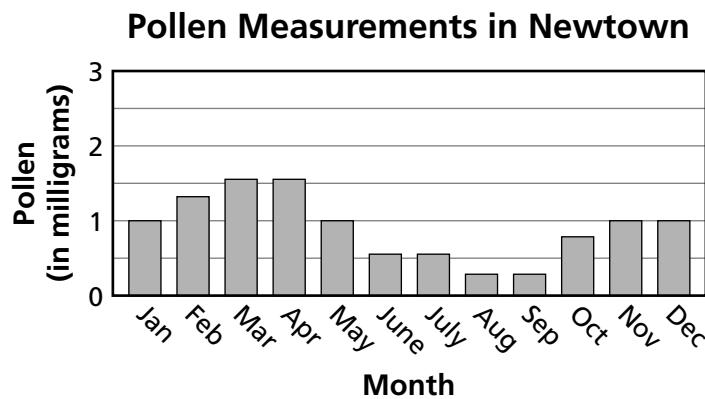


Which of these figures appear to be congruent?

- (A) 1 and 6
- (B) 3 and 9
- (C) 5 and 8
- (D) 7 and 2

**19**

Look at the information in the graph below.

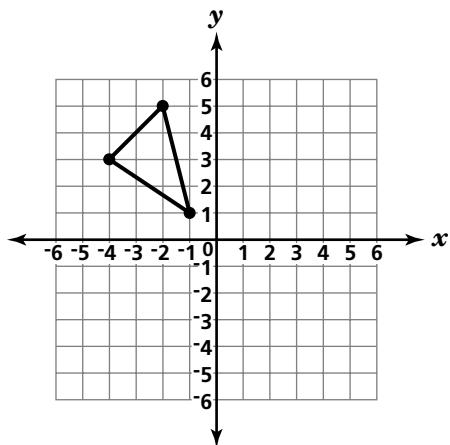


Erin wants to visit Newtown. She becomes ill when there is too much pollen in the air. What months would be best for Erin to visit Newtown?

- (A) March through June
- (B) June through September
- (C) September through December
- (D) December through March

**20**

Look at the figure below.



What will be the new coordinates of the figure when it is reflected across the  $y$ -axis?

- (A)  $(1, 1), (3, 4), (5, 2)$
- (B)  $(1, 1), (4, 3), (2, 5)$
- (C)  $(-1, -1), (-3, -4), (-5, -2)$
- (D)  $(-1, -1), (-4, -3), (-2, -5)$

***STOP***

# Mathematics Grade 8

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

**Wisconsin Knowledge and Concepts Examinations** **WI**  
***Criterion-Referenced Test***

# Guide to Grade 8

Released Item Books  
In READING and MATHEMATICS



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional, or learning disability.

## **Guide to Grade 8 Released Item Books in Reading and Mathematics**

This document contains information for using, scoring, and interpreting the released items in reading and mathematics.

August 2006  
(Document Version 1.0, August 28, 2006)

Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction.

## **Table of Contents**

<b>Introduction.....</b>	<b>1</b>
<b>Reading .....</b>	<b>2</b>
Reading Item Information.....	4
Reading Objectives and Subskills.....	5
Reading Depth of Knowledge.....	8
Reading Rubric for Constructed-Response Items.....	9
Reading Constructed-Response Item Scoring Guide.....	10
Anchor Papers for Reading Constructed-Response Item.....	11
<b>Mathematics .....</b>	<b>18</b>
Mathematics Item Information .....	22
Mathematics Objectives and Subskills .....	23
Mathematics Depth of Knowledge .....	28
Mathematics Rubric for Constructed-Response Items .....	29
Mathematics Constructed-Response Item Scoring Guides.....	30
Anchor Papers for Mathematics Constructed-Response Items.....	32

## **Guide to Released Item Books**

Please help us improve this document. We welcome your comments and questions.  
Please contact us at:

Wisconsin Department of Public Instruction  
Office of Educational Accountability  
125 S. Webster Street, P.O. Box 7841  
Madison, WI 53707-7841

Toll-free: (800) 441-4563

Fax: (608) 266-8770

<http://www.dpi.wi.gov/oea/>

# Introduction

## What are released items?

The items in the Reading and Mathematics released item books are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in the released item books illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

## How do I use the released item books and this guide?

### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

This guide provides instructions for administering the released item books as practice tests and information for scoring the items, including scoring guides and anchor papers for the constructed-response items. The item information tables identify the answer key, what each item measures, depth of knowledge, and item difficulty. Item difficulty is presented as both the percentage of students who answered the item correctly and the scale score location of the item. The item's scale score location describes where the item functions along the ability scale. Items with higher scale score locations are considered more difficult than items with lower scale score locations. Students with scale scores above the scale score location of the item would have a greater probability of answering the item correctly than students with scale scores below the item's scale score location.

### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. Note that a student's score on the practice test cannot be converted to a total scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

## Reading

### Sample Directions for Administering the Reading Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, and scratch paper. Students' test books should be closed.*

**SAY** In this test, you will read some passages and answer both multiple-choice questions and short-answer questions about those passages. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Write your answer on the lines in your test book. You may also write in the space under the lines, but your answer must stay inside the boxed area. Answers or parts of answers written outside the boxed area will not be scored. You may use scratch paper to help you plan your answer, but remember to write your answer in the boxed area in your test book. After you have written your answer, be sure to read it to make sure you have written your ideas clearly and completely.

For both the multiple-choice questions and the short-answer questions, remember to look back at the reading passages to help you answer the questions. For some questions, you may need to go back to two reading passages to find the answer. Be sure to look back at both reading passages to help you answer these questions.

You will have 40 minutes to do the test. Work until you come to the word "STOP" at the bottom of the page. You may go back and check your answers. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** Please open your test book to Page 2.

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY** You may begin.

*Record the starting and stopping times.*

Record the Starting Time:	Add 40 Minutes:	Record the Stopping Time:
_____	+ 40	_____

*Check to be sure that students are marking their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY ➤ Stop. This is the end of the test. Please close your test book.**

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Reading Item Information

Item	Answer Key	Objective/ Subskill	Depth of Knowledge Level	Format	2005 –06 Item Statistics				Scale Score Location
					A or 0	B or 1	C or 2	D or 3	
1	A	2.1	1	SR	*91%	4%	1%	3%	453
2	A	1.1	1	SR	*86%	7%	5%	2%	469
3	A	3.1	3	SR	*90%	1%	1%	7%	449
4	C	2.1	1	SR	3%	1%	*94%	2%	445
5	B	3.1	3	SR	5%	*77%	4%	14%	483
6	A	3.3	2	SR	*71%	8%	2%	19%	510
7	A	4.1	3	SR	*83%	2%	10%	5%	482
8	C	4.1	4	SR	8%	13%	*71%	7%	513
9		3.1	3	BCR	6%	44%	38%	9%	574
10	A	3.2	3	SR	*67%	3%	27%	2%	557
11	D	3.3	3	SR	6%	11%	16%	*66%	524
12	A	2.3	2	SR	*59%	24%	4%	12%	547
13	D	1.1	1	SR	3%	13%	5%	*78%	485
14	B	1.3	2	SR	17%	*76%	3%	4%	517
15	D	4.2	2	SR	5%	16%	4%	*75%	505
16	A	2.2	1	SR	*89%	4%	2%	4%	461
17	D	2.2	1	SR	5%	33%	4%	*57%	549
18	C	4.3	4	SR	28%	5%	*53%	13%	557
19	C	3.2	3	SR	26%	14%	*42%	17%	636

Objective/Subskill and Depth of Knowledge Level information follows this table.  
 SR: selected response; BCR: brief constructed response.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
444 and below	445–479	480–538	539 and above

# Reading Objectives and Subskills

---

## Types of Text

---

The grade 8 reading assessment presents a variety of grade-appropriate reading passages representing literary, informational, and everyday text. Passages may be up to 1,500 words long and some passages may be paired with other, related passages. Students may be asked to read and answer questions about texts such as these:

Literary	Informational	Everyday
Short stories, novel excerpts, poetry, drama, biography, autobiography	Magazine, textbook, and newspaper articles, government documents, historical papers, reports, manuals, reviews, editorial cartoons	Charts, schedules, forms, timelines, applications, product use or warning labels, safety notices, simple instructions

---

## Objectives, Subskills, and Descriptors

---

Objectives (labeled 1, 2, 3, and 4) and subskills (labeled 1.1, 1.2, etc.) denote general knowledge and skills that are assessed and reported on the WKCE-CRT. Bulleted descriptors are *examples* of specific knowledge or skills that may be included within each subskill. The subskills include knowledge and skills *such as, but not limited to* the descriptors.

### 1. Determine the meaning of words and phrases in context.

#### 1.1. Use context clues to determine the meaning of words and phrases.

- Use context clues to determine the meaning of unfamiliar words.
- Understand the meaning of words and phrases used figuratively.
- Use context clues to determine the meaning of multiple-meaning words.
- Use knowledge of synonyms and antonyms to determine the meaning of words.
- Identify analogies to demonstrate understanding of word meaning.
- Understand connotative and denotative meaning of words.

#### 1.2. Use knowledge of word structure to determine the meaning of words and phrases.

- Identify the meaning of a word with an affix.
- Use knowledge of root words to determine the meaning of a word.

#### 1.3. Use word reference materials to determine the meaning of words and phrases.

- Use an entry from a word reference to determine word meaning and pronunciation.

## **2. Understand text.**

- 2.1. Demonstrate understanding of literal meaning by identifying stated information in literary text.
  - Identify stated information about story elements.
- 2.2. Demonstrate understanding of literal meaning by identifying stated information in informational text.
  - Identify stated information about main ideas and supporting details.
  - Identify stated information provided through text features.
- 2.3. Demonstrate understanding of explicitly stated sequence of events in literary and informational text.
  - Identify first, next, and last events.
  - Follow steps in a process.

## **3. Analyze text.**

### **3.1. Analyze literary text.**

- Make inferences about story elements.
- Summarize important ideas and events.
- Analyze stated or implied theme, message, or main idea.
- Draw conclusions.
- Identify purpose.
- Analyze diverse viewpoints.

### **3.2. Analyze informational text.**

- Identify implied main ideas and supporting details.
- Identify implied relationships (such as cause/effect and compare/contrast).
- Summarize information.
- Identify purpose.
- Make inferences based on text features.
- Make inferences based on visual information.
- Make inferences about text structure.
- Analyze diverse viewpoints.
- Use graphic organizers to analyze and classify information.

3.3. Analyze author's use of language in literary and informational text.

- Analyze the use of literary devices.
- Recognize and distinguish among genres.
- Make inferences about the author's tone.
- Make inferences about the author's style.
- Analyze the author's use of rhetorical devices.
- Distinguish among types of language (such as formal/informal, literary/technical, and serious/humorous).

#### **4. Evaluate and extend text.**

4.1. Evaluate and extend literary text.

- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.
- Evaluate diverse viewpoints and influences.
- Distinguish between important and unimportant details.
- Evaluate the credibility of story elements.
- Draw conclusions.

4.2. Evaluate and extend informational text.

- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.
- Distinguish between facts and opinions.
- Evaluate the accuracy, currency, and credibility of information.
- Evaluate diverse viewpoints and influences.
- Distinguish between important and unimportant facts.
- Draw conclusions.

4.3. Evaluate and extend the author's use of language in literary and informational text.

- Evaluate the author's word choice and use of language.
- Recognize bias and propaganda in language.

## **Reading Depth of Knowledge**

These depth of knowledge levels are intended to reflect the level of cognitive demand placed on students by test items. As the level of cognitive demand increases, so does the mental effort and integration of information required to answer a test item successfully. Each level represents important cognitive skills, and each level requires the use of cognitive skills in lower levels. For example, a student who is asked to make connections between two texts (level 4) would also need to recall pertinent details from the texts (level 1), understand stated information in the texts (level 2), and make inferences and draw conclusions about each text (level 3). The levels assume grade-appropriate text, vocabulary, and tasks. Test items should represent a range of depth of knowledge levels, and items within each level may represent a range of difficulty as indicated by percentage of students who answered the item correctly or scale score location.

### **Level 1: Recognizing and Recalling**

Students demonstrate a grade-appropriate ability to recognize or recall basic facts, terms, or definitions. For example, a student might be asked to identify an explicitly stated main idea in a text.

### **Level 2: Using Fundamental Concepts and Procedures**

Students demonstrate a grade-appropriate ability to use basic facts, definitions, skills, or concepts. For example, a student might be asked to use information in a text to complete a graphic organizer.

### **Level 3: Concluding and Explaining**

Students demonstrate understanding of grade-appropriate text by using stated and implied information and text elements to draw conclusions. Students explain and convey ideas effectively. For example, a student might be asked to provide details and examples from a text to support a conclusion.

### **Level 4: Evaluating, Extending, and Making Connections**

Students demonstrate their knowledge of concepts when evaluating or interpreting grade-level text. Students make connections among texts, common experiences, and issues. For example, a student might be asked to evaluate an author's effectiveness in achieving an intended purpose.

# **Reading Rubric for Constructed-Response Items**

## **3 points**

- The response demonstrates *thorough understanding* of the reading concept embodied in the task.
- The response is *accurate, complete, insightful, and fulfills all the requirements* of the task.
- Necessary support and/or examples are included.
- Information is clearly *text-based*.

## **2 points**

- The response demonstrates *partial understanding* of the reading concept embodied in the task.
- The response is *accurate* and *fulfills most of the requirements* of the task.
- Necessary support and/or examples may not be complete or clearly text-based.

## **1 point**

- The response demonstrates *an incomplete understanding* of the reading concept embodied in the task.
- The response provides *some information that is text-based*, but does not fulfill the requirements of the task.
- Information provided is *too general* or *too simplistic*.
- Necessary support and/or examples may be incomplete or omitted.

## **0 points**

- The response demonstrates *no understanding* of the reading concept embodied in the task.
- The response is *inaccurate, confused, or irrelevant*.
- The student has *failed to respond to the task*.

# Reading Constructed-Response Item Scoring Guide

Forms: Public Release	Item #: 9	Item Type: BCR	TB Page #: 5	AB Page #: n/a
Reporting Category: Reading				
Objective: 3. Analyzes Text				
Subskill: 3.1. Analyzes literary text				
Descriptor: Identifies/analyzes implied theme/message/main idea.				Max Score Pts: 3

## Item Stem

**Explain how Juan might have prevented the problems he experiences in this passage. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.**

**Responses should be evaluated according to the guidelines outlined below for each score point.**

### 3 points

- The response demonstrates a **thorough understanding** of the passage and the problems of Juan Bobo.
- The response indicates an **understanding of the larger idea** of how problems can be prevented.
- The student **clearly supports** the response with **highly relevant ideas and details** from the text. For example:
  - Juan Bobo might have asked his mother for more specific directions on how to make the pig beautiful before he started his task. He could have thought more about what she meant when she said to make the pig “look as beautiful as you can.”
  - Juan Bobo could have asked for help. For example, he might have asked other members of his family, or he could have asked his mother to look at the pig before he took it to the market. Then no one would have laughed at him.

### 2 points

- The response demonstrates a **partial understanding** of the passage and Juan Bobo’s problems.
- The response **makes some connection** between what happens in the story and how the events might have been prevented.
- The student supports the response with **accurate details** from the text. For example:
  - Juan Bobo should have asked his mother what she meant about making the pig beautiful.
  - He should have asked someone before he embarrassed himself by taking the silly-looking pig to town.

### 1 point

- The response demonstrates **incomplete understanding** of the reading passage and Juan Bobo’s problems..
- The response refers to information in the passage, **but it does not make the connection** between story events and solutions to the problem.
- Student provides **limited or vague text-based details**. Text-based details may include ideas that are partial, too general, or too simplistic. For example:
  - Everyone laughed at Juan Bobo and the pig he fixed up to be beautiful. (unrelated)
  - Juan Bobo should have asked someone. (simplistic)

## Anchor Papers for Reading Constructed-Response Item

Explain how Juan might have prevented the problems he experiences in this passage. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Juan could have prevented his problems with the pig by asking his mom exactly what to do. Juan took the words "make the pig beautiful" to literally, and if he were to ask his mother directions for what to do then I think that would've not made him go through all trouble of getting the shoes, blouse, pumps and makeup.

### Score Point 3

- >Demonstrates a thorough understanding of the passage and the problems of Juan Bobo. (Juan took the words "make the pig beautiful" too literally)
- >Understands the larger idea of how problems can be prevented. (...asking his mom exactly what to do.)
- >Response is clearly supported with highly relevant ideas and details from the text. ("make the pig beautiful; ...getting the shoes, blouse, pumps and makeup.)

Explain how Juan might have prevented the problems he experiences in this passage. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

He should have realized that pigs are way different than humans and don't wear the same things. Pigs don't need clothes. He should have just let it how it was when it was clear. Then more people would have wanted to buy the pig and less people would have laughed at him.

Score Point 3

>Demonstrates a thorough understanding of the passage and the problems of Juan Bobo. (Pigs don't need clothes; ...less people would have laughed at him.)

>Understands the larger idea of how problems can be prevented. (...realized that pigs are way different than humans and don't wear the same things.)

>Response is clearly supported with highly relevant ideas and details from the text. (Pigs don't need clothes; less people would have laughed at him.)

Explain how Juan might have prevented the problems he experiences in this passage. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

is help prevent it, he could have had someone older, that was bigger help him take the pig there because he couldn't control the pig because it was much bigger than him.

Score Point 2

- >Demonstrates a partial understanding of the passage and Juan Bobo's problems.
- >Makes some connection between what happens in the story and how the events might have been prevented. (...someone older that was bigger help him.)
- >Response supported with accurate details from the text.  
(...he couldn't control the pig because it was much bigger than him.)

Explain how Juan might have prevented the problems he experiences in this passage. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

I think that Juan could have prevented it by not putting so much on the pig. If the pig did not have all three articles of clothing & make-up on, it would not have felt hot and would not have needed to cool off in the mud.

Score Point 2

- >Demonstrates a partial understanding of the passage and Juan Bobo's problems.
- >Makes some connection between what happens in the story and how the events might have been prevented. (...prevented it by not putting so much on the pig...and would not have needed to cool off in the mud.)
- >Response supported with accurate details from the text. (articles of clothing and makeup.)

Explain how Juan might have prevented the problems he experiences in this passage. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

He might have prevented the problem by not dressing up the pig.

---

---

---

---

---

---

---

Score Point 1

- >Demonstrates an incomplete understanding of the passage, and Juan Bobo's problems. (Prevention of problem only.)
- >Refers to words in the passage, but does not make the connection between story events and solutions to the problem.
- >Student provides limited or vague text based details that are partial, general, or simplistic.

Explain how Juan might have prevented the problems he experiences in this passage. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Juan could have stopped the incident by stopping and going around the mud puddle.

---

---

---

---

---

---

---

Score Point 1

- >Demonstrates an incomplete understanding of the passage, and Juan Bobo's problems. (Prevention of problem only.)
- >Refers to words in the passage, but does not make the connection between story events and solutions to the problem.
- >Student provides limited or vague text based details that are partial, general, or simplistic.

Explain how Juan might have prevented the problems he experiences in this passage. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

He could have prevented the problems  
by putting the pig on a leash.

Score Point 0

- >Demonstrates no understanding of the reading concept embodied in the task.
- >The response is inaccurate, confused, or irrelevant. (Pig was already on a rope.)
- >Student has written a response but failed to respond to the task.

# Mathematics

## Sample Directions for Administering the Mathematics Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, scratch paper, and the following manipulatives:*

- Ruler
- Calculator for Session 2  
(4-function calculator required; use of scientific calculator is student preference)

*NOTE: The use of a calculator is not allowed to solve the problems in Session 1.*

*Also required for the operational test, but not for this released item book:*

- Protractor

*Students' test books should be closed.*

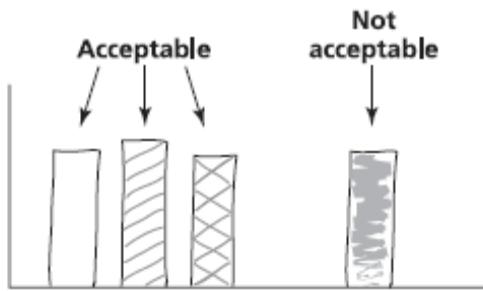
**SAY** Remember to use only a No. 2 pencil in this test. In Session 1, you will be answering multiple-choice questions and short answer questions. Multiple-choice questions are questions that ask you to choose the best answer. For the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

You may use scratch paper to work the multiple-choice questions, but remember to fill in the circle that goes with the answer you choose.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

For the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

Demonstrate by drawing the illustration below on the board.



**Now you will do Session 1 of the Mathematics test. Remember to read all of the directions and information in the test book. When you come to the word "STOP" at the bottom of the page, you have finished Session 1. You may go back and check your answers, but do not go on to Session 2 of the Mathematics test. When you have finished, sit quietly until everyone else has finished.**

**You will have 10 minutes to do Session 1. Make sure you stop at the end of Session 1.**

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** Please open your test book to Page 2.

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY** You may begin.

*Record the starting and stopping times for Session 1.*

Record the Starting Time:	Add 10 Minutes:  _____ + 10 _____	Record the Stopping Time:  _____
------------------------------	---	---

*Check to be sure that students are marking and writing their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY** Stop. Put down your pencil and close your test book. This is the end of Session 1.

*Pause to be sure that all students have closed their test books. Before proceeding to Session 2, make sure each student has a calculator.*

*During an actual test administration, students would be required to clear their calculators' memories immediately before and after each calculator-allowed session.*

**SAY** Now, open your test book to the page labeled “Mathematics Session 2.”

In Session 2, you will be answering multiple-choice questions and short-answer questions. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

Remember, for the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

You will have 35 minutes to do Session 2. Remember to read all of the directions and information in this part of the test book. When you come to the word “STOP” at the bottom of the page, you have finished Session 2.

You may go back over Session 2 to check your answers, but do not go back to Session 1. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** You may begin.

*Record the starting and stopping times for Session 2.*

Record the Starting Time:	Add 35 Minutes:	Record the Stopping Time:
_____	+ 35	_____

**SAY** Stop. This is the end of Session 2. Please close your test book.

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Mathematics Item Information

Item	Answer Key	Calculator Allowed	Objective/Subskill	Depth of Knowledge Level	2005–06 Item Statistics					Scale Score Location
					Format	A or 0	B or 1	C or 2	D	
1	B	No	Fb	2	SR	9%	*83%	4%	5%	503
2	B	No	Bb	2	SR	35%	*52%	7%	5%	589
3	D	No	Fa	2	SR	21%	11%	11%	*56%	546
4	D	No	Fc	2	SR	11%	11%	8%	*69%	524
5	B	No	Fb	2	SR	6%	*84%	7%	3%	498
6	D	No	Fa	3	SR	8%	6%	13%	*72%	546
7	D	Yes	Ba	1	SR	1%	1%	4%	*94%	439
8	D	Yes	Cb	2	SR	14%	12%	7%	*66%	527
9	A	Yes	Da	1	SR	*62%	18%	6%	13%	584
10	D	Yes	Ca	1	SR	5%	25%	21%	*49%	577
11	D	Yes	Eb	2	SR	21%	8%	4%	*67%	537
12		Yes	Dc	4	A-BCR	75%	21%			595
12		Yes	Ae	4	B-BCR	63%	17%	13%		592
13	D	Yes	Dc	2	SR	9%	10%	29%	*52%	560
14	D	Yes	Ba	2	SR	7%	16%	27%	*49%	587
15	A	Yes	Eb	3	SR	*69%	8%	19%	3%	579
16	C	Yes	Fa	2	SR	5%	2%	*56%	37%	566
17		Yes	Dc	2	A-BCR	34%	62%			524
17		Yes	Ac	4	B-BCR	43%	18%	29%		563
18	C	Yes	Cb	1	SR	5%	4%	*86%	5%	455
19	B	Yes	Ea	1	SR	2%	*92%	4%	2%	450
20	B	Yes	Cc	2	SR	25%	*58%	9%	6%	581

Objective/Subskill and Depth of Knowledge Level information follows this table.  
 SR: selected response; A-BCR: brief constructed response, part A; B-BCR: brief constructed response, part B.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
482 and below	483–512	513–572	573 and above

# Mathematics Objectives and Subskills

## Beginning of Grade 8

---

### How to use the Framework

---

The mathematics assessment framework is an indication of the knowledge and skills that will be assessed on the November WKCE-CRT. ***This information does not replace your local curriculum.*** However, you may wish to ensure that your local curriculum includes the knowledge and skills described in the framework.

This section of the framework describes the types of content that students may encounter on the WKCE-CRT

The knowledge and skills to be assessed are organized into objectives, subskills, and descriptors as shown below. WKCE-CRT results will be reported by objectives and subskill.

**A. Objective:** A group of cognitively related skills.

**A.a. Subskill:** A group of related knowledge and skills that *may include, but is not limited to,* the descriptors which follow.

- **Descriptor:** an example of a specific knowledge or skill that may be assessed.

---

### Objectives, Subskills, and Descriptors

---

#### Objective   Mathematical Processes

**A:**

Students will effectively use mathematical knowledge, skills, and strategies related to reasoning, communication, connections, representation, and problem solving.

**Descriptors, such as but not limited to**

- Use reasoning and logic to:
  - Perceive patterns
  - Identify relationships
  - Formulate questions
  - Pose problems
  - Make conjectures
  - Justify strategies
  - Test reasonableness of results
- Communicate mathematical ideas and logical reasoning using the vocabulary of mathematics in a variety of ways (e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models).
- Connect mathematics to the real world, as well as within mathematics.
- Create and use representations to organize, record, and communicate mathematical ideas.
- Solve and analyze routine and non-routine problems.

---

#### Objective   Number Operations and Relationships

**B:**

##### Subskill   Concepts B.a.:

**Descriptors, such as but not limited to**

- Recognize and apply place-value concepts to numbers less than 100,000,000 with decimals to the thousandths place.

- Read, write, and represent numbers using words, numerals, number lines, arrays, expanded form ( $12.09 = 10+2+.09$ ), and symbolic renaming ( $12.09 = 13-.91$ ).
- Compare and order a set of fractions or decimals (to the hundredths place) and use symbols ( $<$ ,  $>$ ,  $=$ ,  $\neq$ ).
- Identify and use number theory concepts:
  - prime and composite numbers
  - divisibility potential of numbers (divisors of 1-10, 25, and multiples of 10).
  - least common multiples
  - greatest common factor of two numbers
- Demonstrate understanding of fractions and percents with and without contexts (e.g., sales tax and discounts, 40 is 25 percent of what number?, What number is 25 percent of 160?)
- Apply proportional reasoning to a variety of problem situations (e.g. comparisons, rates, and similarities).
- Identify equivalent forms of fractions, decimals and percents.

**Subskill  
B.b.: Computation**

**Descriptors, such as but not limited to**

- Use all operations in everyday situations to solve single- or multi-step word problems.
- Solve problems involving percents with and without context.
- Add and subtract decimals including thousandths with and without text.
- Multiply decimals and integers (-100 to 100) including thousandths with and without context (e.g., interest rates).
- Divide decimals and integers in problems with and without context.
- Demonstrate understanding of the concept of division of fractions in a contextual setting.
- Add and subtract mixed numbers and fractions with unlike denominators, multiply mixed numbers.
- Estimate the sum, difference, and product of whole numbers, common fractions, mixed numbers, and decimals to thousandths.
- Determine reasonableness of answers.

**Objective C: Geometry**

**Subskill C.a.: Describing figures**

**Descriptors, such as but not limited to**

- Name 3-dimensional figures (e.g., rectangular prisms, square pyramids, cones, cylinders, and spheres).
- Find the measure of the third angle of a triangle when given the measures of two interior or exterior angles.
- Determine the sum of the angles of a polygon using diagonals drawn from one vertex.
- Determine the measure of an angle in a drawing of an adjacent and supplementary or adjacent and complementary pair of angles when given the measure of the other angle.

**Subskill C.b.: Spatial relationships and transformations**

**Descriptors, such as but not limited to**

- Draw and/or describe a similar figure when given a polygon drawn on graph paper with vertices at lattice points.
- Identify figures that are congruent and/or similar.
- Demonstrate understanding of similarity by finding the relationship between the sides of

- two figures.
- Draw or identify the image of a figure based on one or more transformations (reflection, rotation, and/or translation).
  - Design symmetrical shapes.
  - Draw or identify lines of symmetry.
  - Classify figures possessing line symmetry only, line and rotation symmetry, rotational symmetry only, no symmetry.
  - Identify and describe 3-dimensional figures from multiple perspectives.

**Subskill      Coordinate systems**

**C.c.:**

**Descriptors, such as but not limited to**

- Identify, locate, plot coordinates in all four quadrants; draw or identify the reflection of a point across the x- or y-axis or the translation of a point at integer coordinates in any of the four quadrants.
- Locate or plot coordinates in any of the four quadrants using a geometric figure (e.g., transformations).

**Objective      Measurement**

**D:**

**Subskill      D.a.:**

**Measurable attributes**

**Descriptors, such as but not limited to**

- Select the appropriate unit of measure (U.S. customary and metric) to estimate the length, liquid capacity, volume, time, and weight/mass of everyday objects.
- Convert units within a system (e.g., feet to yards; ounces to pounds; inches to feet; pints to quarts).

Approximate conversions of units between metric and U.S. customary systems using a model or in context (quart/liter; yard/meter).

**Subskill      D.b.:**

**Direct measurement**

**Descriptors, such as but not limited to**

- Apply appropriate tools techniques to measure down to the nearest 1/4-, 1/8- or 1/16-inch or nearest centimeter or millimeter.
- Determine and compare elapsed time in problem-solving situations.
- Measure and/or draw angles up to 360 degrees.

**Subskill      D.c.:**

**Indirect measurement**

**Descriptors, such as but not limited to**

- Estimate area given a reference.
- Determine perimeter/circumference and area of polygons and circles with and without context.
- Determine the distance between points using a scale.
- Determine volume and surface area of cylinders, rectangular prisms and pyramids with base shapes of triangle, square, regular pentagon and regular hexagon in real-world context.
- Draw similar figures in any shape using a scale factor (e.g., enlarge/shrink).
- Use ratio and proportion in context.
- Use  $d = r*t$  formula in simple contexts.

---

<b>Objective</b>	<b>Statistics and Probability</b>
<b>E:</b>	
<b>Subskill</b>	<b>Data analysis and statistics</b>
<b>E.a.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Compare two sets of data to generate or confirm/deny hypotheses.</li> <li>• Extract, interpret and analyze data including multiple representations of the same data from tables, double back-to-back stem-and-leaf plots, double bar graphs, simple circle graphs, line plots, line graphs, charts and diagrams with and without context.</li> <li>• Create graph with one-variable data sets using back-to-back stem-and-leaf plots, double bar graphs, circle graphs, line plots and line graphs; discuss appropriateness of graph selected.</li> <li>• Find mean, median (with odd or even number of data), mode, and range of a set of data with and without context.</li> <li>• Evaluate sources of data in context and multiple representations of a given data set.</li> <li>• Compare two sets of data to generate or confirm/deny hypotheses.</li> </ul>
<b>Subskill</b>	<b>Probability</b>
<b>E.b.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Determine the likelihood of an event and probability based on one or two dependent or independent events.</li> <li>• Use probabilities to estimate outcomes and evaluate fair and unfair simple events.</li> <li>• Use data from simulations provided in charts/tables to solve and interpret probability problems.</li> <li>• Determine the number of arrangements from a set of 5 or less. Ex: How many different ways could 5 students stand in line?</li> <li>• Solve problems involving sample spaces or diagrams.</li> <li>• Analyze outcomes based on an understanding of theoretical and experimental probability.</li> </ul>
<b>Objective</b>	<b>Algebraic Relationships</b>
<b>F:</b>	
<b>Subskill</b>	<b>Patterns, relations and functions</b>
<b>F.a.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Use two concurrent numeric patterns to describe and analyze functional relationships between two variables. Describe and analyze in words functional relationships in two concurrent numeric patterns using multiplication and exponents and describe the relationship in words.</li> <li>• Extend an increasing or decreasing arithmetic or geometric pattern.</li> <li>• Describe and interpret linear patterns in tables and graphs.</li> <li>• Identify the rule to complete or extend a function table or any combination of the two using one or two operations (+, -, <math>\times</math>, <math>\div</math>) and numbers (-100 through 100) in the function table.</li> <li>• Describe real-world phenomena represented by a graph. Describe real-world phenomena that a given graph might represent.</li> <li>• Justify the accuracy of the chosen item in a sequence.</li> </ul>
<b>Subskill</b>	<b>Expressions, equations and inequalities</b>
<b>F.b.:</b>	<p><b>Descriptors, such as but not limited to</b></p> <ul style="list-style-type: none"> <li>• Solve single-variable inequalities using symbols.</li> </ul>

---

- Solve single-variable, one- and two-step equations with whole number, whole number integer, or rational coefficients with and without context.
- Find values of expressions with one variable and up to two operations including basic operations and exponents.
- Solve two-step, multi-operation equations with letter variables and whole number or integer coefficients with and without context.  
Ex:  $-3x + 1 =$ .
- Write an algebraic expression (with one or two operations) which generalizes a linear pattern.
- Create a corresponding algebraic expression when given an arithmetic operation/relationship expressed in words.
- Evaluate formulas with and without context by solving for a specified variable.

**Subskill Properties**

**F.c.:**

**Descriptors, such as but not limited to**

- Identify a pair of equivalent numerical or one-variable expressions when using commutative or associative properties with addition and multiplication.
- Demonstrate understanding of up to four-step order of operations expression using parentheses, exponents and fraction symbol.
- Demonstrate understanding of distributive property without variables.
- Solve order of operations problems with one variable to demonstrate understanding of commutativity and associativity.

## **Mathematics Depth of Knowledge**

The representative examples for the following depth of knowledge categories are intended to reflect student performance expectations with regard to the level of mental effort and amount of information integrated by the student. Items are targeted at one of four levels of cognitive demand. Each level of demand is represented by items with a range of difficulty, as indicated by the percentage of students who answered the item correctly or by scale score location. Assuming grade-appropriate vocabulary and test items, these levels are viable and useful across all grades.

### **Level 1: Recognizing and Recalling**

Students recognize and recall basic facts, terms, concepts, and definitions of the content and processes of mathematics. For example, students may be required to do computation with whole numbers, fractions, decimals, and integers.

### **Level 2: Using Fundamental Concepts and Procedures**

Students describe or apply basic facts, terms, rules, concepts and definitions of the content and processes of mathematics.

### **Level 3: Concluding and Explaining**

Students demonstrate an understanding of complex ideas, draw conclusions based on this understanding, and communicate ideas and conclusions effectively.

### **Level 4: Evaluating, Extending, and Making Connections**

Students synthesize skills and techniques from various concepts of mathematics to solve multifaceted problems, and justify conclusions using mathematical definitions, properties, and principles. For example, students may be required to support mathematical arguments with definitions, properties, and principles.

## **Mathematics Rubric for Constructed-Response Items**

Step B of the constructed-response items is scored using a generic rubric.

- |                 |   |
|-----------------|---|
| <b>2 points</b> | The student demonstrates a thorough understanding of the mathematical concepts and/or procedures represented in the problem. The student uses appropriate mathematical procedures and/or concepts to explain or justify the response to Step A, and provides clear and complete explanations and interpretations containing words, calculations, or symbols, unless otherwise specified in the item stem.<br><br>The response may contain minor flaws that do <u>not</u> detract from the demonstration of a thorough understanding of the problem. |
| <b>1 point</b>  | The student demonstrates only a partial understanding of the mathematical concepts and/or procedures represented in the problem. The response lacks an essential understanding of the underlying mathematical concepts used to provide the response to Step A.<br><br>The response contains errors related to the misinterpretation of important aspects of the problem, misuse of mathematical procedures and/or concepts, or misinterpretation of results.  |
| <b>0 points</b> | The student provides a completely incorrect explanation or justification, or one that cannot be interpreted, or no response at all.   |

# Mathematics Constructed-Response Item Scoring Guides

Form: Public Release	Item #: 12	Item Type: BCR	TB Page #: 8	AB Page #: n/a
Objective for Step A: D. Measurement				Max Score Pts:
Subskill: D.c. Indirect Measurement				Step A: 0–1
Objective for Step B: A. Mathematical Processes				Step B: 0–2

## Step A: Response is limited to correct answer or range below

9

## Step B: Responses may include, but may not be limited to, the Answer Cues below

<b>2 points</b>	<u>Both</u> of the following tasks are accomplished: <ul style="list-style-type: none"><li>• The student calculates the volume of the pot and one jar, or indicates in words how to do the calculation.</li><li>• The student divides the volume of the pot by the volume of one jar, or indicates in words how to do this. (See Note 1 below.)</li></ul>
<b>1 point</b>	<u>One</u> of the following applies: <ul style="list-style-type: none"><li>• The student accomplishes both of the above tasks, but makes a computational error. (See Note 2 below.)</li><li>• The student calculates the volume of just the pot or jar, or indicates in words how to do this calculation.</li><li>• The student indicates that the number of jars is the volume of the pot divided by the volume of one jar, but does not explain how the volumes are calculated.</li><li>• The student makes a consistent conceptual error, such as substituting diameter for radius in an otherwise correct volume calculation.</li></ul>
<b>0 points</b>	The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.
Note 1:	Full credit is awarded to the student who recognizes (explicitly or implicitly) that in this division the height of salsa in the pot and jars is the same, and that $\pi$ is a constant, so that the number of jars is just the square of the ratio of diameter sizes.
Note 2:	If an arithmetic error leads to loss of credit for Step A, and the process is otherwise correct, award full credit for Step B.

Form: Public Release	Item #: 17	Item Type: BCR	TB Page #: 11	AB Page #: n/a
Objective for Step A: D. Measurement				Max Score Pts:
Subskill: D.c. Indirect Measurement				Step A: 0–1
Objective for Step B: A. Mathematical Processes				Step B: 0–2

<b>Step A: Response is limited to correct answer or range below</b>
5,400

<b>Step B: Responses may include, but may not be limited to, the Answer Cues below</b>	
<b>2 points</b>	<p>One of the following applies (See Note 1 below.):</p> <ul style="list-style-type: none"> <li>• The student calculates the area of the stand, and divides the volume of water by this area to determine the depth of water (20 inches).</li> <li>• The student divides 7200 by 5400 and multiplies the result by the original depth (15 inches).</li> <li>• The student determines the depth by any other method that demonstrates an understanding of volume. (See Note 2 below.)</li> </ul>
<b>1 point</b>	<p>One of the following applies:</p> <ul style="list-style-type: none"> <li>• The student gives one of the above calculations, but with a computational error. (See Note 3 below.)</li> <li>• The student only calculates the area of the stand (360 square inches).</li> <li>• The student gives the final depth only (20 inches), without explanation.</li> <li>• The student shows an understanding of volume, but not of solving for a specified dimension.</li> </ul>
<b>0 points</b>	The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.
Note 1:	An explanation of any of these methods in words only receives full credit.
Note 2:	Give credit to any computation showing that the student can calculate the missing dimension of a rectangular prism, given volume and 2 other dimensions.
Note 3:	If an arithmetic error leads to loss of credit for Step A, and the process is otherwise correct, award full credit for Step B.

# Anchor Papers for Mathematics

## Constructed-Response Items

### Item 12

Kate makes a batch of salsa in a large cylindrical pot. The inside of the pot is 9 inches in diameter, and it is filled with 4 inches of salsa. Kate plans to store the salsa in small cylindrical glass jars that are 3 inches in diameter and 4 inches high.

$$V = \pi r^2 h$$

#### Step A

How many glass jars will Kate need for all of the salsa? (Use 3.14 to approximate  $\pi$ .)

Answer: 9 glass jars

#### Step B

Explain how you determined the number of glass jars Kate will need. Use words and/or numbers in your explanation.

I took  $4.5 \times 4.5 = 20.25$ , Then I took  $3.14 \times 20.25 \times 4 = 251.24$ . Then I took  $3.14 \times 1.5 \times 1.5 = 7.065$ . Then I took  $7.065 \times 4 = 28.26$ . Then I took  $251.24 \div 28.26 = 9$ .

#### Step A

Score Point 1  
  > Correct

#### Step B

Score Point 2  
  > Correct volumes for pot and jars  
  > Volume of jars correctly divided into volume of pot

### Item 12

Kate makes a batch of salsa in a large cylindrical pot. The inside of the pot is 9 inches in diameter, and it is filled with 4 inches of salsa. Kate plans to store the salsa in small cylindrical glass jars that are 3 inches in diameter and 4 inches high.

$$V = \pi r^2 h$$

#### Step A

How many glass jars will Kate need for all of the salsa? (Use 3.14 to approximate  $\pi$ .)

Answer: 9 glass jars

#### Step B

Explain how you determined the number of glass jars Kate will need. Use words and/or numbers in your explanation.

I found the volume of the pot  
and the the volume of a glass jar  
and then divided the volume of the  
pot by the volume of the jar to get  
9 which is how many glass jars needed.

#### Step A

Score Point 1

> Correct

#### Step B

Score Point 1

< [no indication of how volume is calculated]

> Volume of jars correctly divided into volume of pot

## Item 12

Kate makes a batch of salsa in a large cylindrical pot. The inside of the pot is 9 inches in diameter, and it is filled with 4 inches of salsa. Kate plans to store the salsa in small cylindrical glass jars that are 3 inches in diameter and 4 inches high.

$$V = \pi r^2 h$$

### Step A

How many glass jars will Kate need for all of the salsa? (Use 3.14 to approximate  $\pi$ .)

Answer: 9 glass jars

### Step B

Explain how you determined the number of glass jars Kate will need. Use words and/or numbers in your explanation.

I found out the volume of both, then divided

#### Step A

Score Point 1

> Correct

#### Step B

Score Point 0

< [no calculation of volumes]

< [no indication of what is being divided by what]

### Item 12

Kate makes a batch of salsa in a large cylindrical pot. The inside of the pot is 9 inches in diameter, and it is filled with 4 inches of salsa. Kate plans to store the salsa in small cylindrical glass jars that are 3 inches in diameter and 4 inches high.

$$V = \pi r^2 h$$

#### Step A

How many glass jars will Kate need for all of the salsa? (Use 3.14 to approximate  $\pi$ .)

Answer: 9.06 glass jars

#### Step B

Explain how you determined the number of glass jars Kate will need. Use words and/or numbers in your explanation.

first I figured out the  
volume of salsa in the pot  
then how much could be  
held in the jars so I ÷  
the amount of salsa by the volume of the  
Jars

#### Step A

Score Point 0

< [incorrect]

#### Step B

Score Point 1

< [no indication of how volume is calculated]

> Volume of jars correctly divided into volume of pot

## Item 12

Kate makes a batch of salsa in a large cylindrical pot. The inside of the pot is 9 inches in diameter, and it is filled with 4 inches of salsa. Kate plans to store the salsa in small cylindrical glass jars that are 3 inches in diameter and 4 inches high.

$$V = \pi r^2 h$$

### Step A

How many glass jars will Kate need for all of the salsa? (Use 3.14 to approximate  $\pi$ .)

Answer: 254.469 glass jars

### Step B

Explain how you determined the number of glass jars Kate will need. Use words and/or numbers in your explanation.

I took the diameter 9 and divided  
by 2 which gave me half of 9 3  
then did  $\pi \cdot 4.5^2 \cdot 4 = 254.469$

#### Step A

Score Point 0

< [incorrect]

#### Step B

Score Point 1

> Correct volume calculation for pot

< [no indication of dividing volumes]

## Item 12

Kate makes a batch of salsa in a large cylindrical pot. The inside of the pot is 9 inches in diameter, and it is filled with 4 inches of salsa. Kate plans to store the salsa in small cylindrical glass jars that are 3 inches in diameter and 4 inches high.

$$V = \pi r^2 h$$

### Step A

How many glass jars will Kate need for all of the salsa? (Use 3.14 to approximate  $\pi$ .)

Answer: 113

glass jars

### Step B

Explain how you determined the number of glass jars Kate will need. Use words and/or numbers in your explanation.

Using the equation  $V = \pi r^2 h$  I found that she will need 113 jars.  
I took  $V = 3.14 \times 9 \times 4$ .

#### Step A

Score Point 0

< [incorrect]

#### Step B

Score Point 0

< [incorrect calculation of volume of jar (squares diameter)]

< [no division of volume of jars into volume of pot]

**Item 17**

Scott has an old fish tank in the shape of a box. It fits exactly onto a rectangular stand that is 12 inches wide and 30 inches long. The tank can be filled with water to a depth of 15 inches.

**Step A**

What is the total volume of water that Scott's old fish tank can hold?

Answer: 5,400 cubic inches

**Step B**

Scott is buying a new fish tank that fits on the same stand as the old tank, but holds up to 7,200 cubic inches of water. Use what you know about volume to explain how to find the depth of the water in the new fish tank. Use words and/or numbers in your explanation.

$$12 \cdot 30 = 360$$

$$7,200 \div 360 = 20$$

$$12 \cdot 30 \cdot 20 = 7200$$

## Step A

Score Point 1

&gt; Correct

## Step B

Score Point 2

&gt; Correctly calculates area of the stand

&gt; Correctly calculates depth of the water

### Item 17

Scott has an old fish tank in the shape of a box. It fits exactly onto a rectangular stand that is 12 inches wide and 30 inches long. The tank can be filled with water to a depth of 15 inches.

#### Step A

What is the total volume of water that Scott's old fish tank can hold?

Answer: 5400 cubic inches

#### Step B

Scott is buying a new fish tank that fits on the same stand as the old tank, but holds up to 7,200 cubic inches of water. Use what you know about volume to explain how to find the depth of the water in the new fish tank. Use words and/or numbers in your explanation.

$$12 \times 30 \times 20 = 7200$$

---

---

---

---

#### Step A

Score Point 1  
-> Correct

#### Step B

Score Point 1  
-> Partial credit for "guess and check" method  
(with calculation)

### Item 17

Scott has an old fish tank in the shape of a box. It fits exactly onto a rectangular stand that is 12 inches wide and 30 inches long. The tank can be filled with water to a depth of 15 inches.

#### Step A

What is the total volume of water that Scott's old fish tank can hold?

Answer: 5,400 cubic inches

#### Step B

Scott is buying a new fish tank that fits on the same stand as the old tank, but holds up to 7,200 cubic inches of water. Use what you know about volume to explain how to find the depth of the water in the new fish tank. Use words and/or numbers in your explanation.

Guess and check.

---

---

---

---

Step A

Score Point 1

> Correct

Step B

Score Point 0

< ["guess and check" is unacceptable without any work shown]

### Item 17

Scott has an old fish tank in the shape of a box. It fits exactly onto a rectangular stand that is 12 inches wide and 30 inches long. The tank can be filled with water to a depth of 15 inches.

#### Step A

What is the total volume of water that Scott's old fish tank can hold?

Answer: 375 cubed cubic inches

#### Step B

Scott is buying a new fish tank that fits on the same stand as the old tank, but holds up to 7,200 cubic inches of water. Use what you know about volume to explain how to find the depth of the water in the new fish tank. Use words and/or numbers in your explanation.

Fist I took 12 times 30 to get 360. Then  
I divided 7200 by 360 to get 20. Then  
I tried the equation  $12 \cdot 30 \cdot 20 = 7200$   
and I was correct.

Step A

Score Point 0

< [incorrect]

Step B

Score Point 2

> Correctly calculates area of the stand

> Correctly calculates depth of the water

### Item 17

Scott has an old fish tank in the shape of a box. It fits exactly onto a rectangular stand that is 12 inches wide and 30 inches long. The tank can be filled with water to a depth of 15 inches.

#### Step A

What is the total volume of water that Scott's old fish tank can hold?

Answer: 4800 cubic inches

#### Step B

Scott is buying a new fish tank that fits on the same stand as the old tank, but holds up to 7,200 cubic inches of water. Use what you know about volume to explain how to find the depth of the water in the new fish tank. Use words and/or numbers in your explanation.

$12 \times 30 = 360$  then use guess & ✓  
Ans = 20. n

#### Step A

Score Point 0

< [incorrect]

#### Step B

Score Point 1

> Correctly calculates area of the stand

< [no credit for "guess and check" without work shown]

### Item 17

Scott has an old fish tank in the shape of a box. It fits exactly onto a rectangular stand that is 12 inches wide and 30 inches long. The tank can be filled with water to a depth of 15 inches.

#### Step A

What is the total volume of water that Scott's old fish tank can hold?

Answer: 47 cubic inches

#### Step B

Scott is buying a new fish tank that fits on the same stand as the old tank, but holds up to 7,200 cubic inches of water. Use what you know about volume to explain how to find the depth of the water in the new fish tank. Use words and/or numbers in your explanation.

If it fits in the stand at 12 inches wide and 30 inches long and holds up to 7,200 cubic inches of water the the depth of the water in the new fish tank would be 30 inches

Step A

Score Point 0

< [incorrect]

Step B

Score Point 0

< [no calculation of area of the stand]

< [no calculation of depth of the water]

**Guide to Grade 8 Released Item Books  
In READING and MATHEMATICS**

Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

**Wisconsin Knowledge and Concepts Examinations**  
**Criterion-Referenced Test**

**Released Item Book**

**Reading**

**Grade**

**10**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.

**Acknowledgments** CTB is indebted to the following for permission to use material in this book:

All trademarks and trade names found in this publication are the property of their respective companies and are not associated with the publisher of this publication.

"Cruze to the Blues!" copyright © 2005 by CTB/McGraw-Hill LLC. All rights reserved.

Excerpt from *A Walk in the Woods* by Bill Bryson, copyright © 1997 by Bill Bryson. Used by permission of Broadway Books, a division of Random House, Inc.

Excerpts and illustrations from "Trumpeter Swan" from <http://dnr.wi.gov/org/land/er/factsheets/birds/swan.htm>, copyright © 2000 by Wisconsin Department of Natural Resources.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### **What are released items?**

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### **How do I use this book?**

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

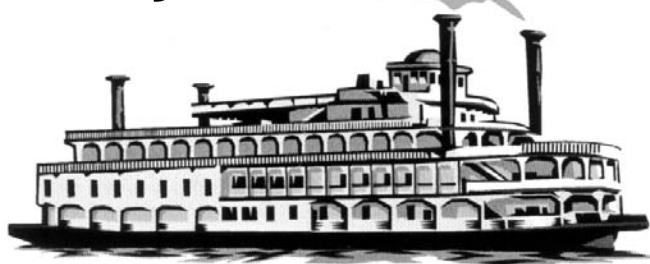
**Directions**

Read this advertisement. Then answer Numbers 1 through 5.

# Cruze to the Blues!

**Class of 2006 Summer Trip**

**June 10–12**



**Steam Dream Blues Boat!**

A weekend of music with **Fat Traks**,  
winner of the Star Award for Best  
Blues Album!

**Seniors and Friends:**

**Let's Cruise!**

3 days, 2 nights on the Steam  
Dream Blues Boat from St. Louis  
to New Orleans!

Book now, before our special \$750  
weekend travel offer \* steams away!

Call 1-800-555-BLUE for reservations  
& discount information \*\*

\* \$750 travel fee includes stateroom and all meals with one day and one night in New Orleans! Last day to book is April 15, 2006. Airfare not included.  
\*\* Large group discounts available for 20 or more!

**Fat Traks**



**Concert  
of the  
Century!**



**Tour 2000 calls this  
“the coolest trip of  
the season!”**

Manufacturer's Coupon



Expiration July 15, 2006

## 30% off DVD or Videocassette!

**30% off**  
**Fat Traks Concert**  
**“Live in New Orleans”**  
**DVD or Videocassette\***  
**Proof of ticket purchase necessary**

\*Good only at participating dealers and only for high school seniors who sign up for **Cruze to the Blues** by April 13, 2006.

### Fat Traks



**Concert  
of the  
Century!**



“Cruze to the Blues!” copyright © 2005 by CTB/McGraw-Hill LLC. All rights reserved.

**1** The advertisement is trying to create a tone of

- (A) mystery
- (B) adventure
- (C) ironic humor
- (D) lighthearted fun

**2** The “Cruze to the Blues” offer includes all of these except

- (A) airfare to St. Louis
- (B) meals in New Orleans
- (C) an invitation to bring friends along
- (D) a discount for a group of 25 students



**3** The manufacturer's coupon accompanying the cruise announcement suggests that students

- (A) buy a DVD player
- (B) give the coupon to a friend
- (C) use the coupon at any music store
- (D) sign up for the trip before April 13

**4** Which of these tries to influence readers by using the testimony of an authority?

- (A) Concert of the Century!
- (B) Seniors and Friends: Let's Cruise!
- (C) Tour 2000 calls this "the coolest trip of the season!"
- (D) Book now, before our special \$750 weekend travel offer steams away!

**5** Which of these would probably be least useful in evaluating the advertisement's claim that this is "the coolest trip of the season"?

- (A) questioning people connected with Tour 2000
- (B) listening to the Fat Traks award-winning album
- (C) discussing the trip with friends who are first learning of the trip
- (D) talking with people who have taken trips on the Steam Dream Blues Boat

## Directions

Read the passage “The Appalachians.” Then answer Numbers 6 through 11.

# The Appalachians

by Bill Bryson

Once, aeons ago, the Appalachians were of a scale and majesty to rival the Himalayas—piercing, snow-peaked, pushing breathtakingly through the clouds to heights of four miles or more. New Hampshire’s Mount Washington is still an imposing presence, but the stony mass that rises from the New England woods today represents, at most, the stubby bottom one-third of what was ten million years ago.

That the Appalachian Mountains present so much more modest an aspect today is because they have had so much time in which to wear away. The Appalachians are immensely old—older than the oceans and continents (at least in their present configurations), far, far older than most other mountain chains, older indeed than almost all other landscape features on earth. When simple plants colonized the land and the first creatures crawled gasping from the sea, the Appalachians were there to greet them.

Something over a billion years ago, the continents of earth were a single mass called Pangaea surrounded by the lonely Panthalassan Sea. Then some unexplained turmoil within the earth’s mantle caused the land to break apart and drift off as vast asymmetrical chunks. From time to time over the ages since—three times at least—the continents

have held a kind of grand reunion, floating back to some central spot and bumping together with slow but crushing force. It was during the third of these collisions, starting about 470 million years ago, that the Appalachians were first pushed up (like a rucked<sup>1</sup> carpet, as the analogy nearly always has it). Four hundred seventy million years is a span pretty well beyond grasping, but if you can imagine flying backwards through time at the rate of one year per second, it would take you about sixteen years to cover such a period. It’s a long time.

The continents didn’t just move in and out from each other in some kind of grand slow-motion square dance but spun in lazy circles, changed their orientation, went on cruises to the tropics and poles, made friends with smaller land masses, and brought them home. Florida once belonged to Africa. A corner of Staten Island is, geologically, part of Europe. The seaboard from New England up to Canada appears to have originated in Morocco. Parts of Greenland, Ireland, Scotland, and Scandinavia have the same rocks as the eastern United States—are, in effect, ruptured outposts of the Appalachians. There are even suggestions that mountains as far south as the Shackleton Range in Antarctica may be fragments of the Appalachian family.

<sup>1</sup>rucked: folded; creased; wrinkled

Excerpt from *A Walk in the Woods* by Bill Bryson, copyright © 1997 by Bill Bryson. Used by permission of Broadway Books, a division of Random House, Inc.



**6** What is the main idea of the passage?

- (A) All continents were once part of a single land mass.
- (B) The Appalachians have changed a great deal over time.
- (C) At one time, the Appalachians were the highest mountains on earth.
- (D) Collisions between drifting continents helped form the earth's mountain ranges.

**7** Read this sentence from the passage.

New Hampshire's Mount Washington is still an imposing presence, but the stony mass that rises from the New England woods today represents, at most, the stubby bottom one-third of what was ten million years ago.

In this context, the word imposing means

- (A) decaying
- (B) growing
- (C) impressive
- (D) inconvenient

**8** According to the passage, about how old are the Appalachians?

- (A) over a billion years old
- (B) about 10 million years old
- (C) several thousand years old
- (D) about 470 million years old

**9** According to the passage, the Appalachians were formed by

- (A) a collision among the continents
- (B) a volcanic eruption in New England
- (C) the breakup of the landmass Pangaea
- (D) some unexplained turmoil within the earth's mantle

**10** What characteristic of the Appalachians does the author emphasize the most?

- (A) their age
- (B) their location
- (C) their uniqueness
- (D) their ruggedness

**11** Which sentence best expresses the main idea of the fourth paragraph?

- (A) The continents are moving faster than most people think.
- (B) Old parts of the Appalachians can be found in many remote places.
- (C) The landmasses of the earth are made up of fragments of the United States.
- (D) Many of the earth's geographical features have changed locations over time.

## Directions

Read the passage “Trumpeter Swan.” Then answer Numbers 12 through 19.

# Trumpeter Swan

### Description

The Trumpeter Swan is the largest waterfowl species native to North America. Most Trumpeters weigh 21–30 pounds, although large males may exceed 35 pounds. The male is called a cob; the female is called a pen. With a wingspan over 7 feet, these snow-white birds are truly spectacular. Standing on the ground, an adult Trumpeter stands about 4 feet high.

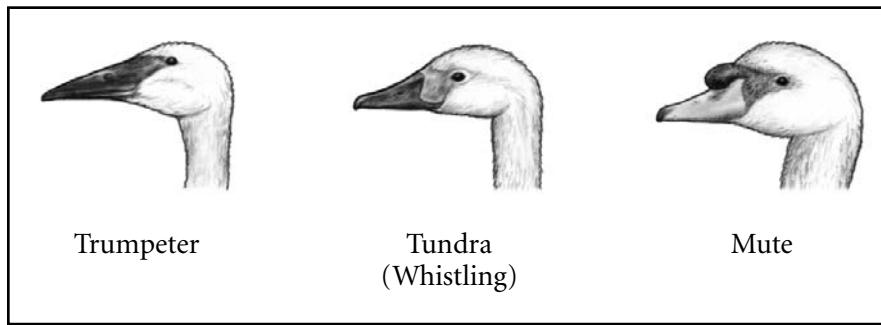
Trumpeters have broad, flat bills with fine tooth-like serrations<sup>1</sup> along the edges that strain water when the birds eat aquatic vegetation. Their long necks allow them to uproot plants in 4 feet of water. Trumpeters are often confused with the far more common Tundra Swan (formerly Whistling Swan, *Cygnus columbianus*), the only other native swan that occurs regularly in North America. Tundra Swans can be

seen in the upper Midwest during spring and fall migration.

Observers have described the Trumpeter’s call as resonant,<sup>2</sup> deep and loud,

sonorous,<sup>3</sup> and trumpet-like. Hence the bird’s name: Trumpeter Swan.

A swan in its first year is called a juvenile or cygnet. Juvenile Trumpeter and Tundra Swans are grayish. Tundra cygnets are more silver gray than the darker Trumpeter cygnets, which are sooty gray



<sup>1</sup>serrations: sawlike notches

<sup>2</sup>resonant: echoing; resounding

<sup>3</sup>sonorous: full, deep, or rich in quality

in the head and neck areas. Swan cygnets do not become all white until about a year old. In their first summer, Trumpeter and Tundra Swan cygnets have pink bills with black tips. The bills turn all black during the first winter.

### Status and Distribution

Trumpeter Swans were once fairly common throughout most of the northern United States and Canada. Market hunting and the millinery<sup>4</sup> trade rapidly depleted nesting populations during the 19th century. By 1900, it was widely believed that the species had become extinct. Fortunately, a small nonmigratory population survived in the remote mountain valleys of Montana, Idaho, and Wyoming.

Once considered for federal “endangered” status, the Trumpeter is not officially listed as threatened or endangered. In the Midwest, however, it is

actually more rare than the threatened Bald Eagle. It has no official state status in Midwestern states, except in Wisconsin, where it is listed as an

endangered species, and in Michigan, where it is a threatened species.

### Breeding Biology

Trumpeter Swans may form pair bonds as early as their second winter and some may nest for the first time at age three years. Most Trumpeters, however,

<sup>4</sup>millinery: the business of making hats



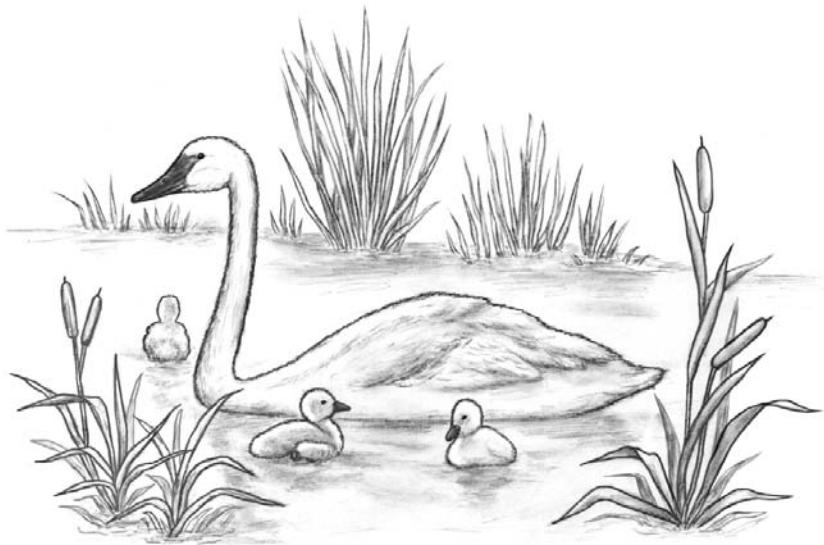
don't nest until they are four to six years old. Trumpeter Swans mate for life and may live for 20 to 30 years. If one member of a pair dies, the survivor finds another mate.

Swans usually form pair bonds where they spend the winter. Pairs may select a nesting area near where the pen hatched. The pen chooses the specific nesting area and the cob defends it, sometimes joined by the pen. If a pair spends at least two summers at the same nesting location, it will form an almost unbreakable attachment to the site.

Nest building begins in mid-April and may take up to two weeks. Beginning in late April to early May, the pen lays one off-white egg about  $4\frac{1}{2}$  inches long and 3 inches wide every other day until a clutch of five to nine eggs is complete. Once all eggs have been laid, the pen incubates the eggs and the cob protects the nest against all intruders. When the cygnets hatch in June, they weigh about 7 ounces. After a day or two, they take to the water to feed on insects and other aquatic invertebrates. For the first several weeks, a cygnet may concentrate on this protein-rich food source to support its rapid growth. At early stages cygnets may gain 20% of their body weight every day.

By the time the cygnets are four to six weeks old they are feeding on aquatic vegetation, using their bills to uproot plants as their parents do. The cygnets grow rapidly. At six weeks, the belly, breast, and cheek are fully feathered. By seven weeks, cygnets have most neck and crown feathers. Cygnets have little down left at eight weeks and are fully feathered by nine to ten weeks though they are unable to fly until about 15 weeks of age. At 15 weeks the cygnets weigh about 20 pounds. Their growth rate exceeds a pound a week!

The first flights in late September are typically short. Daily practice prepares the cygnets to migrate with their parents just before freeze-up to wintering areas. Cygnets will remain with their parents during



winter and migrate north with them. Then the parents drive them away. By this time the cygnets are about one year old. They remain together in sibling groups until about two years of age when they, too, begin to seek mates and a new life in a remote marsh.

### Midwest Restoration Programs

Wisconsin, Minnesota, and Michigan are attempting to reestablish Trumpeter Swans by rearing cygnets in captivity. After two years, unrelated birds are paired and released at selected wetlands. Birds are retained in captivity for two years because it is believed that the first two years of a cygnet's life are the most difficult to survive. Released birds typically "imprint" on the release area; that is, they will most likely return to that area to nest at age four years.

The Wisconsin Department of Natural Resources (WDNR) began their Trumpeter Swan recovery program in 1987 in cooperation with the Milwaukee County Zoo, the Wisconsin Metro Audubon Society, and the MDNR (Minnesota Department of Natural Resources). The goal of the WDNR recovery program: to achieve a population of at least 20 breeding and migratory pairs by the year 2000.

Excerpts and illustrations from "Trumpeter Swan" from <http://dnr.wi.gov/org/land/er/factsheets/birds/swan.htm>, copyright © 2000 by Wisconsin Department of Natural Resources.

**12** The Trumpeter Swan gets its name from its

- (A) loud call
- (B) broad bill
- (C) great height
- (D) brilliant color

**13** Read this sentence from the passage.

Market hunting and the millinery trade rapidly depleted nesting populations during the 19th century.

What does depleted mean in this sentence?

- (A) discovered
- (B) exterminated
- (C) reduced
- (D) relocated

**14** Which of these best explains how the graphics are an aid to the text?

- (A) They prove that the Trumpeter is a superior swan.
- (B) They provide basic information about the Trumpeter.
- (C) They suggest the ways in which Trumpeters are like humans.
- (D) They show why the Trumpeter should be classified as “endangered.”

**15** How are some Midwestern states trying to reestablish the Trumpeter Swan population?

- (A) by protesting the hunting of Trumpeters for the millinery trade
- (B) by demanding that Trumpeters remain on all “endangered” lists
- (C) by prohibiting regional zoos from releasing Trumpeters to the wild
- (D) by raising Trumpeters in captivity during the first two years of their lives



**Go On**

**16** The author presents the information mainly through the effective use of

- (A) colorful language
- (B) simple descriptions
- (C) emotional arguments
- (D) informational graphics

**17** How is the Trumpeter Swan's bill specially adapted for feeding in water?

- (A) The toothlike edges help to filter food.
- (B) The flat shape helps to scoop up small fish.
- (C) The sharp point helps to dig up aquatic plants.
- (D) The small teeth inside help to grind vegetation.

**18** How does the organization of the article help the reader?

- (A) It states the problem and several possible solutions.
- (B) It follows the chronology of a Trumpeter Swan's life.
- (C) It divides the information into smaller sections by topic.
- (D) It presents information from most important to least important.

**19**

Explain the reasons for the decline and the survival of the Trumpeter Swan population during the 19th century and what efforts are being made to increase its population today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

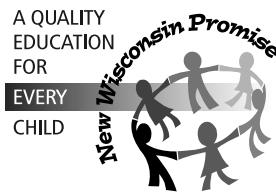
---

---

**STOP** 

# Reading Grade 10

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

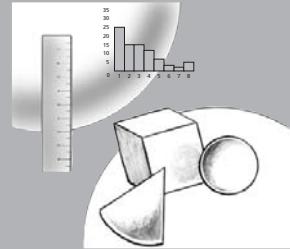
**Wisconsin Knowledge and Concepts Examinations  
Criterion-Referenced Test**

**Released Item Book**

**Mathematics**

**Grade**

**10**



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.



Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. Based on a template copyright © 1997 by CTB/McGraw-Hill LLC. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction and CTB/McGraw-Hill LLC.

Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test  
(WKCE-CRT)

## Released Item Book

### What are released items?

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

### How do I use this book?

#### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

#### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

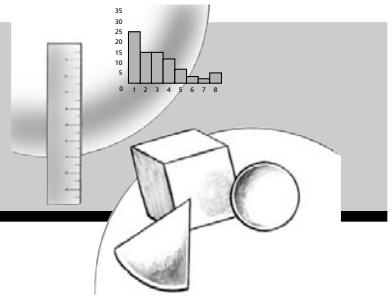
- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

#### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

# Mathematics

## Session 1



**1** Which of these ordered pairs is on the graph of  $3x - 2y = 12$ ?

- (A)  $(-6, 0)$
- (B)  $(0, 4)$
- (C)  $(3, 4)$
- (D)  $(4, 0)$

**2** The Raymond Institute increased the number of mathematicians on its staff over the years 1996–2000. The number of mathematicians at the Raymond Institute for each of those years is shown in the table below.

**Mathematicians at the Raymond Institute**

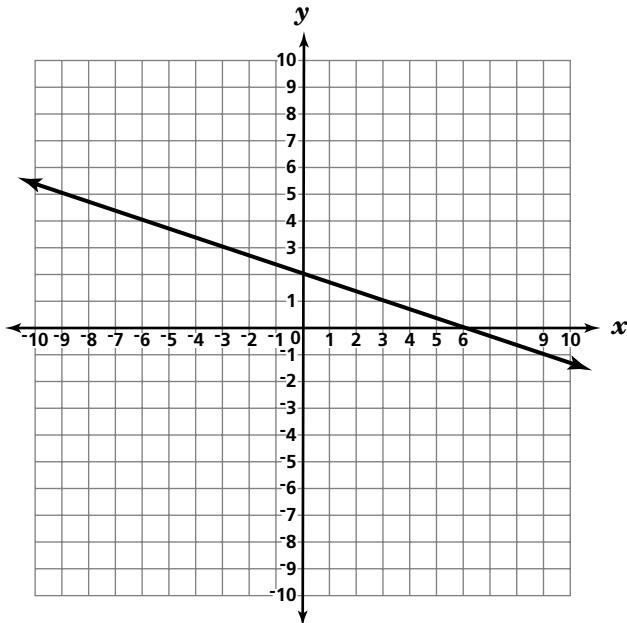
Year	Number of Mathematicians
1996	32
1997	35
1998	39
1999	44
2000	50

If the pattern in the table continues, how many mathematicians will be at the Raymond Institute in 2004?

- (A) 62
- (B) 74
- (C) 84
- (D) 95



- 3** The line  $y = -\frac{1}{3}x + 2$  is graphed on the grid below.



Which of these is parallel to the graphed line?

(A)  $y = \frac{1}{3}x + 2$

(B)  $y = -3x + 2$

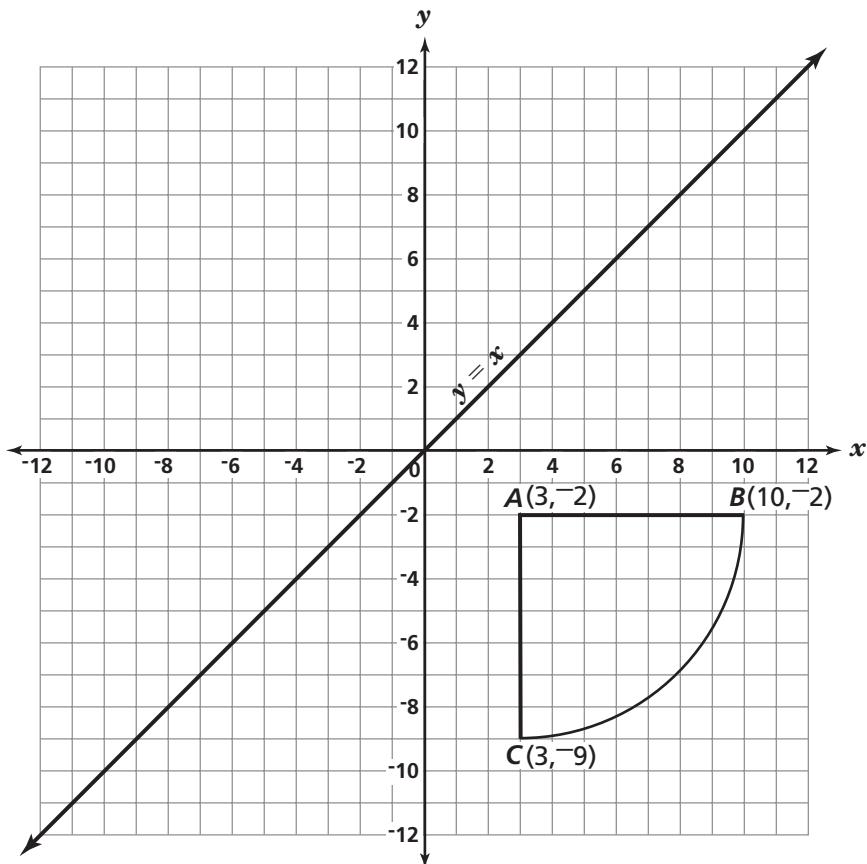
(C)  $y = 2x + \frac{1}{3}$

(D)  $y = -\frac{1}{3}x + 3$



**4**

Coach Nelson is designing a new park that will have both a baseball diamond and a softball diamond. The baseball diamond will have the same dimensions as the softball diamond. A diagram of the park with the placement of the softball diamond is shown below.



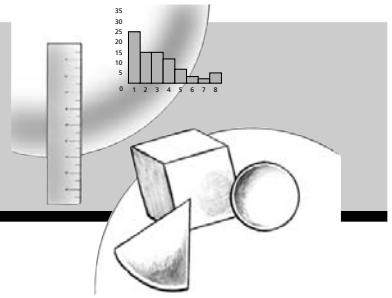
The position of the baseball diamond will be determined by the reflection of the image of the softball diamond about the line  $y = x$ . What are the coordinates of the reflected image of point C?

- (A) (3, 9)
- (B) (9, -3)
- (C) (-9, 3)
- (D) (-3, -9)

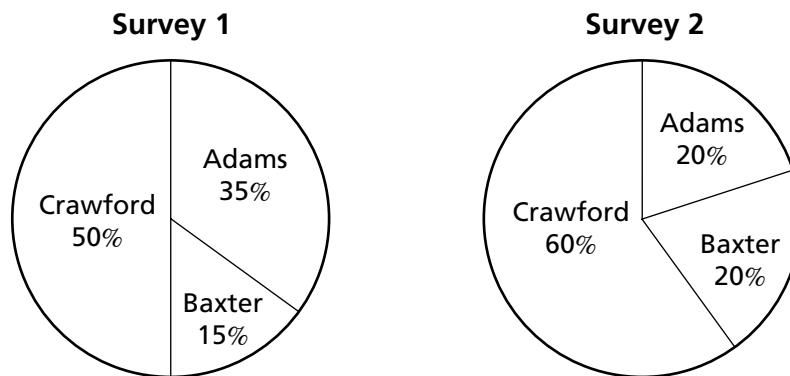
**STOP**

# Mathematics

## Session 2



- 5** Three candidates are running for mayor in the town of Morganville. The local newspaper conducted two surveys asking potential voters for whom they plan to vote. Survey 1 was taken six months before the election and Survey 2 was taken three months before the election. The results of the two surveys are shown below.



Based on the results of both surveys, which of these statements is true?

- (A) Crawford will definitely win the election.
- (B) More people will vote for Baxter than Adams in the election.
- (C) Crawford is spending the most money of the three candidates.
- (D) Baxter gained voter support between Survey 1 and Survey 2.

- 6** An ecologist owns 188,000 square feet of land. She wants to plant trees on 18% of her land. How many square feet of land will be used for planting? Round the answer to the nearest square foot.

- (A) 10,444 square feet
- (B) 18,800 square feet
- (C) 33,840 square feet
- (D) 135,360 square feet



- 7** Barbara visits Japan and Australia on her vacation. The exchange rates between United States dollars and the currencies of the countries she is visiting are shown below.

Currency Exchange Rates	
$1 \text{ U.S. dollar} = 105.5 \text{ Japanese yen}$	
$1 \text{ U.S. dollar} = 1.63 \text{ Australian dollars}$	

When she arrives in Australia, she still has 10,500 Japanese yen. How much is this worth in Australian dollars?

- (A) 64.72 Australian dollars
- (B) 99.53 Australian dollars
- (C) 162.23 Australian dollars
- (D) 171.97 Australian dollars

- 8** The table below contains coordinates for two endpoints of a circle's diameter.

$x$	$y$
2	5
-2	5

Which of these points is the center of the circle?

- (A) (2, 0)
- (B) (6, 5)
- (C) (1, 5)
- (D) (0, 5)

- 9** Carla is mowing lawns to earn money for a used car that costs \$1,500. Carla's parents have agreed to contribute \$1 for every \$1 she saves. Carla saves \$10 from each lawn she mows. Carla mows 3 lawns per week. Carla estimates that with her parents' help she should be able to purchase the car in 20 weeks.

In the box below, explain whether or not Carla's estimate is accurate. Use mathematics to explain your answer. You may use words, calculations, or diagrams in your explanation.

- 10** In order to test the effectiveness of a new drug designed to lower blood pressure, a medical researcher creates two testing groups. The dose group will receive the new drug while the other group will be the control group. The control group will receive a placebo, a pill that looks like the real drug but contains no medication at all. Participants will not know whether they are taking the drug or the placebo until after the experiment ends.

**What is the role of the control group in this experiment?**

- (A) to assure that everyone in the dose group takes the drug
- (B) to verify that the placebo has no effect on experiment participants
- (C) to assure that the people with the highest blood pressure get to take the drug
- (D) to verify that any effects seen in the dose group are actually related to the drug



**11**

At an electronics store, Kara earns a 5% commission on her sales. The table below shows her sales for four weeks.

Kara's Sales

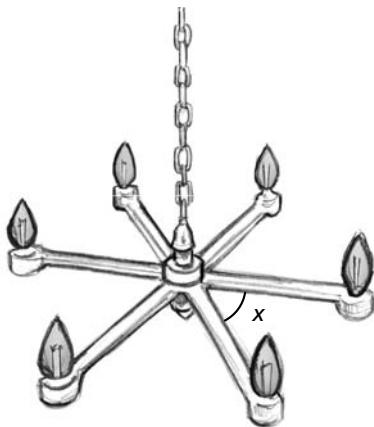
Week	1	2	3	4
Sales	\$1,920	\$1,680	\$3,360	\$2,640

What was Kara's total commission for these four weeks?

- (A) \$12
- (B) \$40
- (C) \$120
- (D) \$480

**12**

A lamp company is designing a light fixture with 6 bulbs. The bulbs are located at the end of six congruent supports as shown below. All the bulbs are evenly spaced around the lamp.



What is the approximate measure of the angle ( $x$ ) between each support?

- (A)  $30^\circ$
- (B)  $60^\circ$
- (C)  $120^\circ$
- (D)  $180^\circ$

**13**

The graph below contains pricing information for The Chopper, a kitchen tool that is advertised on television. The price depends on how soon a customer calls after the end of the advertisement.

Pricing of The Chopper

Minutes ( $m$ ) After Television Advertisement Ends	Price
$0 \leq m \leq 10$	\$34.95
$10 < m \leq 20$	\$39.95
$20 < m \leq 30$	\$44.95
$30 < m \leq 40$	\$49.95
$m > 40$	\$59.95

Approximately how much more would a customer who orders 3 Choppers 23 minutes after the end of the television advertisement pay than a customer who orders 2 Choppers 17 minutes after the advertisement?

- (A) \$15
- (B) \$35
- (C) \$40
- (D) \$55

**14**

The United States imported 9.75 million barrels of petroleum per day in 1999. This represents approximately one-half of the daily petroleum demand in the United States. A barrel holds 42 gallons. According to this information, what was the United States' daily petroleum demand, in gallons, in 1999?

- (A) 85 million gallons
- (B) 205 million gallons
- (C) 397 million gallons
- (D) 819 million gallons



- 15** An engineer knows that a large container holds a volume of 50 gallons of water. For his latest project he needs to find the volume in cubic centimeters. He will use the conversion factors below to convert 50 gallons to cubic centimeters.

**Liquid Measure Conversions**

1 gallon = 4 quarts

1 liter = 1000 cubic centimeters of water

1 liter = 1.0567 liquid quarts

In the box below, calculate how many cubic centimeters of water are in 50 gallons. Round your answer to the nearest whole number. Use mathematics to explain your answer. You may use words, calculations, or diagrams in your explanation.

**Answer:** \_\_\_\_\_ cubic centimeters

- 16** Look at the figures below.



Figure 1

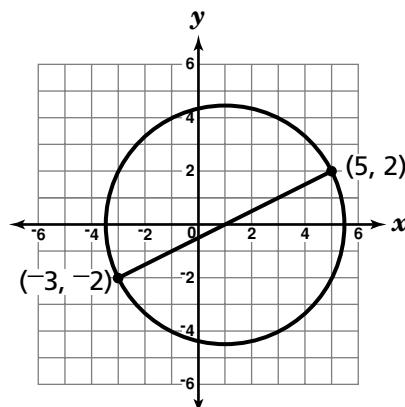


Figure 2

Which of these describes the relationship between Figure 1 and Figure 2?

- (A) Figure 2 is a translation of Figure 1.
- (B) Figure 2 is a  $180^\circ$  rotation of Figure 1.
- (C) Figure 2 is a vertical reflection of Figure 1.
- (D) Figure 2 is a horizontal reflection of Figure 1.

- 17** Jill drew a circle in the coordinate plane. She then drew a diameter of the circle from  $(-3, -2)$  to  $(5, 2)$  as shown below.



What is the length of the diameter of the circle that Jill drew? Round the answer to the nearest unit.

- (A) 4 units
- (B) 5 units
- (C) 9 units
- (D) 12 units

- 18** The equation shown below can be used to estimate a person's low-density lipoprotein cholesterol (LDL) level, where  $C$  is the total cholesterol level,  $H$  is the high-density lipoprotein cholesterol level, and  $T$  is the level of triglycerides. All measurements are in milligrams per deciliter of blood.

$$\text{LDL} = C - H - \frac{T}{5}$$

A person's lipoprotein analysis results are shown below.

**Lipoprotein Analysis Results**

Total cholesterol ( $C$ )	230
High-density lipoprotein ( $H$ )	50
Triglycerides ( $T$ )	80

What is this person's LDL level?

- (A) 20
- (B) 100
- (C) 164
- (D) 180

**19** Hospital A has 360 beds, 30 of which are for critical-care patients. Hospital B is smaller with only 164 beds, 14 of which are for critical-care patients. Which of these statements correctly compares the percentage of critical-care beds at the two hospitals?

- (A) Hospital A at 8.3% has a greater percent of critical-care beds than Hospital B.
- (B) Hospital A at 12.0% has a greater percent of critical-care beds than Hospital B.
- (C) Hospital B at 8.5% has a greater percent of critical-care beds than Hospital A.
- (D) Hospital B at 11.7% has a greater percent of critical-care beds than Hospital A.

**20** Jared is giving his two friends, Larry and Daryl, a ride home from school. He will drop off Larry first, then Daryl, and then Jared will drive himself home. The chart below shows the number of routes Jared can take for each part of the trip.

**Jared's Trip**

Part of the Drive	Number of Routes
School to Larry's house	3
Larry's house to Daryl's house	4
Daryl's house to Jared's house	2

How many routes for the entire trip are possible?

- (A) 9
- (B) 12
- (C) 24
- (D) 27

**STOP** 

# Mathematics Grade 10

# Released Item Book



Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent

**Wisconsin Knowledge and Concepts Examinations** **WI**  
***Criterion-Referenced Test***

# Guide to Grade 10

Released Item Books  
In READING and MATHEMATICS



The Wisconsin Department of Public Instruction does not discriminate on the basis of gender, race, religion, age, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional, or learning disability.

## **Guide to Grade 10 Released Item Books in Reading and Mathematics**

This document contains information for using, scoring, and interpreting the released items in reading and mathematics.

August 2006  
(Document Version 1.0, August 28, 2006)

Developed and published under contract with the Wisconsin Department of Public Instruction by CTB/McGraw-Hill LLC, a subsidiary of The McGraw-Hill Companies, Inc., 20 Ryan Ranch Road, Monterey, California 93940-5703. Copyright © 2006 by the Wisconsin Department of Public Instruction. All rights reserved. State of Wisconsin educators and citizens only may copy, download, and/or print the document, located online at <http://dpi.wi.gov/oea/assessmt.html>. Any other use or reproduction of this document, in whole or in part, requires written permission of the Wisconsin Department of Public Instruction.

## **Table of Contents**

<b>Introduction.....</b>	<b>1</b>
<b>Reading .....</b>	<b>2</b>
Reading Item Information.....	4
Reading Objectives and Subskills.....	5
Reading Depth of Knowledge.....	8
Reading Rubric for Constructed-Response Items.....	9
Reading Constructed-Response Item Scoring Guide.....	10
Anchor Papers for Reading.....	12
<b>Mathematics .....</b>	<b>21</b>
Mathematics Item Information .....	24
Mathematics Objectives and Subskills .....	25
Mathematics Depth of Knowledge .....	29
Mathematics Rubric for Constructed-Response Items .....	30
Mathematics Constructed-Response Item Scoring Guides.....	31
Anchor Papers for Mathematics Constructed-Response Items.....	33
Mathematics Formula Reference Sheet .....	39

## **Guide to Released Item Books**

Please help us improve this document. We welcome your comments and questions.  
Please contact us at:

Wisconsin Department of Public Instruction  
Office of Educational Accountability  
125 S. Webster Street, P.O. Box 7841  
Madison, WI 53707-7841

Toll-free: (800) 441-4563

Fax: (608) 266-8770

<http://www.dpi.wi.gov/oea/>

# Introduction

## What are released items?

The items in the Reading and Mathematics released item books are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in the released item books illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

## How do I use the released item books and this guide?

### *Professional Development*

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

This guide provides instructions for administering the released item books as practice tests and information for scoring the items, including scoring guides and anchor papers for the constructed-response items. The item information tables identify the answer key, what each item measures, depth of knowledge, and item difficulty. Item difficulty is presented as both the percentage of students who answered the item correctly and the scale score location of the item. The item's scale score location describes where the item functions along the ability scale. Items with higher scale score locations are considered more difficult than items with lower scale score locations. Students with scale scores above the scale score location of the item would have a greater probability of answering the item correctly than students with scale scores below the item's scale score location.

### *Improving Instruction*

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

### *Student Practice*

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. Note that a student's score on the practice test cannot be converted to a total scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

## Reading

### Sample Directions for Administering the Reading Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, and scratch paper. Students' test books should be closed.*

**SAY** In this test, you will read some passages and answer both multiple-choice questions and short-answer questions about those passages. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Write your answer on the lines in your test book. You may also write in the space under the lines, but your answer must stay inside the boxed area. Answers or parts of answers written outside the boxed area will not be scored. You may use scratch paper to help you plan your answer, but remember to write your answer in the boxed area in your test book. After you have written your answer, be sure to read it to make sure you have written your ideas clearly and completely.

For both the multiple-choice questions and the short-answer questions, remember to look back at the reading passages to help you answer the questions. For some questions, you may need to go back to two reading passages to find the answer. Be sure to look back at both reading passages to help you answer these questions.

You will have 40 minutes to do the test. Work until you come to the word "STOP" at the bottom of the page. You may go back and check your answers. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** Please open your test book to Page 2.

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY** You may begin.

*Record the starting and stopping times.*

Record the Starting Time:	Add 40 Minutes:	Record the Stopping Time:
_____	+ 40	_____

*Check to be sure that students are marking their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY ➤ Stop. This is the end of the test. Please close your test book.**

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Reading Item Information

Item	Answer Key	Objective/Subskill	Depth of Knowledge Level	2005 –06 Item Statistics					Scale Score Location
				Format	A or 0	B or 1	C or 2	D or 3	
1	D	3.3	2	SR	1%	35%	4%	*59%	577
2	A	2.2	1	SR	*81%	4%	6%	8%	487
3	D	3.2	1	SR	14%	4%	11%	*71%	517
4	C	4.3	4	SR	12%	12%	*55%	21%	587
5	C	4.2	4	SR	12%	31%	*44%	11%	598
6	B	3.2	2	SR	17%	*56%	9%	17%	632
7	C	1.1	1	SR	7%	18%	*66%	7%	547
8	D	2.2	1	SR	19%	8%	2%	*70%	554
9	A	2.2	1	SR	*67%	4%	14%	14%	549
10	A	4.2	3	SR	*64%	9%	20%	6%	564
11	D	3.2	3	SR	8%	26%	7%	*58%	574
12	A	2.2	1	SR	*86%	9%	3%	1%	501
13	C	1.1	1	SR	6%	15%	*77%	2%	499
14	B	2.2	2	SR	9%	*75%	3%	12%	530
15	D	2.2	1	SR	6%	11%	5%	*77%	510
16	B	3.3	3	SR	9%	*60%	7%	24%	575
17	A	2.2	1	SR	*50%	8%	29%	12%	585
18	C	3.2	3	SR	13%	22%	*60%	4%	542
19		3.2	3	BCR	10%	25%	42%	19%	501

Objective/Subskill and Depth of Knowledge Level information follows this table.

SR: selected response; BCR: brief constructed response.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
455 and below	456–502	503–554	555 and above

# Reading Objectives and Subskills

---

## Types of Text

---

The grade 10 reading assessment presents a variety of grade-appropriate reading passages representing literary, informational, and everyday text. Passages may be up to 1,500 words long and some passages may be paired with other, related passages. Students may be asked to read and answer questions about texts such as these:

Literary	Informational	Everyday
Short stories, novel excerpts, poetry, drama, biography, autobiography	Articles, brochures, editorials, essays, memoirs, speeches, interviews, critiques	Charts, schedules, forms, timelines, applications, coupons, consumer product labels or information, product use or warning labels, safety notices, technical instructions, brochures, advertisements, warranties, trouble-shooting guides

---

## Objectives, Subskills, and Descriptors

---

Objectives (labeled 1, 2, 3, and 4) and subskills (labeled 1.1, 1.2, etc.) denote general knowledge and skills that are assessed and reported on the WKCE-CRT. Bulleted descriptors are *examples* of specific knowledge or skills that may be included within each subskill. The subskills include knowledge and skills *such as, but not limited to* the descriptors.

### 1. Determine the meaning of words and phrases in context.

1.1. Use context clues to determine the meaning of words and phrases.

- Use context clues to determine the meaning of unfamiliar words.
- Understand the meaning of words and phrases used figuratively.
- Use context clues to determine the meaning of multiple-meaning words.
- Use knowledge of synonyms and antonyms to determine the meaning of words.
- Identify analogies to demonstrate understanding of word meaning.
- Understand connotative and denotative meaning of words.

1.2. Use knowledge of word structure to determine the meaning of words and phrases.

- Identify the meaning of a word with an affix.
- Use knowledge of root words to determine the meaning of a word.

1.3. Use word reference materials to determine the meaning of words and phrases.

- Use an entry from a word reference to determine word meaning and pronunciation.

## **2. Understand text.**

2.1. Demonstrate understanding of literal meaning by identifying stated information in literary text.

- Identify stated information about story elements.

2.2. Demonstrate understanding of literal meaning by identifying stated information in informational text.

- Identify stated information about main ideas and supporting details.
- Identify stated information provided through text features.

2.3. Demonstrate understanding of explicitly stated sequence of events in literary and informational text.

- Identify first, next, and last events.
- Follow steps in a process.

## **3. Analyze text.**

3.1. Analyze literary text.

- Make inferences about story elements.
- Summarize important ideas and events.
- Analyze stated or implied theme, message, or main idea.
- Draw conclusions.
- Identify purpose.
- Analyze diverse viewpoints.

3.2. Analyze informational text.

- Identify implied main ideas and supporting details.
- Identify implied relationships (such as cause/effect and compare/contrast).
- Summarize information.
- Identify purpose.
- Make inferences based on text features.
- Make inferences based on visual information.
- Make inferences about text structure.
- Analyze diverse viewpoints.
- Use graphic organizers to analyze and classify information.

3.3. Analyze author's use of language in literary and informational text.

- Analyze the use of literary devices.
- Recognize and distinguish among genres.
- Make inferences about the author's tone.
- Make inferences about the author's style.
- Analyze the author's use of rhetorical devices.
- Distinguish among types of language (such as formal/informal, literary/technical, and serious/humorous).

#### **4. Evaluate and extend text.**

4.1. Evaluate and extend literary text.

- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.
- Evaluate diverse viewpoints and influences.
- Distinguish between important and unimportant details.
- Evaluate the credibility of story elements.
- Draw conclusions.

4.2. Evaluate and extend informational text.

- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.
- Distinguish between facts and opinions.
- Evaluate the accuracy, currency, and credibility of information.
- Evaluate diverse viewpoints and influences.
- Distinguish between important and unimportant facts.
- Draw conclusions.

4.3. Evaluate and extend the author's use of language in literary and informational text.

- Evaluate the author's word choice and use of language.
- Recognize bias and propaganda in language.

## **Reading Depth of Knowledge**

These depth of knowledge levels are intended to reflect the level of cognitive demand placed on students by test items. As the level of cognitive demand increases, so does the mental effort and integration of information required to answer a test item successfully. Each level represents important cognitive skills, and each level requires the use of cognitive skills in lower levels. For example, a student who is asked to make connections between two texts (level 4) would also need to recall pertinent details from the texts (level 1), understand stated information in the texts (level 2), and make inferences and draw conclusions about each text (level 3). The levels assume grade-appropriate text, vocabulary, and tasks. Test items should represent a range of depth of knowledge levels, and items within each level may represent a range of difficulty as indicated by percentage of students who answered the item correctly or scale score location.

### **Level 1: Recognizing and Recalling**

Students demonstrate a grade-appropriate ability to recognize or recall basic facts, terms, or definitions. For example, a student might be asked to identify an explicitly stated main idea in a text.

### **Level 2: Using Fundamental Concepts and Procedures**

Students demonstrate a grade-appropriate ability to use basic facts, definitions, skills, or concepts. For example, a student might be asked to use information in a text to complete a graphic organizer.

### **Level 3: Concluding and Explaining**

Students demonstrate understanding of grade-appropriate text by using stated and implied information and text elements to draw conclusions. Students explain and convey ideas effectively. For example, a student might be asked to provide details and examples from a text to support a conclusion.

### **Level 4: Evaluating, Extending, and Making Connections**

Students demonstrate their knowledge of concepts when evaluating or interpreting grade-level text. Students make connections among texts, common experiences, and issues. For example, a student might be asked to evaluate an author's effectiveness in achieving an intended purpose.

# **Reading Rubric for Constructed-Response Items**

## **3 points**

- The response demonstrates *thorough understanding* of the reading concept embodied in the task.
- The response is *accurate, complete, insightful, and fulfills all the requirements* of the task.
- Necessary support and/or examples are included.
- Information is clearly *text-based*.

## **2 points**

- The response demonstrates *partial understanding* of the reading concept embodied in the task.
- The response is *accurate* and *fulfills most of the requirements* of the task.
- Necessary support and/or examples may not be complete or clearly text-based.

## **1 point**

- The response demonstrates *an incomplete understanding* of the reading concept embodied in the task.
- The response provides *some information that is text-based*, but does not fulfill the requirements of the task.
- Information provided is *too general* or *too simplistic*.
- Necessary support and/or examples may be incomplete or omitted.

## **0 points**

- The response demonstrates *no understanding* of the reading concept embodied in the task.
- The response is *inaccurate, confused, or irrelevant*.
- The student has *failed to respond to the task*.

# Reading Constructed-Response Item Scoring Guide

Forms: Public Release	Item #: 19	Item Type: BCR	TB Page #: 11	AB Page #: n/a
Reporting Category: Reading				
Objective: 3. Analyzes Text				
Subskill: 3.2. Analyzes informational text				
Descriptor: Summarizes information				

## Item Stem

**Explain the reason for the decline and the survival of the Trumpeter Swan population during the 19<sup>th</sup> century and what efforts are being made to increase its population today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.**

## Responses should be evaluated according to the guidelines outlined below for each score point.

### 3 points

- The response demonstrates **thorough understanding** of the reason for the decline and the survival of the Trumpeter Swan population in the 19<sup>th</sup> century and what efforts are being made to increase its population today.
- The student **clearly supports** the response with **highly relevant ideas and details** from the text. For example:
  - The Trumpeter Swan population declined rapidly in the 19<sup>th</sup> century as a result of market hunting and hat making. It was believed that the species had become extinct by 1900. A small non-migratory population survived in the remote mountain valleys of Montana, Idaho, and Wyoming. Since the Swans were living in such a remote location, they were unable to be hunted like the rest of the species. Wisconsin, Minnesota, and Michigan are attempting to reestablish the Trumpeter Swan by rearing cygnets in captivity. The birds are paired and released at selected wetlands at the age of two. It is believed that the first two years of a cygnet's life are the most difficult to survive. Such departments as the Wisconsin Department of Natural Resources, the Milwaukee County Zoo, the Wisconsin Metro Audubon Society, and the Minnesota Department of Natural Resources are hoping to drastically increase the breeding and migratory pairs using this recovery program.
  - The Trumpeter's population decline was because of hunting and the millinery trade in the 19<sup>th</sup> century. They barely survived extinction. Luckily, there was a small non-migratory population that was in Wyoming, Idaho and Montana. In the Midwest, steps are being taken to increase the population growth of the Trumpeter Swan. They are putting the birds in captivity then releasing them after two years and allowing them to find safe environments to live in. Hopefully, these steps will help to increase the population of Trumpeter Swans.

### 2 points

- The response demonstrates **partial understanding** of the reason for the decline and the survival of the Trumpeter Swan population in the 19<sup>th</sup> century and what efforts are being made to increase its population today.
- The student supports the response with **accurate details** from the text. For example:
  - Trumpeter Swans were once fairly common throughout much of the northern United States and Canada. In the 19<sup>th</sup> century, they were hunted and their feathers were used to make hats. By the 1900s it was believed that they were extinct. A small population survived in the Midwest. Several organizations have gotten together to help increase the

population of Swans. They create pairs of cygnets and release them into the wild at the age of two.

- The Trumpeter Swan's existence was endangered because of hunting and trade. So many birds were killed that the numbers kept decreasing; many believed that the swan had become extinct. There was a group of non-migratory birds, and they survived. The swan is still more threatened than the American bald eagle.

**1 point**

- The response demonstrates **incomplete understanding** of the reading passage and does not fulfill all of the requirements of the task.
- Student provides **limited or vague text-based details**. Text-based details may include ideas that are partial, too general, or too simplistic. For example:
  - A small population survived in the remote mountain valleys of Montana, Idaho, and Wyoming.
  - The goal of the WDNR recovery program: to achieve a population of at least 20 breeding and migratory pairs of Swans.
  - Market hunting and the millinery trade rapidly depleted nesting populations during the 19<sup>th</sup> century.

## Anchor Papers for Reading Constructed-Response Item

Explain the reasons for the decline and the survival of the Trumpeter Swan population during the 19th century and what efforts are being made to increase its population today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Market hunting and millinery trade destroyed nesting populations of the Trumpeter Swan. They survived in remote mountain valleys of Montana, Idaho and Wyoming. Wisconsin, Minnesota, and Michigan are attempting to increase population by taking cygnets into captivity until they are two years old (hardest years) and then releasing them into the wild.

### Score Point 3

- >Demonstrates a thorough understanding of the reason for the decline and the survival of the Trumpeter Swan population in the 19th century and what efforts are being made to increase its population today. (Addresses all three parts of the prompt)
- >Clearly supports the response with highly relevant ideas and details from the text. (Market hunting and the millinery trade/survived in the remote mountain valleys of Montana, Idaho, and Wyoming/raising cygnets in captivity until age two and then releasing them/the first two years are the hardest for them)

Explain the reasons for the decline and the survival of the Trumpeter Swan population during the 19th century and what efforts are being made to increase its population today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Market hunting and the millinery trade caused a rapid decline in nesting populations in the 19th century. The survival of the Trumpet Swan is due to a nonmigratory population that survived in the remote mountain valleys of Wyoming, Idaho and Montana. The Wisconsin DNR is working with the Milwaukee County Zoo, the Wisconsin Metro Audubon Society and the Minnesota DNR to achieve a population of at least 20 breeding and migratory pairs. They aren't letting any swans out of captivity until after two years of their lives because the first two years are the hardest.

Score Point 3

- >Demonstrates a thorough understanding of the reason for the decline and the survival of the Trumpeter Swan population in the 19th century and what efforts are being made to increase its population today. (Addresses all three parts of the prompt)
- >Clearly supports the response with highly relevant ideas and details from the text. (Market hunting and the millinery trade/a non-migratory population survived in the remote mountain valleys of Wyoming, Idaho, and Montana/The WDNR is working with other groups to achieve a population of at least 20 breeding and migratory pairs/release them from captivity after two years as they are the hardest.)

Explain the reasons for the decline and the survival of the Trumpeter Swan population during the 19th century and what efforts are being made to increase its population today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer in the lines below.

The reason for decline is hunting. Hunters killed off most of the swan in the Mid-western region. Wisconsin and Minnesota agencies are raising trumpeter swans in captivity for the first two years of their lives because those are the hardest years of a swan's life. The agencies goal was to have at least 20 pairs of breeding swan by the year 2000.

Score Point 2

- >Demonstrates a partial understanding of the reason for the decline and the survival of the Trumpeter Swan population in the 19th century and what efforts are being made to increase its population today. (Addresses the reason for the decline in population and the efforts being made to increase its population today, but does not address the reason for their survival during the 19th century.)
- >Supports the response with accurate details from the text. (Hunting/raising Trumpeter Swans in captivity for the first two years of their lives because those are the hardest years of a swan's life/goal was to have at least 20 breeding pairs by 2000.)

Explain the reasons for the decline and the survival of the Trumpeter Swan population during the 19th century and what efforts are being made to increase its population today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

In the 19th century, Trumpeter Swans were nearly wiped out. The passage confirms this by saying, "By 1900, it was widely believed that the species had become extinct."

However, some Trumpeter Swans survived. The passage says, "Fortunately, a small non-migratory population survived in the remote mountain valleys of Montana, Idaho, and Wyoming." These swans went untouched by humans.

Today, states with a native Trumpeter Swan population are concerned about the species. They have begun raising swans in captivity, releasing them when they are two years old, mature enough to take care of themselves in their natural habitat.

Score Point 2

- >Demonstrates a partial understanding of the reason for the decline and the survival of the Trumpeter Swan population in the 19th century and what efforts are being made to increase its population today. (Does not explain the reasons they were nearly wiped out/nearly extinct.)
- >Supports the response with accurate details from the text. (Fortunately, a small non-migratory population survived in the remote mountain valleys of Montana, Idaho, and Wyoming/begun raising swans in captivity, releasing them when they are two years old.)

Explain the reasons for the decline and the survival of the Trumpeter Swan population during the 19th century and what efforts are being made to increase its population today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

The reasons for the decline are that they had no habitat and had nowhere to live in the Midwest. Today, there are numerous efforts being made. One is that they are still on the "endangered" species list, and there is the "Trumpeter Swan Recovery Act."

Score Point 1

- >Demonstrates an incomplete understanding of the reading passage and does not fulfill all of the requirements of the task. (Reasons for the decline are not text-based)
- >Provides limited or vague text-based details. (Numerous efforts are being made (to increase its population) such as the Trumpeter Swan Recovery Act.)

Explain the reasons for the decline and the survival of the Trumpeter Swan population during the 19th century and what efforts are being made to increase its population today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

They declined because of the Hunting and they survived because people started breeding them biologically.

Score Point 1

- >Demonstrates an incomplete understanding of the reading passage and does not fulfill all of the requirements of the task. (People were NOT breeding them biologically/Addresses why the population declined only.)
- >Provides limited or vague text-based details. (They declined because of the hunting.)

Explain the reasons for the decline and the survival of the Trumpeter Swan population during the 19th century and what efforts are being made to increase its population today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

The reasons for the decline + the survival of the Trumpeter Swan during the 19th century was that they became extinct, + a small population survived in mountain valleys in Montana, Idaho + Wyoming. The trumpeter Swan is more rare in the midwestern states than the bald eagle.

Score Point 1

- >Demonstrates an incomplete understanding of the reading passage and does not fulfill all of the requirements of the task. (Only supports why they were able to survive during the 19th century.)
- >Provides limited or vague text-based details. (A small population survived in mountain valleys in Montana, Idaho, and Wyoming.)

Explain the reasons for the decline and the survival of the Trumpeter Swan population during the 19th century and what efforts are being made to increase its population today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

the swans first 2  
years of its life are the hardest  
to survive. all the swans look different.

Score Point 0

- >Demonstrates no understanding of the reading concept embodied in the task.  
(Does not address any part of the prompt)
- >Response is inaccurate, confused, or irrelevant. (All the swans look different is irrelevant.)
- >Has written a response but failed to respond to the task. (Uses a detail from the passage but does not relate it to any part of the prompt.)

Explain the reasons for the decline and the survival of the Trumpeter Swan population during the 19th century and what efforts are being made to increase its population today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

The population for swans was not very high. The swan made lots of attempts to change that but it really didn't work. I think the population would increase if there was a better habitat.

Score Point 0

- >Demonstrates no understanding of the reading concept embodied in the task.
- >Response is inaccurate, confused, or irrelevant.
- >Has written a response but failed to respond to the task. (Does not use details/examples from the passage to support answer.)

# Mathematics

## Sample Directions for Administering the Mathematics Test

---

*Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, scratch paper, the Mathematics Formula Reference Sheet, and the following manipulative:*

- Calculator for Session 2  
(scientific calculator is required, use of a graphing calculator is a student preference)

*NOTE: The use of a calculator is **not** allowed to solve the problems in Session 1.*

*Also required for the operational test, but not for this released item book:*

- Ruler
- Protractor

*Students' test books should be closed.*

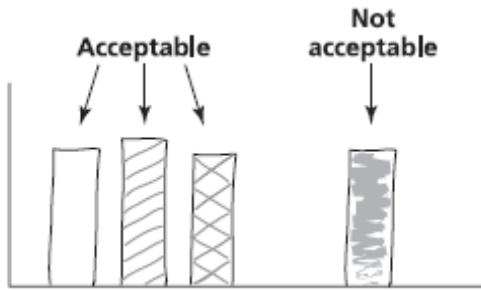
**SAY** Remember to use only a No. 2 pencil in this test. In Session 1, you will be answering multiple-choice questions and short answer questions. Multiple-choice questions are questions that ask you to choose the best answer. For the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

You may use scratch paper to work the multiple-choice questions, but remember to fill in the circle that goes with the answer you choose.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

For the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

Demonstrate by drawing the illustration below on the board.



**Now you will do Session 1 of the Mathematics test. Remember to read all of the directions and information in the test book. When you come to the word "STOP" at the bottom of the page, you have finished Session 1. You may go back and check your answers, but do not go on to Session 2 of the Mathematics test. When you have finished, sit quietly until everyone else has finished.**

**You will have 5 minutes to do Session 1. Make sure you stop at the end of Session 1.**

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY ▶ Please open your test book to Page 2.**

*Demonstrate. Check to be sure that all students are in the correct place in their test books.*

**SAY ▶ You may begin.**

*Record the starting and stopping times for Session 1.*

Record the Starting Time:	Add 5 Minutes: _____ + 5 _____	Record the Stopping Time: _____
------------------------------	-----------------------------------	---------------------------------------

*Check to be sure that students are marking and writing their answers in the appropriate places in their test books.*

*At the stopping time,*

**SAY ▶ Stop. Put down your pencil and close your test book. This is the end of Session 1.**

*Pause to be sure that all students have closed their test books. Before proceeding to Session 2, distribute a calculator to each student.*

**SAY** Now, open your test book to the page labeled “Mathematics Session 2.”

In Session 2, you will be answering multiple-choice questions and short-answer questions. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

Remember, for the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

You will have 35 minutes to do Session 2. Remember to read all of the directions and information in this part of the test book. When you come to the word “STOP” at the bottom of the page, you have finished Session 2.

You may go back over Session 2 to check your answers, but do not go back to Session 1. When you have finished, sit quietly until everyone else has finished.

**Are there any questions?**

*When you are sure that all students understand the directions, continue.*

**SAY** You may begin.

*Record the starting and stopping times for Session 2.*

Record the Starting Time:	Add 35 Minutes:	Record the Stopping Time:
_____	+ 35	_____

**SAY** Stop. This is the end of Session 2. Please close your test book.

*Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.*

## Mathematics Item Information

Item	Answer Key	Calculator Allowed	Objective/Subskill	Depth of Knowledge Level	2005–06 Item Statistics					Scale Score Location
					Format	A or 0	B or 1	C or 2	D	
1	D	No	Fb	4	SR	13%	8%	25%	*52%	587
2	C	No	Aa	2	SR	8%	8%	*78%	6%	527
3	D	No	Fa	1	SR	21%	16%	12%	*49%	585
4	C	No	Cc	3	SR	14%	14%	*53%	18%	618
5	D	Yes	Ea	4	SR	25%	2%	3%	*70%	544
6	C	Yes	Ba	2	SR	20%	8%	*69%	2%	564
7	C	Yes	Da	2	SR	13%	12%	*66%	8%	569
8	D	Yes	Dc	3	SR	19%	6%	15%	*58%	582
9		Yes	Ab	3	BCR	15%	30%	50%		529
10	D	Yes	Ea	3	SR	5%	15%	8%	*71%	544
11	D	Yes	Bb	2	SR	1%	6%	18%	*74%	561
12	B	Yes	Ca	1	SR	21%	*72%	5%	1%	545
13	D	Yes	Ea	2	SR	17%	17%	12%	*53%	579
14	D	Yes	Aa	2	SR	6%	20%	24%	*50%	580
15		Yes	Da	2	BCR	45%	21%	21%		598
16	B	Yes	Cb	3	SR	9%	*71%	14%	6%	550
17	C	Yes	Dc	2	SR	13%	13%	*64%	9%	571
18	C	Yes	Fb	2	SR	5%	12%	*78%	4%	529
19	C	Yes	Ba	3	SR	15%	38%	*40%	6%	616
20	C	Yes	Eb	2	SR	52%	6%	*33%	8%	612

Objective/Subskill and Depth of Knowledge Level information follows this table.

SR: selected response; BCR: brief constructed response.

### Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
515 and below	516–540	541–594	595 and above

# Mathematics Objectives and Subskills

## Beginning of Grade 10

---

### How to use the Framework

---

The mathematics assessment framework is an indication of the knowledge and skills that will be assessed on the November WKCE-CRT. ***This information does not replace your local curriculum.*** However, you may wish to ensure that your local curriculum includes the knowledge and skills described in the framework.

This section of the framework describes the types of content that students may encounter on the WKCE-CRT

The knowledge and skills to be assessed are organized into objectives, subskills, and descriptors as shown below. WKCE-CRT results will be reported by objectives and subskill.

**A. Objective:** A group of cognitively related skills.

**A.a. Subskill:** A group of related knowledge and skills that *may include, but is not limited to,* the descriptors which follow.

- **Descriptor:** an example of a specific knowledge or skill that may be assessed.

---

### Objectives, Subskills, and Descriptors

---

#### Objective Mathematical Processes

**A:**

Students will effectively use mathematical knowledge, skills, and strategies related to reasoning, communication, connections, representation, and problem solving.

**Descriptors, such as but not limited to**

- Use reasoning and logic to:
  - Perceive patterns
  - Identify relationships
  - Formulate questions
  - Pose problems
  - Make conjectures
  - Justify strategies
  - Test reasonableness of results
- Communicate mathematical ideas and logical reasoning using the vocabulary of mathematics in a variety of ways (e.g., using words, numbers, notation, symbols, pictures, charts, tables, diagrams, graphs, and models).
- Connect mathematics to the real world, as well as within mathematics.
- Create and use representations to organize, record, and communicate mathematical ideas.
- Solve and analyze routine and non-routine problems.

---

#### Objective Number Operations and Relationships

**B:**

**Subskill Concepts**

**B.a.:**

**Descriptors, such as but not limited to**

- Compare and order real numbers.

- Analyze and solve problems using percents.
- Apply proportional reasoning and ratios in mathematical and real-world contexts.

**Subskill Computation**

**B.b.:**

**Descriptors, such as but not limited to**

- Compare, perform, and explain operations on real numbers with and without context (e.g., transitivity, rate of change, exponential functions, scientific notation, roots, powers, reciprocals, absolute value, ratios, proportions, percents).
- Select and use appropriate properties, computational procedures, and modes of representation with and without context (e.g., simple and compound interest, commission, percents, proportions).
- Determine reasonableness of answers.

**Objective Geometry**

**C:**

**Subskill Describing figures**

**C.a.:**

**Descriptors, such as but not limited to**

- Identify, describe, and analyze properties of 2- and 3-dimensional figures, relationships among figures, and relationships among their parts (e.g., parallel, perpendicular and congruent sides, diagonals, various types of angles and triangles, complementary and supplementary angles, sum of angles in a triangle).
- Present convincing geometric arguments by means of informal proof, counter-examples, or other logical means.
- Model problems using the Pythagorean Theorem and right triangle trigonometry.

**Subskill Spatial relationships and transformations**

**C.b.:**

**Descriptors, such as but not limited to**

- Use proportional reasoning to solve congruence and similarity problems (e.g., scale drawings and similar geometric figures).
- Use transformations and symmetry to solve problems.
- Visualize 3-dimensional figures in problem-solving situations.

**Subskill Coordinate systems**

**C.c.:**

**Descriptors, such as but not limited to**

- Use the two-dimensional rectangular coordinate system to describe and characterize properties of geometric figures. Identify and apply symmetry about an axis.
- Use the two-dimensional rectangular coordinate system and algebraic procedures to describe and characterize geometric properties and relationships (e.g., slope, intercepts, parallelism, and perpendicularity, Pythagorean Theorem, distance formula).

**Objective Measurement**

**D:**

**Subskill Measurable attributes**

**D.a.:**

**Descriptors, such as but not limited to**

- Identify, describe, and use derived attributes to represent and solve problems (e.g., speed, acceleration, density, money conversion.)

**Subskill Direct measurement**

**D.b.:**

- Descriptors, such as but not limited to**
- Select and use tools with appropriate degree of precision to determine measurements directly.
- Subskill      Indirect measurement**
- D.c.:              Descriptors, such as but not limited to**
- Determine the perimeter/area of two-dimensional figures.
  - Determine the surface area/volume of three-dimensional figures.
  - Solve for angles and segments in similar polygons and arcs in circles.
  - Use right-triangle trigonometry functions and the Pythagorean Theorem to solve right-triangle problems.
  - Use formulas in applications (e.g., distance formula, simple and compound interest).
- 

- Objective      Statistics and Probability**
- E:**
- Subskill      Data analysis and statistics**
- E.a:              Descriptors, such as but not limited to**
- Organize, display, compare, and interpret data in a variety of ways in mathematical and real-world contexts (e.g., histograms, line graphs, stem-and-leaf plots, scatter plots, box-and whiskers, bar charts, Venn diagrams, tables, circle graphs).
  - Interpret, analyze, and make predictions from organized and displayed data (e.g., measures of central tendency such as mean, median, and mode and measures of variation such as standard deviation, range, dispersion, outliers, line of best fit, percentiles).
  - Analyze, evaluate, and critique methods and conclusions of statistical experiments (e.g., randomness, sampling, techniques, surveys).
- Subskill      Probability**
- E.b.:              Descriptors, such as but not limited to**
- Determine the likelihood of occurrence of simple and complex events (e.g., combinations and permutations, fundamental counting principle, experimental versus theoretical probability and independent, dependent and conditional probability).
- 

- Objective      Algebraic Relationships**
- F:**
- Subskill      Patterns, relations and functions**
- F.a.:              Descriptors, such as but not limited to**
- Describe, recognize, interpret, and translate graphical representations of mathematical and real-world phenomena on coordinate grids (e.g., slope, intercepts, rate of change, linear and non-linear functions, and quadratic, exponential, and constant functions).
  - Analyze, generalize, and represent patterns of change (e.g., direct and inverse variations, including numerical sequences, patterns to a given term, algebraic expressions and equations).
- Subskill      Expressions, equations and inequalities**
- F.b:              Descriptors, such as but not limited to**
- Solve linear and quadratic equations, linear inequalities, and systems of linear equations and inequalities.
-

- Model and solve a variety of mathematical and real-world problems by using algebraic expressions, equations, and inequalities (e.g., linear, exponential, quadratic).
- Translate between different representations and describe the relationship among variable quantities in a problem (e.g., tables, graphs, functional notations, formulas).

**Subskill**   **Properties**  
**F.c.:**

**Descriptors, such as but not limited to**

- Demonstrate understanding of properties by evaluating and simplifying expressions.
- Demonstrate understanding of properties by solving linear and quadratic equations, linear inequalities, and systems of linear equations and inequalities with one or two variables.

## **Mathematics Depth of Knowledge**

The representative examples for the following depth of knowledge categories are intended to reflect student performance expectations with regard to the level of mental effort and amount of information integrated by the student. Items are targeted at one of four levels of cognitive demand. Each level of demand is represented by items with a range of difficulty, as indicated by the percentage of students who answered the item correctly or by scale score location. Assuming grade-appropriate vocabulary and test items, these levels are viable and useful across all grades.

### **Level 1: Recognizing and Recalling**

Students recognize and recall basic facts, terms, concepts, and definitions of the content and processes of mathematics. For example, students may be required to do computation with whole numbers, fractions, decimals, and integers.

### **Level 2: Using Fundamental Concepts and Procedures**

Students describe or apply basic facts, terms, rules, concepts and definitions of the content and processes of mathematics.

### **Level 3: Concluding and Explaining**

Students demonstrate an understanding of complex ideas, draw conclusions based on this understanding, and communicate ideas and conclusions effectively.

### **Level 4: Evaluating, Extending, and Making Connections**

Students synthesize skills and techniques from various concepts of mathematics to solve multifaceted problems, and justify conclusions using mathematical definitions, properties, and principles. For example, students may be required to support mathematical arguments with definitions, properties, and principles.

## **Mathematics Rubric for Constructed-Response Items**

- 2 points** The student demonstrates a thorough understanding of the mathematical concepts and/or procedures represented in the problem. The student responds correctly to the problem, uses mathematical procedures and/or concepts, and provides clear and complete explanations and interpretations containing words, diagrams, or calculations unless otherwise specified. The response may contain minor flaws that do not detract from the demonstration of a thorough understanding of the problem.
- 1 point** The student provides a response that is only partially correct. The student provides a correct solution, but may demonstrate a misunderstanding of the underlying mathematical concepts and/or procedures. The student provides a correct solution, but in place of showing his/her work writes, “I used my calculator.” The student provides a thorough demonstration of understanding the problem, but states an incorrect solution or conclusion.
- 0 points** The student provides a completely incorrect solution, a response that cannot be interpreted, or no response at all.

# Mathematics Constructed-Response Item Scoring Guides

Form: Public Release	Item #: 9	Item Type: CR	TB Page #: 9	AB Page #: n/a
Objective: A. Mathematical Processes				Max Score Pts:
Subskill:				0–2

## **Response is limited to correct answer or range below**

(3 lawn per week)(\$10 per lawn) = \$30 per week  
\$30 per week from Carla + \$30 per week from parents = \$60 per week  
(\$60 per week)(20 weeks) = \$1200  
Car costs \$1,500  
**AND**  
Carla's estimate of 20 weeks is too low.

## **Responses may include, but may not be limited to, the Answer Cues below**

**2 points**      Both of the following tasks are accomplished:

- The student indicates a total of \$1200 (calculation explicit or implicit).
- The student correctly concludes that there is a time or money shortfall.

**1 point**      One of the following applies:

- The student accomplishes one of the tasks above. [See Note.]
- The student accomplishes both of the tasks above, but with a calculation error.
- The student gives a total of \$600 and accomplishes the second task correctly.

**0 points**      The student gives any other response.

Note: No credit is awarded for only the answer "no."

Form: Public Release	Item #: 15	Item Type: BCR	TB page #:	AB Page #: n/a
Objective: D. Measurement				Max Score Pts:
Subskill: D.a. Measurable Attributes				0–2

**Response is limited to correct answer or range below**

50 gallons =  $4 \times 50$  quarts = 200 quarts

200 quarts =  $200 / 1.0567 = 189.268$  liters

$189.268$  liters =  $189.268 \times 1,000$  cubic centimeters = 189,268 cubic centimeters

**OR**

$$\left( \frac{50\text{gal}}{1} \right) \left( \frac{4\text{qts}}{1\text{gal}} \right) \left( \frac{1\text{liter}}{1.0567\text{qts}} \right) \left( \frac{1,000\text{cm}^3}{1\text{liter}} \right) = 189,268 \text{ cubic centimeter}$$

**Responses may include, but may not be limited to, the Answer Cues below**

**2 points** Both of the following tasks are accomplished:

- The student provides a complete and correct conversion process.
- The student gives the correct answer (189,268 c.c. or 189,269 c.c.). (See Notes below.)

**1 point** One of the following applies:

- The student gives the correct answer only (189,268 c.c. or 189,269 c.c.).
- The student provides a complete but incorrect conversion process (e.g. multiplication instead of division by 1.0567), with a consistent answer (211,340 c.c.).
- The student provides an incomplete conversion process that correctly indicates division by 1.0567.
- The student correctly converts 1 gallon only (3785 c.c.)

**0 points** One of the following applies:

- The student provides an incomplete and incorrect conversion process;
- The student gives any other inaccurate response.

Note 1: For full credit, the process must be complete, the calculation correct, and the answer between 189,000 and 189,300, inclusive. (This allows for acceptable rounding or truncation during the conversion process.)

Note 2: The student is not penalized for failing to round or truncate the answer to a whole number.

## Anchor Papers for Mathematics Constructed-Response Items

### Item 9

Carla is mowing lawns to earn money for a used car that costs \$1,500. Carla's parents have agreed to contribute \$1 for every \$1 she saves. Carla saves \$10 from each lawn she mows. Carla mows 3 lawns per week. Carla estimates that with her parents' help she should be able to purchase the car in 20 weeks.

In the box below, explain whether or not Carla's estimate is accurate. Use mathematics to explain your answer. You may use words, calculations, or diagrams in your explanation.

*20 weeks  
x 3 lawns/week  
10  
x 10 dollars/lawn  
1000  
x 2 her parents saving  
1200 total amount made in Carla's estimate.*

*1500  
-1200  
300  
 $300 \div 10 = 30$   
 $30 \div 10 = 3$   
 $3 \div 3 = 1$   
 $1 \times 15 = 15$   
 $15 \div 3 = 5$  weeks*

*Carla would need to work another 5 weeks.  
Carla's estimate is inaccurate. She is about \$300 short still.*

#### Score Point 2

- > Total of \$1200 indicated
- > Shortfall of time/money identified

### Item 9

Carla is mowing lawns to earn money for a used car that costs \$1,500. Carla's parents have agreed to contribute \$1 for every \$1 she saves. Carla saves \$10 from each lawn she mows. Carla mows 3 lawns per week. Carla estimates that with her parents' help she should be able to purchase the car in 20 weeks.

In the box below, explain whether or not Carla's estimate is accurate. Use mathematics to explain your answer. You may use words, calculations, or diagrams in your explanation.

no, she only has \$1,200 dollars

Score Point 1

- > Total of \$1200 indicated
- < [shortfall of time/money not identified]

**Item 9**

Carla is mowing lawns to earn money for a used car that costs \$1,500. Carla's parents have agreed to contribute \$1 for every \$1 she saves. Carla saves \$10 from each lawn she mows. Carla mows 3 lawns per week. Carla estimates that with her parents' help she should be able to purchase the car in 20 weeks.

In the box below, explain whether or not Carla's estimate is accurate. Use mathematics to explain your answer. You may use words, calculations, or diagrams in your explanation.

*She won't be able to buy the car because she only saved \$600.00.*

Score Point 0

- < [total of \$1200 not indicated]
- < [shortfall of time/money not identified]

## Item 15

An engineer knows that a large container holds a volume of 50 gallons of water. For his latest project he needs to find the volume in cubic centimeters. He will use the conversion factors below to convert 50 gallons to cubic centimeters.

### Liquid Measure Conversions

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

$$1 \text{ liter} = 1000 \text{ cubic centimeters of water}$$

$$1 \text{ liter} = 1.0567 \text{ liquid quarts}$$

In the box below, calculate how many cubic centimeters of water are in 50 gallons. Round your answer to the nearest whole number. Use mathematics to explain your answer. You may use words, calculations, or diagrams in your explanation.

$$\begin{aligned} 50 \text{ gallons} &\times 4 \text{ quarts} = 200 \text{ quarts} \\ 200 \text{ quarts} &\times 1.0567 \text{ liters} = 211.34 \text{ liters} \\ 211.34 \text{ liters} &\times 1000 \text{ cm}^3 = 211,340 \text{ cm}^3 \end{aligned}$$

Answer: 189,269 cubic centimeters

### Score Point 2

- > All 3 conversions correct
- > Answer correct

## Item 15

An engineer knows that a large container holds a volume of 50 gallons of water. For his latest project he needs to find the volume in cubic centimeters. He will use the conversion factors below to convert 50 gallons to cubic centimeters.

### Liquid Measure Conversions

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

$$1 \text{ liter} = 1000 \text{ cubic centimeters of water}$$

$$1 \text{ liter} = 1.0567 \text{ liquid quarts}$$

In the box below, calculate how many cubic centimeters of water are in 50 gallons. Round your answer to the nearest whole number. Use mathematics to explain your answer. You may use words, calculations, or diagrams in your explanation.

$$\begin{aligned} 50 &= 200 \text{ quarts} \\ 200 &= 211.34 \text{ liters} \\ 211.34 &= 211340 \end{aligned}$$

Answer: 211340 cubic centimeters

#### Score Point 1

- > 2 conversions correct
- < [major conversion incorrect (multiplies instead of divides by 1.0567)]
- < [answer incorrect]

### Item 15

An engineer knows that a large container holds a volume of 50 gallons of water. For his latest project he needs to find the volume in cubic centimeters. He will use the conversion factors below to convert 50 gallons to cubic centimeters.

#### Liquid Measure Conversions

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

$$1 \text{ liter} = 1000 \text{ cubic centimeters of water}$$

$$1 \text{ liter} = 1.0567 \text{ liquid quarts}$$

In the box below, calculate how many cubic centimeters of water are in 50 gallons. Round your answer to the nearest whole number. Use mathematics to explain your answer. You may use words, calculations, or diagrams in your explanation.

$$\begin{array}{r} 1056.7 \text{ liquid quarts} \\ \times \quad 4 \text{ quarts} \\ \hline 4,226.8 \end{array} \qquad \begin{array}{r} 4,226.8 \\ \times 50 \\ \hline 211,39 \end{array}$$

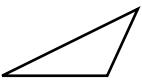
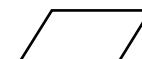
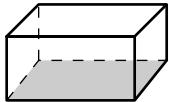
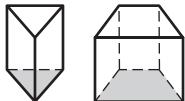
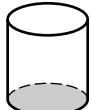
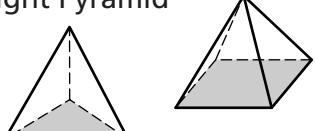
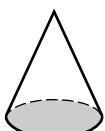
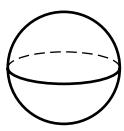
Answer: 211 cubic centimeters

Score Point 0

< [major conversion incorrect]

< [another conversion omitted]

## Wisconsin Mathematics Formula Reference Sheet

Shape	Formulas for Area (A) and Circumference (C)
Triangle 	$A = \frac{1}{2}bh = \frac{1}{2} \times \text{base} \times \text{height}$
Rectangle 	$A = lw = \text{length} \times \text{width}$
Trapezoid 	$A = \frac{1}{2}(b_1 + b_2)h = \frac{1}{2} \times \text{sum of bases} \times \text{height}$
Parallelogram 	$A = bh = \text{base} \times \text{height}$
Circle 	$A = \pi r^2 = \pi \times \text{square of radius}$ $C = 2\pi r = 2 \times \pi \times \text{radius}$
Figure	Formulas for Volume (V) and Surface Area (SA)
Rectangular Prism 	$V = lwh = \text{length} \times \text{width} \times \text{height}$ $SA = 2lw + 2hw + 2lh = 2(\text{length} \times \text{width}) + 2(\text{height} \times \text{width}) + 2(\text{length} \times \text{height})$
General Prisms 	$V = Bh = \text{area of base} \times \text{height}$ $SA = \text{sum of the areas of the faces}$
Right Circular Cylinder 	$V = Bh = \text{area of base} \times \text{height}$ $SA = 2B + Ch = (2 \times \text{area of base}) + (\text{circumference} \times \text{height})$
Right Pyramid 	$V = \frac{1}{3}Bh = \frac{1}{3} \times \text{area of base} \times \text{height}$ $SA = B + \frac{1}{2}Pl = \text{area of base} + (\frac{1}{2} \times \text{perimeter of base} \times \text{slant height})$
Right Circular Cone 	$V = \frac{1}{3}Bh = \frac{1}{3} \times \text{area of base} \times \text{height}$ $SA = B + \frac{1}{2}Cl = \text{area of base} + (\frac{1}{2} \times \text{circumference} \times \text{slant height})$
Sphere 	$V = \frac{4}{3}\pi r^3 = \frac{4}{3} \times \pi \times \text{cube of radius}$ $SA = 4\pi r^2 = 4 \times \pi \times \text{square of radius}$

## Equations of a Line

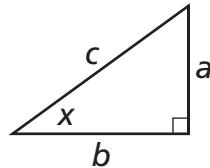
Slope-Intercept Form:  $y = mx + b$   
where  $m$  = slope and  $b$  =  $y$ -intercept

Point-Slope Form:  $y - y_1 = m(x - x_1)$   
where  $m$  = slope,  $(x_1, y_1)$  = point on line

## Combinations and Permutations

$$nCr = \frac{n!}{r!(n-r)!} \quad nPr = \frac{n!}{(n-r)!}$$

## Formulas for Right Triangles



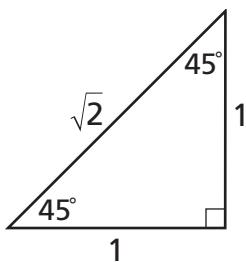
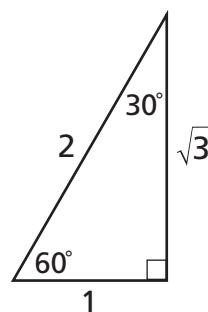
$$\sin x = \frac{a}{c} = \left( \frac{\text{opp}}{\text{hyp}} \right)$$

$$\cos x = \frac{b}{c} = \left( \frac{\text{adj}}{\text{hyp}} \right)$$

$$\tan x = \frac{a}{b} = \left( \frac{\text{opp}}{\text{adj}} \right)$$

$$\text{Pythagorean Theorem: } a^2 + b^2 = c^2$$

## Special Right Triangles



## Coordinate Geometry Formulas

Let  $(x_1, y_1)$  and  $(x_2, y_2)$  be two points in the plane.

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1} \text{ where } x_2 \neq x_1$$

$$\text{midpoint} = \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$\text{distance} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

## Polygon Angle Formulas

Sum of degree measures of the interior angles of a polygon:

$$180(n - 2)$$

Degree measure of an interior angle of a regular polygon:

$$\frac{180(n - 2)}{n}$$

where  $n$  is the number of sides of the polygon

## Interest Formulas

Simple Interest:  $A = P(1 + rt)$

Compound Interest:  $A = P\left(1 + \frac{r}{n}\right)^{nt}$

$A$  = amount (including interest)

$P$  = principal

$r$  = interest rate (expressed as a decimal)

$n$  = number of compoundings per year

$t$  = number of years

## Quadratic Equations

Let  $ax^2 + bx + c = 0$ , where  $a \neq 0$ .

$$\text{Then } x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\text{x-coordinate of vertex} = -\frac{b}{2a}$$

## Distance Traveled

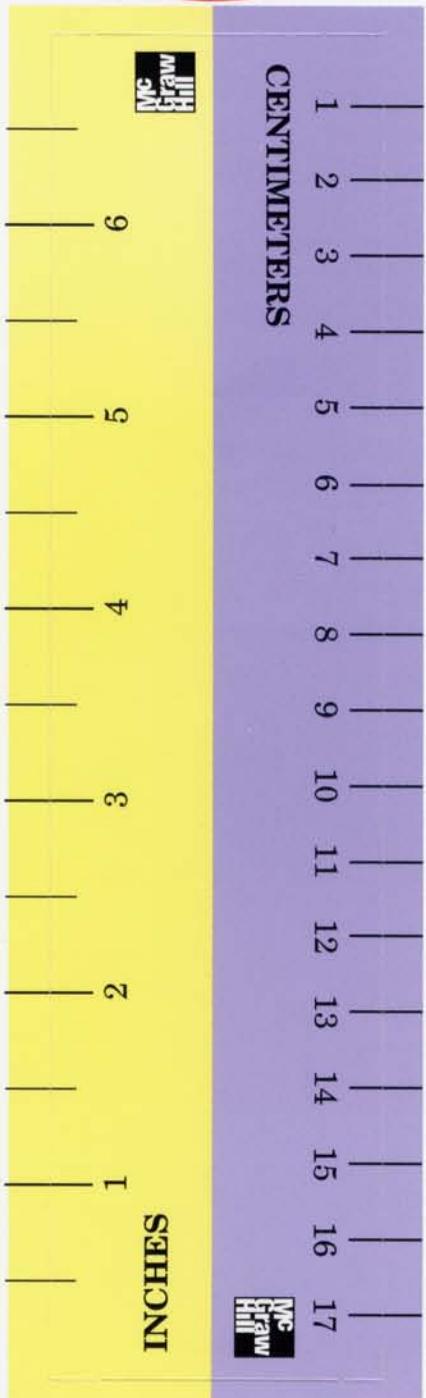
$$d = rt$$

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

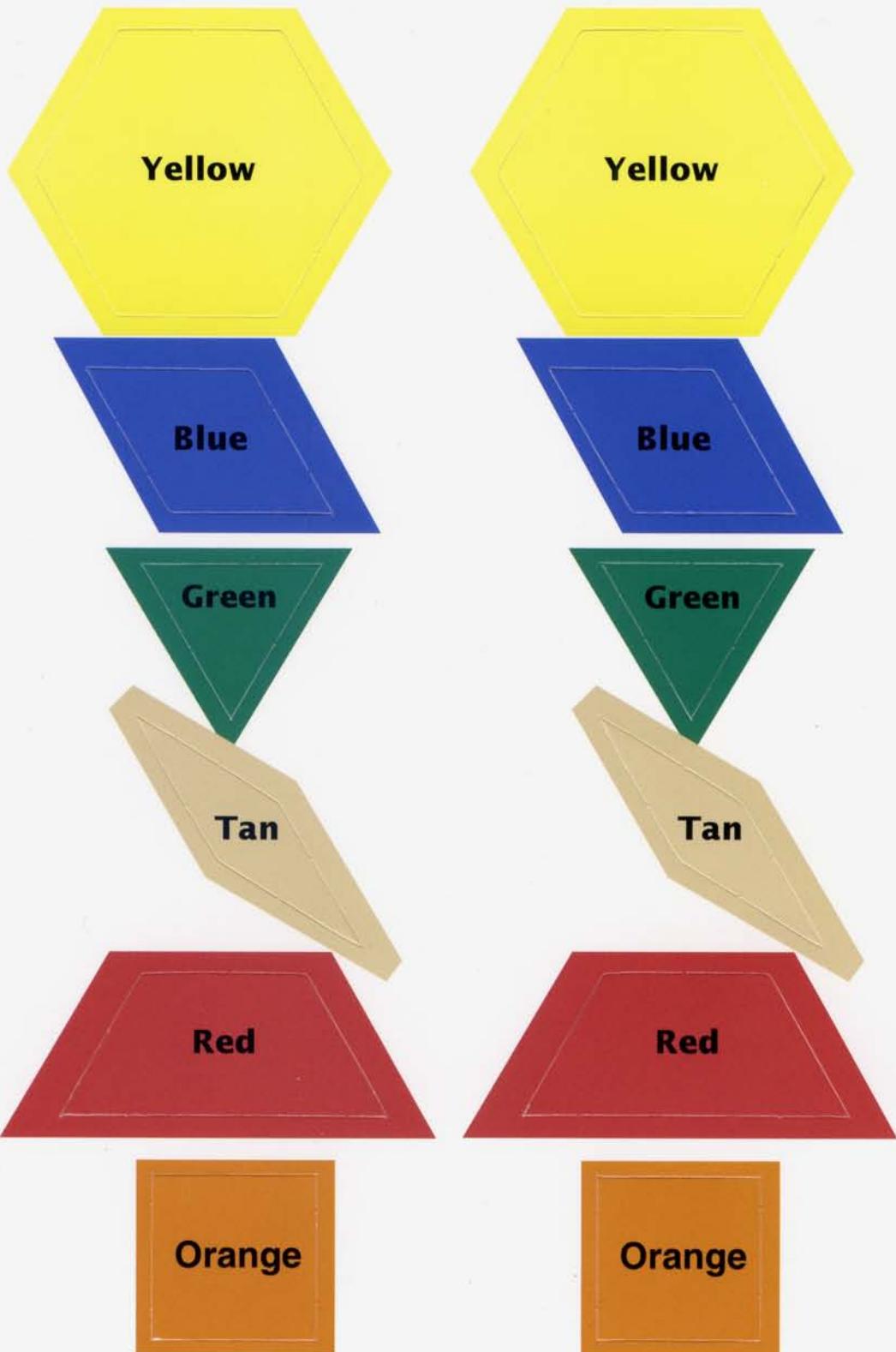


**Guide to Grade 10 Released Item Books  
In READING and MATHEMATICS**

Wisconsin Department of Public Instruction  
Elizabeth Burmaster, State Superintendent



Ruler

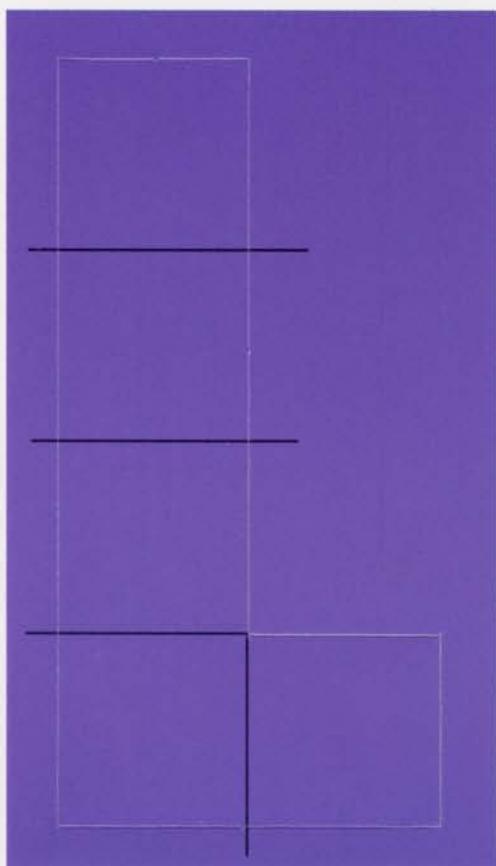


Pattern Blocks

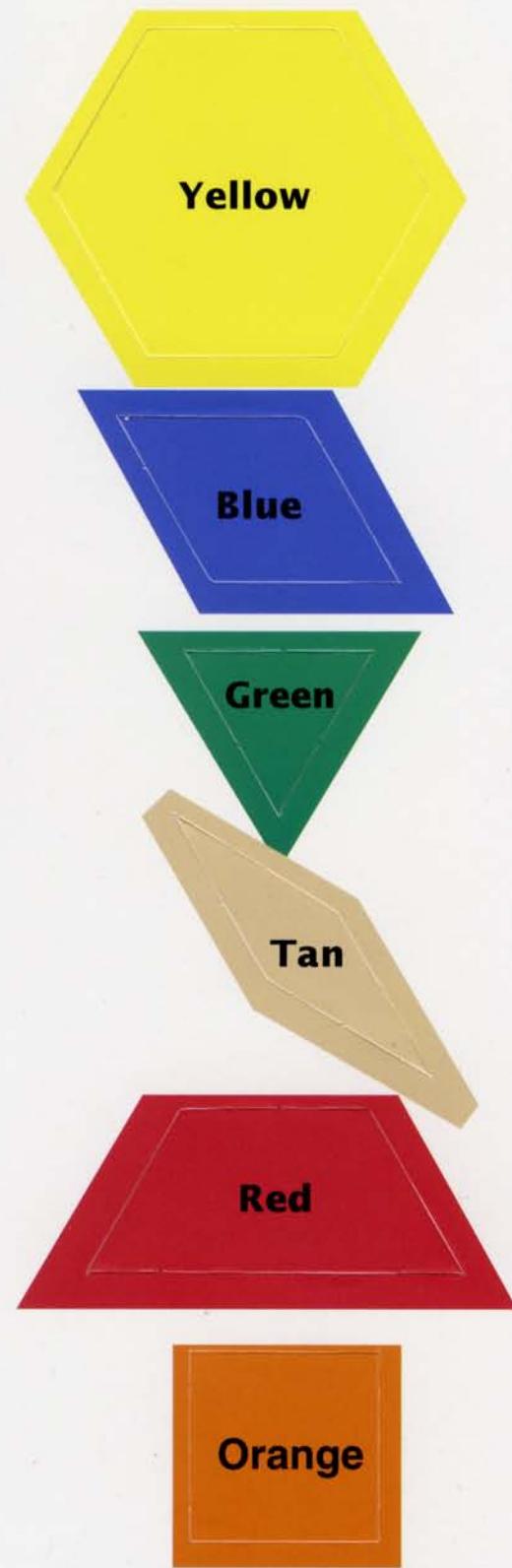
Pattern Blocks



Ruler



Pentomino



Pattern Blocks

# Punch-Out Tools

WKCE-CRT

Grade 5

# Punch-Out Tools

WKCE-CRT

Grade 5

Centimeters

7

6

5

4

3

2

1

McGraw-Hill  
Ruler

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

Inches



Pattern Blocks

45289

Centimeters

7

6

5

4

3

2

1

McGraw-Hill  
Ruler

3

4

5

6

7

8

9

10

11

12

13

14

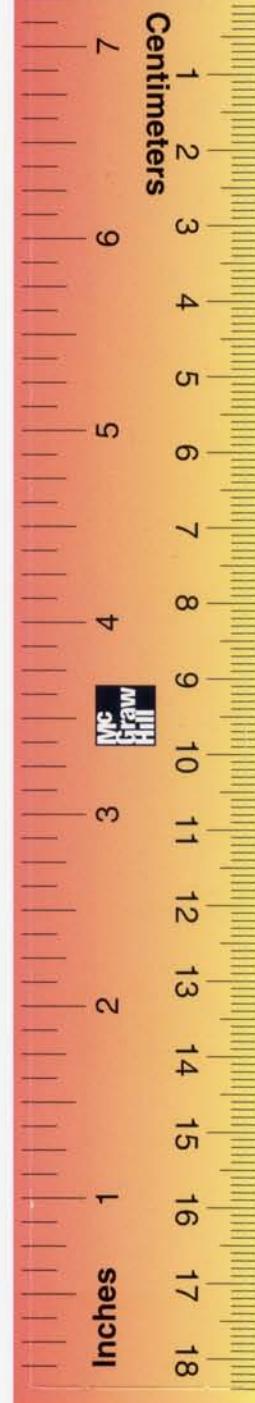
15

16

17

18

Inches

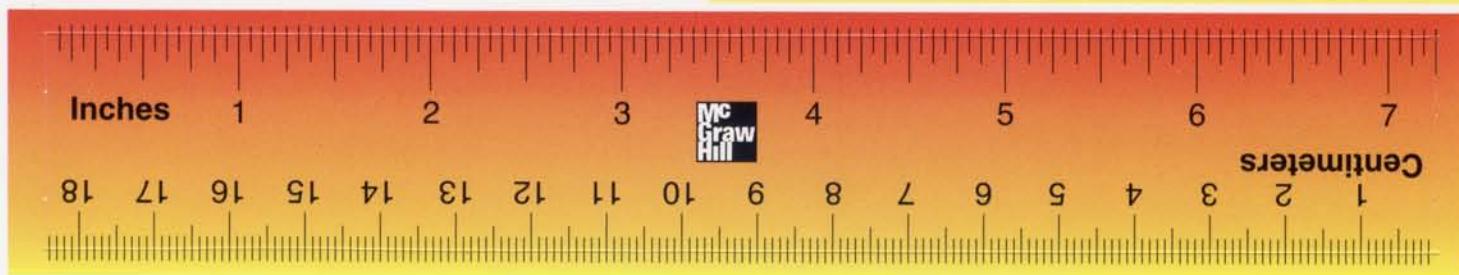


Pattern Blocks

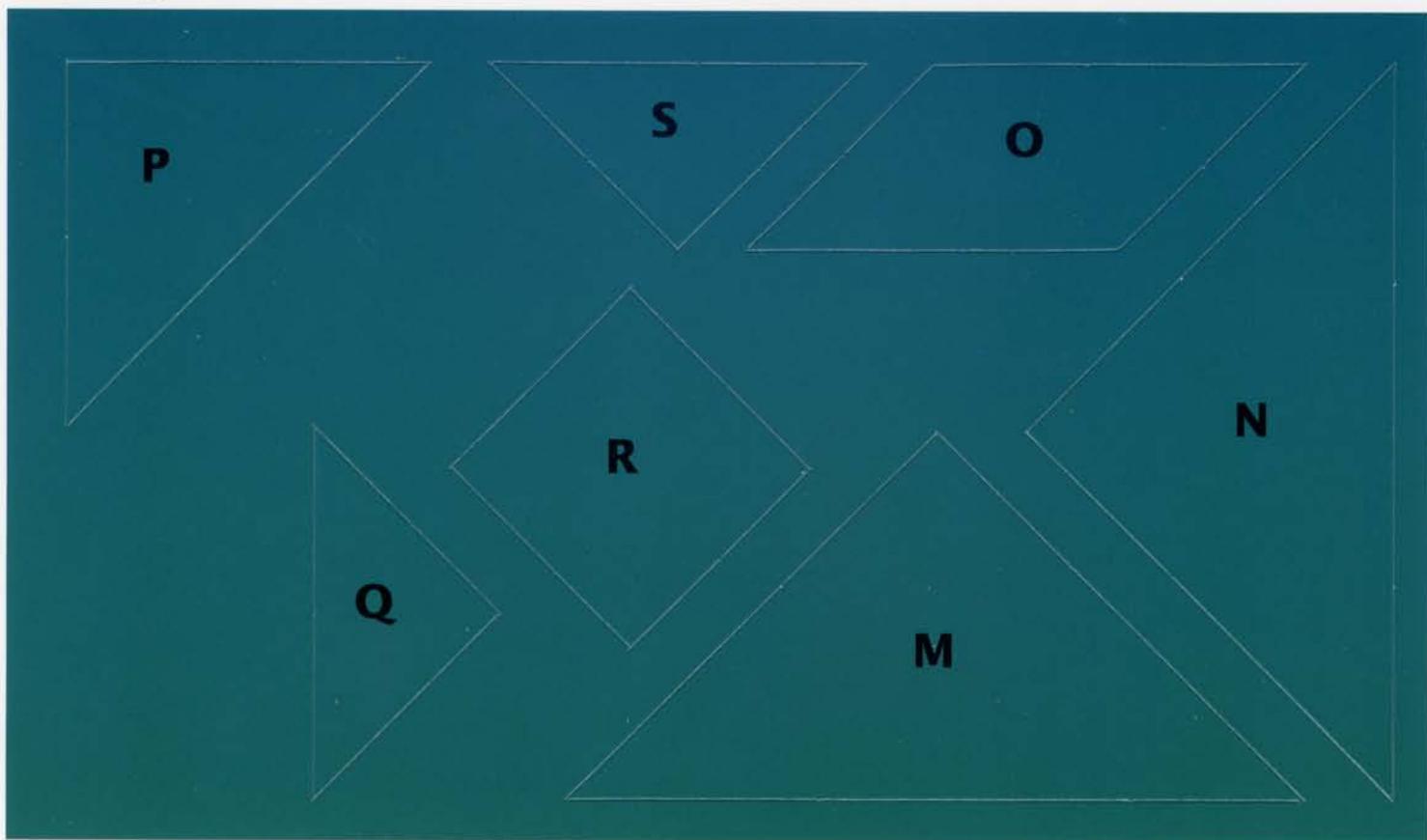
45289

0405060708IPAK98765432

Ruler



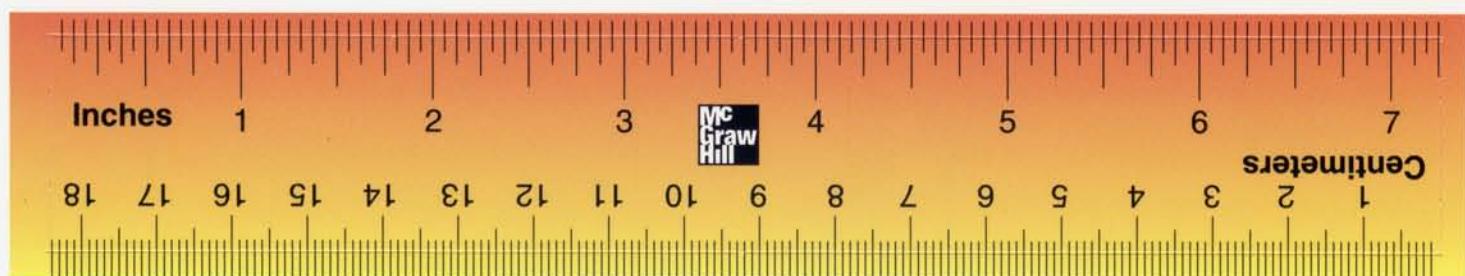
Tangrams



WKCE-CRT  
Grade 7-8  
Grade 10

# Punch-Out Tools

Ruler

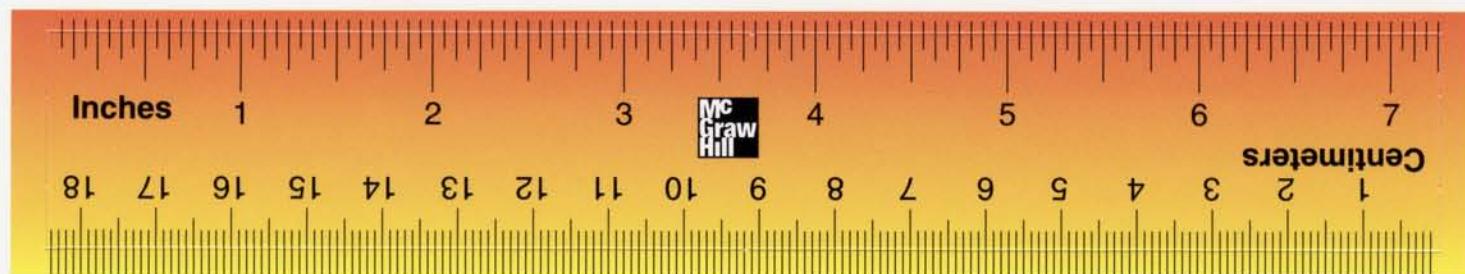


45291

WKCE-CRT  
Grade 7-8  
Grade 10

# Punch-Out Tools

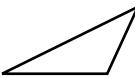
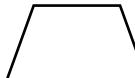
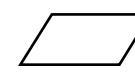
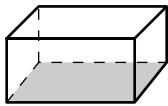
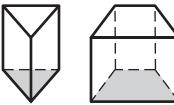
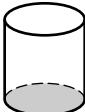
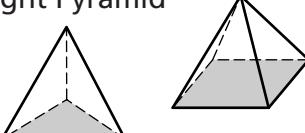
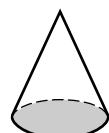
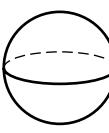
Ruler



45291

0405060708IPAK98765432

## Wisconsin Mathematics Formula Reference Sheet

<b>Shape</b>	<b>Formulas for Area (A) and Circumference (C)</b>	
Triangle 	$A = \frac{1}{2}bh = \frac{1}{2} \times \text{base} \times \text{height}$	
Rectangle 	$A = lw = \text{length} \times \text{width}$	
Trapezoid 	$A = \frac{1}{2}(b_1 + b_2)h = \frac{1}{2} \times \text{sum of bases} \times \text{height}$	
Parallelogram 	$A = bh = \text{base} \times \text{height}$	
Circle 	$A = \pi r^2 = \pi \times \text{square of radius}$ $C = 2\pi r = 2 \times \pi \times \text{radius}$	
<b>Figure</b>		<b>Formulas for Volume (V) and Surface Area (SA)</b>
Rectangular Prism 	$V = lwh = \text{length} \times \text{width} \times \text{height}$ $SA = 2lw + 2hw + 2lh = 2(\text{length} \times \text{width}) + 2(\text{height} \times \text{width}) + 2(\text{length} \times \text{height})$	
General Prisms 	$V = Bh = \text{area of base} \times \text{height}$ $SA = \text{sum of the areas of the faces}$	
Right Circular Cylinder 	$V = Bh = \text{area of base} \times \text{height}$ $SA = 2B + Ch = (2 \times \text{area of base}) + (\text{circumference} \times \text{height})$	
Right Pyramid 	$V = \frac{1}{3}Bh = \frac{1}{3} \times \text{area of base} \times \text{height}$ $SA = B + \frac{1}{2}P\ell = \text{area of base} + (\frac{1}{2} \times \text{perimeter of base} \times \text{slant height})$	
Right Circular Cone 	$V = \frac{1}{3}Bh = \frac{1}{3} \times \text{area of base} \times \text{height}$ $SA = B + \frac{1}{2}Cl = \text{area of base} + (\frac{1}{2} \times \text{circumference} \times \text{slant height})$	
Sphere 	$V = \frac{4}{3}\pi r^3 = \frac{4}{3} \times \pi \times \text{cube of radius}$ $SA = 4\pi r^2 = 4 \times \pi \times \text{square of radius}$	

## Equations of a Line

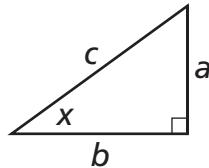
Slope-Intercept Form:  $y = mx + b$   
where  $m$  = slope and  $b$  =  $y$ -intercept

Point-Slope Form:  $y - y_1 = m(x - x_1)$   
where  $m$  = slope,  $(x_1, y_1)$  = point on line

## Combinations and Permutations

$$nCr = \frac{n!}{r!(n-r)!} \quad nPr = \frac{n!}{(n-r)!}$$

## Formulas for Right Triangles



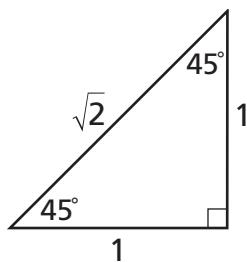
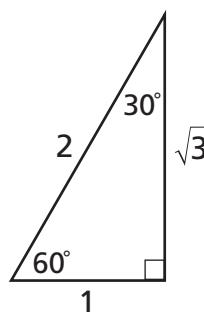
$$\sin x = \frac{a}{c} = \left( \frac{\text{opp}}{\text{hyp}} \right)$$

$$\cos x = \frac{b}{c} = \left( \frac{\text{adj}}{\text{hyp}} \right)$$

$$\tan x = \frac{a}{b} = \left( \frac{\text{opp}}{\text{adj}} \right)$$

$$\text{Pythagorean Theorem: } a^2 + b^2 = c^2$$

## Special Right Triangles



## Coordinate Geometry Formulas

Let  $(x_1, y_1)$  and  $(x_2, y_2)$  be two points in the plane.

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1} \text{ where } x_2 \neq x_1$$

$$\text{midpoint} = \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$\text{distance} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

## Polygon Angle Formulas

Sum of degree measures of the interior angles of a polygon:

$$180(n - 2)$$

Degree measure of an interior angle of a regular polygon:

$$\frac{180(n - 2)}{n}$$

where  $n$  is the number of sides of the polygon

## Interest Formulas

Simple Interest:  $A = P(1 + rt)$

Compound Interest:  $A = P\left(1 + \frac{r}{n}\right)^{nt}$

$A$  = amount (including interest)

$P$  = principal

$r$  = interest rate (expressed as a decimal)

$n$  = number of compoundings per year

$t$  = number of years

## Quadratic Equations

Let  $ax^2 + bx + c = 0$ , where  $a \neq 0$ .

$$\text{Then } x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\text{x-coordinate of vertex} = -\frac{b}{2a}$$

## Distance Traveled

$$d = rt$$

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