

Practice Item Guide
Virginia Standards of Learning
Grade 5 Mathematics

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Pearson

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OVERVIEW

The practice items available in the Virginia Standards of Learning (SOL) grade 5 mathematics practice set provide examples of the new content and increased rigor represented by the 2009 *Mathematics Standards of Learning*. Additionally, these items illustrate the technology-enhanced item (TEI) types. These practice items do not cover all grade 5 mathematics SOL and should not be used in place of review of the SOL test content.

This practice guide may be used by teachers or other adults to guide students through the practice items for grade 5 mathematics. While the use of this guide with the practice items is not required, it is strongly encouraged, as it will help ensure that students are familiar with the types of items that they may encounter while taking the grade 5 mathematics test. The directions in the guide will also lead students through practice with the online tools, will familiarize students with how to navigate through the test, and will help students understand how to use the Section Review screen within TestNav™. Appendix B summarizes how student responses for TEI are indicated on the Section Review screen.

Prior to guiding students through the practice items, carefully read this practice item guide and review the practice items to become familiar with them. All directions that must be read aloud to the students are in **bold Arial font** so that they stand out from the rest of the text. All other text is for your information and should not be read to students.

The following Change Log indicates any updates to this document.

Change Log		
Version	Date	Description
V.1	03/05/2012	Original document posted.
V.2	03/06/2012	Calculator usage removed from Sample B and correction in key for question #13.
V.3	03/15/2013	Overview amended; 20 new practice items added.
V.4	03/26/2013	Amended answer for question #15 in guide and in Appendix A.

SYSTEM REQUIREMENTS FOR TESTNAV

The minimum hardware requirements for all workstations used to access TestNav are available at <http://www.pearsononlinetesting.com/TestNav/7/index.html>

TECHNOLOGY-ENHANCED ITEM (TEI) TYPES

There are four types of technology-enhanced items:

- drag and drop,
- hot spot (which includes number line and coordinate plane items),
- bar graph or histogram, and
- fill-in-the-blank.

A brief description of each technology-enhanced item (TEI) type is provided below. The SOL practice items for grade 5 mathematics will introduce each of the TEI types: drag and drop, hot spot, bar graph, and fill-in-the-blank.

Drag and Drop

Drag and drop items contain draggers and bays.

- Draggers are the answer options that are moved to bays in response to the question.
- Bays are areas of an item where draggers will remain once moved there.

Drag and drop items require a student to respond by moving one or more draggers from one place on the screen into a bay(s) elsewhere on the screen.

The student will click on the dragger and keep the button down while moving the dragger to the desired location. Once the button is released, the dragger will be in the new location. Students can still move the dragger once it has been dropped into a bay.

Drag and drop items may be used in reading, writing, mathematics, and science assessments.

Hot Spot

Hot spot items contain hot spot zones which represent student answer options.

- Hot spot zones are answer options which may be part of a graphic, art, numbers, or text, that are selected in response to a question.
- Unlike a traditional multiple-choice item where only one answer option is correct, hot spot items may require the student to select one or more hot spot zones (answer options) in order to answer the item correctly.
- Number line and coordinate plane items require students to respond by clicking on a number line or coordinate plane to plot one or more points. In these items, the points themselves are the hot spot zones. Only points plotted with the pointer tool within TestNav are scorable responses. Points plotted with the dot tool are not scorable responses.

The student selects a hot spot by clicking on it. In some hot spot items, there will be an indication on the screen, such as the zone being outlined in blue, which confirms that the pointer is over a hot spot. After the hot spot is clicked, there will always be an indication that the zone has been selected as an answer, such as the hot spot being outlined in burnt orange, the hot spot being shaded, an asterisk being placed on the hot spot, or a red point being plotted on the number line or coordinate plane.

Hot spot items may be used in reading, writing, mathematics, and science assessments.

Bar Graph or Histogram

Bar graph or histogram items require students to graph data by indicating the height (if the bars are vertical) or length (if the bars are horizontal) of one or more bars or intervals. The bar height or length is graphed by clicking on a location within the graph or by dragging the bar to the desired location.

Bar graph and histogram items may be used in mathematics and science assessments.

Fill-in-the-Blank

Fill-in-the-blank items require students to input characters from the keyboard (numbers, letters, or symbols) to answer the question. For this item type, the student responds to a question by typing into a blank box provided in the item.

- Some response boxes may limit the characters that can be entered. For instance, if the response is expected to be numeric, the student will not be able to enter letters.
- Students should carefully follow directions in fill-in-the-blank items, such as providing an answer in simplest form, rounding a number as indicated, or using significant digits.
- Currently, no fill-in-the-blank item requires students to correctly spell a word; however, alphabetic characters or symbols may be used in an answer.

Fill-in-the-blank items are currently used in mathematics and science assessments.

OPENING THE VIRGINIA SOL MATHEMATICS PRACTICE ITEMS

1. Go to the Virginia Department of Education Web site:
http://www.doe.virginia.gov/testing/sol/practice_items/index.shtml
2. Under the heading “Mathematics Practice Items” click on the grade 5 link. Since this is a web based application, the link will take you directly to the grade 5 mathematics practice items.

MATERIALS NEEDED FOR COMPLETING THE VIRGINIA SOL PRACTICE ITEMS

Grade 5 Mathematics: Scratch paper and pencil

ONLINE TOOLS AVAILABLE ON THE VIRGINIA SOL MATH PRACTICE ITEMS

The following tools can be accessed by clicking the appropriate icon on the toolbar at the top of the screen. These tools can be used to assist the test taker in finding answers, and only the pointer can be used to respond to the questions.

Tool Icon	Description
	Pointer – Use the pointer to respond to questions.
	Eraser – Use the eraser to remove lines or highlights.
	Highlighter – Use the highlighter tool to highlight text or graphics.
	Eliminator – Use the eliminator tool to mark choices that you do not wish to consider.
	Pencil – Use the pencil tool to make marks on the test questions.
	Ruler – Use the ruler tool to measure something on screen.
	Straightedge – Use the straightedge tool to draw straight lines and underline text.
	Protractor – Use the protractor tool to measure angles on screen.
	Dot tool – Use the dot tool to plot dots on the screen.
	Calculator – Use the calculator to perform calculations.
	Exhibit – Use the exhibit icon to view information about the Commonwealth of Virginia copyright. The exhibit icon only appears on the first screen of these practice items.
	Help – Use the help tool to display information about a specific tool on the top toolbar.

SPECIFIC DIRECTIONS FOR THE SOL GRADE 5 MATHEMATICS PRACTICE ITEMS

Introduction

After the practice items are launched, the first practice item will be displayed. Read the following instructions to the students.

SAY Today you will be working on some grade 5 mathematics practice items for the SOL test. There are 34 questions that will show you some of the types of test items that will be administered as part of the grade 5 mathematics assessments. Some questions are multiple-choice and others are technology-enhanced items. Technology-enhanced items may require you show your answer in another way, such as typing the answer in a box, completing a graph, or clicking and dragging the answer to a specific location.

Listen carefully as I read the directions. I will guide you through each item one at a time. Please remember these questions are for practice. They will not be graded, and I will tell you the answer for each question.

Do you have any questions before we start?

Pause to answer questions.

SAY *Next* and *Previous* buttons appear at the bottom of the screen for each question. Clicking *Next* takes you to the next question. Clicking *Previous* takes you back to the previous question. Notice that the question numbers are also located at the bottom of the screen. For example, the screen with Sample A reads “Sample.”



SAY At any time, you may click on the *Flag for Review* button () located at the bottom left of the screen. This should be used for any questions that you want to review at a later time. We will practice using this button when we are working on the practice items.

Now let's look at the top of your screen.

Pause. The picture below is the toolbar students will see at the top of the screen.



SAY The tools you may use are in the toolbar at the top of the screen. We will practice with some of the tools as we work through the practice questions. If you forget what a tool does, you can click on the Help symbol () to read about the tool.

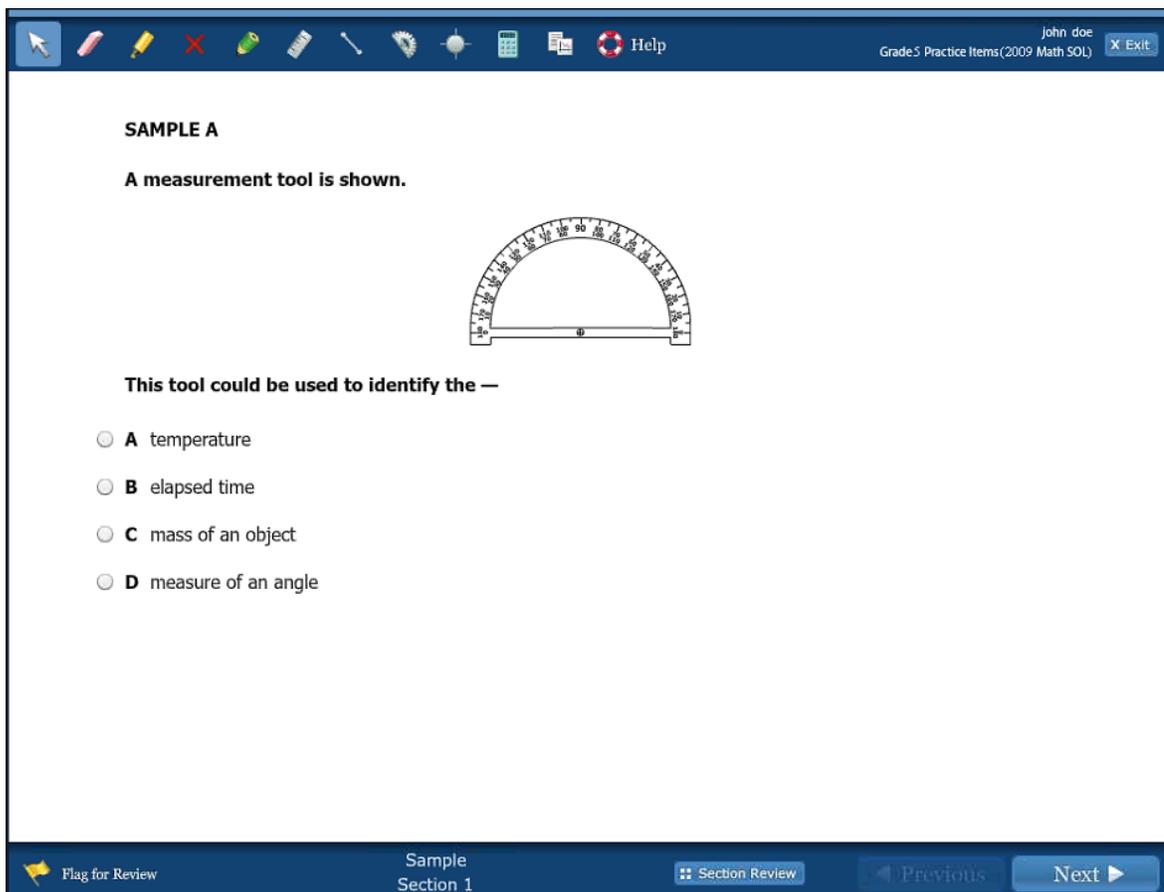
The Help tool has information about the tools. If you would like your students to explore the Help tool, you can have them do this at the end of the practice items.

Note that the exhibit window contains information only about the Commonwealth of Virginia copyright. The exhibit icon only appears on the first screen of these practice items.

SAY One thing to remember is that the tools at the top of the screen are there to help you solve a problem. The only tool that can be used to mark an answer to a question is the pointer

tool ().

SAY Let's look at the first item, Sample A.



The screenshot shows a software interface for a practice item. At the top, there is a toolbar with various icons: a pointer, eraser, highlighter, red X, green checkmark, ruler, compass, protractor, calculator, and a Help icon. The user's name 'John doe' and 'Grade 5 Practice Items (2009 Math SOL)' are visible in the top right corner, along with an 'Exit' button. The main content area is titled 'SAMPLE A' and contains the text 'A measurement tool is shown.' Below this is an image of a semi-circular protractor with degree markings. The question asks 'This tool could be used to identify the —' and provides four multiple-choice options: A temperature, B elapsed time, C mass of an object, and D measure of an angle. At the bottom of the interface, there are buttons for 'Flag for Review', 'Sample Section 1', 'Section Review', 'Previous', and 'Next'.

SAY Read the question to yourself and select the correct answer by clicking the circle next to it.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected D, measure of an angle.

SAY Click *Next* at the bottom of the screen to go to the next sample item.

Pause while students go to the next sample item.

SAY Sample B has a gray directions banner under the toolbar that tells you how to answer the question. When a question has a directions banner, you should always read it before solving the problem. The directions banner says, "Type your answer in the box. Use '.' for the decimal point."

This question is an example of a fill-in-the-blank technology-enhanced item. After you find the answer, you will type your answer in the box.

You may use scratch paper to solve for the answer. Type your answer in the box on the screen using the keyboard. Make sure you are using the pointer tool, and then click inside the box before you type your answer.

Pause while students find and enter the answer.

The screenshot shows a digital math practice interface. At the top, there is a toolbar with various icons for navigation and calculation, including a pointer, eraser, highlighter, and calculator. The user's name "John doe" and the text "Grade 5 Practice Items (2009 Math SOL)" are visible in the top right corner, along with an "Exit" button. Below the toolbar, a gray banner contains the directions: "Directions: Type your answer in the box. Use '.' for the decimal point." The main area of the screen displays "SAMPLE B" followed by the equation $0.42 \div 2 = \underline{\quad ? \quad}$. To the right of the equation is a rectangular input box with a vertical cursor. At the bottom of the screen, there is a navigation bar with a "Flag for Review" button, the text "Sample Section 1", a "Section Review" button, and "Previous" and "Next" buttons.

SAY Which answer did you type in the box?

Pause for replies.

SAY The correct answer is 0.21. Notice that the answer you entered does not need to be the same length as the box.

When we are done looking at the practice items, we will look at a Section Review screen. The Section Review screen shows which questions you have answered and which questions you have not answered. For questions that are fill-in-the-blank, once any character is entered into the response box and remains in the response box, the question will show as “Answered” on the Section Review screen. Do you have any questions about how to type your answer in the box?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

SAY Click *Next* at the bottom of the screen to go to the first practice item.

Pause while students go to the first practice item.

SAY The bottom of your screen now says “Question 1 of 34.”

Notice there are several bullets in question 1. Information you need to answer the question may be presented using bullets. It is important to refer to the bulleted information before answering the question.

The gray directions banner for this question says, “Do not use a calculator to solve this problem.” Now, read the question to yourself, and then use your scratch paper to determine the answer. Click the circle next to the answer you want to select.

Pause while students read the directions and answer the question.

The actual Grade 5 Mathematics test has a non-calculator and calculator section. Students only have access to a four-function calculator in the second section (calculator section) of the test. However, there are no sections in this set of practice items. Items that would appear in the non-calculator section of a test are flagged with a banner that reads: “Do not use a calculator to solve this problem.” Instructors should ensure that students do not use calculators on these specific items. This banner DOES NOT appear on the actual SOL online test.

The screenshot shows a digital math practice interface. At the top, there is a toolbar with various icons for navigation and calculation, including a calculator icon. A message at the top reads "Do not use a calculator to solve this problem." The main content area contains the following text:

This list shows the weight of three vegetables Frank bought.

- The potatoes weighed $3\frac{7}{8}$ pounds.
- The green beans weighed $1\frac{1}{4}$ pounds.
- The peppers weighed $2\frac{1}{2}$ pounds.

The total weight of the vegetables Frank bought is —

Four multiple-choice options are listed:

- A $1\frac{1}{8}$ pounds
- B $1\frac{5}{8}$ pounds
- C $6\frac{5}{8}$ pounds
- D $7\frac{5}{8}$ pounds

At the bottom of the interface, there is a navigation bar with buttons for "Flag for Review", "Section Review", "Previous", and "Next". The text "Question 1 of 34 Section 1" is also visible.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is D, $7\frac{5}{8}$ pounds. Do you have any questions about the answer?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

SAY Read question 2 to yourself.

Pause while students read the question.

John doe
Grade 5 Practice Items (2009 Math SOL) X Exit

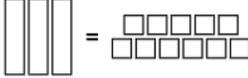
Mr. Hansen wrote this equation on the board.

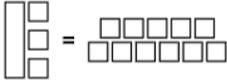
$$r + 3 = 11$$

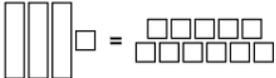
He drew a model of this equation using this key.

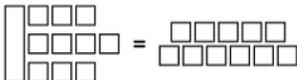
Key	
	= r
	= 1

Which model best represents Mr. Hansen's equation?

A 

B 

C 

D 

Flag for Review Question 2 of 34 Section 1 Section Review Previous Next

SAY Before you answer the question, let's practice using the eliminator tool. On a multiple-choice question, the eliminator tool will help you mark choices that you do not wish to consider. At the top of the toolbar, click on the button with the red X (). Selecting this tool will change your pointer to an arrow with a red X next to it. You can use this tool to eliminate as many choices as you want. To eliminate an answer, click the choices you believe are not correct. Then click the eliminator tool again to put the tool away.

Wait for students to eliminate choices and put the tool away. The eliminator tool can only be used on multiple-choice questions, and not on technology-enhanced items.

SAY If you eliminate a choice and then change your mind, use the eraser tool () on the toolbar to erase a red X. Click on the eraser tool and practice using it to remove a red X.

Pause while students practice using this tool.

SAY Click on the eraser tool icon to put it away. Now solve the problem and click on the answer you have chosen.

Pause while students work to find the answer to the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is B.

Do you have any questions about how to select an answer, use the eliminator tool, or use the eraser?

Answer all questions.

SAY Before we go on to the next question, click on the *Flag for Review* button on the bottom left of the screen. If this were an actual SOL test, you would click this button if you wanted to come back and review the question again.

Pause while students click on this icon.

SAY When we reach the end of the practice questions, I will show you how the questions you flag for review will look on the Section Review screen. The Section Review screen shows which questions you have answered and which questions you have not answered. The questions you *Flag for Review* will have a picture of a flag next to them.

Pause.

SAY Click *Next* at the bottom of the screen to go to the next question.

Read the question to yourself.

Pause while students read the question.

The screenshot shows a digital interface for a math practice test. At the top, there is a toolbar with various icons for navigation and assistance, including a mouse cursor, eraser, pencil, highlighter, red X, green checkmark, calculator, and a help icon. The user's name 'John doe' and the test title 'Grade5 Practice Items(2009 Math SOL)' are visible in the top right corner. The main content area contains the following text:

In which data set does the range have the greatest variation?

- A 21, 24, 29, 25, 27
- B 33, 37, 36, 36, 33
- C 42, 41, 43, 48, 44
- D 53, 57, 54, 51, 53

At the bottom of the interface, there is a navigation bar with a 'Flag for Review' button, 'Question 3 of 34 Section 1', a 'Section Review' button, and 'Previous' and 'Next' buttons.

SAY Use your scratch paper to solve the problem and decide which answer is correct.

Click on the answer you have chosen.

Pause while students work to find the answer to the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is A: 21, 24, 29, 25, 27.

Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

SAY Read the directions and question 4 to yourself.

The screenshot shows a software interface for a math practice test. At the top, there is a toolbar with various icons including a pointer, eraser, highlighter, and calculator. The user's name 'John doe' and the test title 'Grade 5 Practice Items (2009 Math SOL)' are visible in the top right. A grey banner at the top of the question area reads 'Do not use a calculator to solve this problem.' The question text is: 'Ms. Collins bought 2 CDs for \$14.55 each and 3 DVDs for \$10.39 each. These prices include tax. She gave the cashier \$75.00. How much change should Ms. Collins receive?' Below the question are four radio button options: A \$14.73, B \$15.27, C \$50.06, and D \$60.27. At the bottom of the interface, there are navigation buttons: 'Flag for Review', 'Section Review', 'Previous', and 'Next'. The current question is identified as 'Question 4 of 34' in 'Section 1'.

SAY Use your scratch paper to solve the problem and decide which answer is best. You may use the eliminator if it will help you.

Pause while students solve the problem and select an answer.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is A, \$14.73.

Do you have any questions?

Answer all questions.

SAY Before we go to the next question, let's take a moment to practice using the highlighter tool. You can use the highlighter tool on the toolbar to highlight text. To select this tool, click the icon that looks like a yellow highlighter (). Selecting the highlighter tool will change your pointer tool to an arrow with a highlighter next to it. Practice using this tool by highlighting the phrase "How much change" in the question. Click again on the highlighter tool on the toolbar to put the tool away.

Pause while students practice using the highlighter tool.

SAY Do you have any questions about how to highlight text?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

SAY Read the directions and question 5 to yourself, then answer the question. You will need to use your scratch paper for any calculations you need to do.

Pause while students read the question and select and answer.

The screenshot shows a digital math practice interface. At the top, there is a toolbar with various icons for navigation and editing, including a mouse cursor, highlighter, eraser, and calculator. The user's name "John doe" and the text "Grade 5 Practice Items (2009 Math SOL)" are visible in the top right corner, along with an "Exit" button. A grey banner at the top of the question area states "Do not use a calculator to solve this problem." The main question text reads: "A farmer has 1,457 apples and 678 pears." followed by two bullet points: "• She will fill baskets using these pieces of fruit." and "• She will fill each basket with 24 pieces of fruit." Below this, the question asks: "What is the total number of baskets the farmer will be able to fill with these pieces of fruit?" Four multiple-choice options are listed: "A 2,135", "B 779", "C 88", and "D 60". At the bottom of the interface, there is a navigation bar with a "Flag for Review" button, the text "Question 5 of 34 Section 1", a "Section Review" button, and "Previous" and "Next" buttons.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is C, 88.

Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

SAY Read question 6 to yourself. You may use the eliminator or the highlighter to help you decide which answer is best. Then, answer the question.

Pause while students read and answer the question.

The screenshot shows a digital interface for a math practice item. At the top, there is a toolbar with various icons for navigation and editing, including a mouse cursor, eraser, highlighter, and calculator. The user's name "John doe" and the text "Grade 5 Practice Items (2009 Math SOL)" are visible in the top right corner, along with an "Exit" button. The main content area contains two columns of text. The left column states: "This sample space shows all of the possible combinations of one type of drink and one type of snack that Leslie can choose." Below this, a list of combinations is provided: "Water, Apple", "Water, Cheese", "Water, Pretzels", "Water, Banana", "Juice, Apple", "Juice, Cheese", "Juice, Pretzels", and "Juice, Banana". The right column asks: "According to the sample space, what is the probability that the combination Leslie chooses will include juice?" Below the question are four multiple-choice options: "A $\frac{1}{8}$ ", "B $\frac{1}{4}$ ", "C $\frac{4}{8}$ ", and "D $\frac{8}{8}$ ". At the bottom of the interface, there is a navigation bar with a "Flag for Review" button, the text "Question 6 of 34 Section 1", a "Section Review" button, and "Previous" and "Next" buttons.

SAY Which answer did you choose?

Pause for replies

SAY The correct answer is C, $\frac{4}{8}$.

Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

SAY Read the directions and question 7 to yourself.

Pause while students read the question.

The screenshot shows a digital math practice interface. At the top, there is a toolbar with various icons for editing and solving, including a pointer, eraser, highlighter, and calculator. The user's name 'John doe' and the text 'Grade 5 Practice Items (2009 Math SOL)' are visible in the top right corner, along with an 'Exit' button. A grey banner at the top of the question area reads 'Do not use a calculator to solve this problem.' The question text is 'Using the order of operations, which calculation should be done first to simplify this expression?' followed by the expression $54 + 6 \times (3 + 6) \div 3$. Below the expression are four multiple-choice options: A $3 + 6$, B 6×3 , C $6 \div 3$, and D $54 + 6$. At the bottom of the interface, there is a navigation bar with a 'Flag for Review' button, the text 'Question 7 of 34 Section 1', a 'Section Review' button, and 'Previous' and 'Next' buttons.

SAY Determine which answer is correct, and then click on the answer with the pointer tool.

Pause while students work to find the answer to the question.

SAY Which answer did you select?

Pause for replies.

SAY The correct answer is A, $3+6$. Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

SAY Read question 8 to yourself.

Pause while students read the question.

The screenshot shows a digital interface for a math practice item. At the top, there is a toolbar with various icons for navigation and assistance, including a mouse cursor, eraser, highlighter, red X, pencil, ruler, compass, calculator, and a help icon. The user's name 'John doe' and the text 'Grade 5 Practice Items (2009 Math SOL)' are visible in the top right corner, along with an 'Exit' button.

The main content area contains the following text:

This table shows the number of beads Irma has in 5 bowls.

Bowl	Number of Beads
A	15
B	10
C	12
D	8
E	10

Irma will empty all the beads from these bowls and will put an equal number of beads back into each bowl. The number of beads she will put in each bowl represents the —

- A sample space
- B fair share
- C product
- D pattern

At the bottom of the interface, there is a navigation bar with a 'Flag for Review' button, the text 'Question 8 of 34 Section 1', a 'Section Review' button, and 'Previous' and 'Next' buttons.

SAY You may answer the question now.

Pause while students answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected B, fair share. Do you have any questions about the answer?

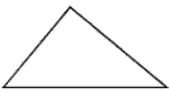
Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

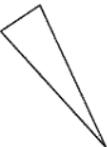
Read question 9 to yourself and then answer it.

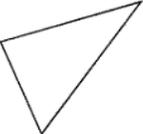
Pause while students read and answer the question.

Which triangle appears to be an isosceles triangle?

A 

B 

C 

D 

john doe
Grade 5 Practice Items (2009 Math SOL) [Exit](#)

Flag for Review Question 9 of 34 Section 1 [Section Review](#) [Previous](#) [Next](#)

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is C.

Do you have any questions?

Answer all questions.

SAY Before we go to the next question, let's practice using the straightedge tool. You can use the straightedge tool on the toolbar to make a straight line or underline text. Look for the straightedge tool icon () at the top of the screen. When you click on the straightedge tool, you will see a drop down box. Select "Tool 2." Your pointer will now have an arrow with a slanted line next to it.

Practice using the straightedge by underlining "isosceles triangle." Then click again on the straightedge tool on the toolbar and on "Tool 2" to put this tool away.

Pause while students underline the text and put the tool away. Assist students as necessary.

SAY Do you have any questions about how to use the straightedge tool?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

SAY Read question 10 to yourself, then answer it.

Pause while students read and answer the question.

John doe
Grade 5 Practice Items (2009 Math SOL) [X Exit](#)

Which equation shows the use of the distributive property?

A $4 \times 2 \times 7 = 2 \times 4 \times 7$

B $15(6 + 3) = 15 \times 6 + 3$

C $6 \times (9 \times 5) = (6 \times 9) \times 5$

D $8(1 + 3) = (8 \times 1) + (8 \times 3)$

[Flag for Review](#) Question 10 of 34 Section 1 [Section Review](#) [Previous](#) [Next](#)

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected D, eight times the quantity one plus three, close quantity, equals the quantity eight times one, close quantity, plus the quantity eight times three, close quantity. Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

SAY Question 11 is an example of a technology-enhanced item where there may be more than one answer.

John doe
Grade 5 Practice Items (2009 Math SOL) X Exit

Directions: Click on a box to choose each statement you want to select. You must select all correct statements.

Identify each statement that is true.

- The sum of two even numbers is even.
- The sum of two odd numbers is odd.
- The difference between an odd number and an even number is odd.
- The difference between two odd numbers is even.

Flag for Review Question 11 of 34 Section 1 Section Review Previous Next

SAY The gray directions banner at the top of the screen says, “Click on a box to choose each statement you want to select. You must select all correct statements.” The question says, “Identify each statement that is true.”

On the actual SOL test, you may see questions that require you to pick one or more answers. Some questions will tell you the number of correct answers to select. Other questions, like this one, will not give you the number of answers to select. You will have to decide how many correct answers there are.

Please make sure students understand this concept, as a traditional multiple-choice question only requires one answer.

SAY To answer this question correctly, you need to select all the correct answers by clicking on them with your pointer tool. Notice with this type of question, a light blue box outlines the answer choice when you move your pointer tool over it. When you click it, the answer option is outlined in orange, indicating you have selected that choice as your answer. If you change your mind, click the orange box to remove the selection, and the orange outline disappears.

Pause.

SAY Before you answer this item, let’s practice using the pencil tool to narrow down the answer choices. Since this is a technology-enhanced item, you cannot use the eliminator tool to eliminate your answer choices. The eliminator tool can only be used on multiple-choice questions.

Click the icon on the toolbar that looks like a green pencil (). Draw an “X” over an answer choice that you do not wish to select. When you have finished with the pencil tool, click on the pencil icon again to put the tool away.

If you change your mind after eliminating an answer with the pencil tool, you can use the eraser tool to remove the “X”. (Pause.)

Now answer the question.

Pause while students answer the question.

SAY How did you answer the question?

Pause for replies.

SAY You should have selected:
The sum of two even numbers is even.
The difference between an odd number and an even number is odd.
The difference between two odd numbers is even.

You must have all three of those statements selected, and only those three statements, to get the item correct.

Since the number of correct answers was not indicated in the item, this item will show as “Answered” on the Section Review screen once one statement is selected. This is so no hint or clue is given as to how many statements are correct.

Do you have any questions about the answer or how to use the pencil tool?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

SAY Question 12 is an example of a fill-in-the-blank item. The directions say, “Type your answer in the box.”

You may use the protractor tool () if it will help you find the answer. Click on the protractor icon to select it. Click and drag the protractor over the angle to be measured. The arrow keys on the keyboard also move the protractor.

SAY To rotate the protractor, use either corner to move the protractor clockwise or counterclockwise. When you have finished with the protractor, click on the protractor icon on the toolbar to put it away. Take a moment to measure the angle now.

Pause while students measure the angle.

SAY Now use your pointer tool to click in the response box and then type the answer to the question.

Pause while students enter the answer.

Directions: Type your answer in the box.

What is the measure of angle XYZ ?

X Y Z

°

Flag for Review Question 12 of 34 Section 1 Section Review Previous Next

SAY How did you answer the question?

Pause for replies.

SAY The correct answer is 145 degrees. Answers ranging from 142 to 148 are acceptable. Notice the correct answer does not need to be the same length as the box.

For questions that are fill-in-the-blank, once any character is entered into the response box and remains in the response box, the question will show as “Answered” on the Section Review screen. Do you have any questions about how to type your answer in the box?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

SAY Try entering other characters into the box, such as letters, spaces, or symbols.

Pause while students try to enter other characters. In this item, they will not be able to enter any character other than numbers.

If a fractional answer is required in a technology-enhanced item, the forward slash (/) symbol is to be used for the fraction bar. If a decimal answer is required, a period (.) is to be used.

SAY This box will only accept numbers. If a letter, number, or symbol does not appear in the answer box after you’ve tried it, then you cannot use that symbol in your answer.

You can use the backspace key on the keyboard to clear your answer or the delete key. To use the delete key, click in front of the numbers you want to clear; press “delete” to remove each number one at a time. Try clearing your answer and retyping it in the box.

Pause while students practice clearing and retyping the answer.

SAY Do you have any questions about how to enter or change your answer?

Answer all questions.

SAY Click *Next* at the bottom of the screen to go to the next question.

Pause.

SAY Question 13 is an example of a drag and drop technology-enhanced item. The directions banner says “Click and drag each selected number to the correct location. You may use each number more than one time.” You will click and drag numbers from the dark gray box to the correct locations to answer the question. If you change your mind after clicking and dragging a number to a box, you can drag the number back to the dark gray box and then select another number.

Read the question to yourself.

Pause while students read the question.

SAY You may answer the question now.

Pause while students answer the question.

John doe
Grade 5 Practice Items(2009 Math SOL) X Exit

Directions: Click and drag each selected number to the correct location. You may use each number more than one time.

This list shows the number of minutes 12 students spent playing sports on Tuesday.

27, 30, 54, 30, 38, 29, 56, 38, 56, 50, 38, 25

Create a stem-and-leaf plot to show this information.

Number of Minutes Spent Playing Sports

Stem	Leaf

0	1	2	3	4
5	6	7	8	9

Key
6 7 means 67

Flag for Review Question 13 of 34 Section 1 Section Review Previous Next

SAY How did you answer the question?

Pause for replies.

SAY The correct answer includes all of the following:
 the stem numbers must be, from top to bottom, 2, 3, 4, and 5;
 for the stem of 2 : you must have leaf numbers 5 7 9;
 for the stem of 3 : you must have leaf numbers 0 0 8 8 8;
 for the stem of 4 : you must have no leaf numbers in the plot;
 for the stem of 5 : you must have leaf numbers 0 4 6 6 .

You must have all the stem numbers and all leaf numbers in the correct locations and in the correct order for your answer to be correct.

Since you are being asked to create the stem-and-leaf plot, this item will show as “Answered” on the Section Review screen after you place one number into the plot. This is so no hint or clue is given on how to complete the stem-and-leaf plot. Do you have any questions?

Answer all questions. Leaf numbers should be ordered from least to greatest to be considered correct.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

SAY Click *Next* at the bottom of the screen to go to the next question.

Pause.

SAY Question 14 is another drag and drop item. The gray directions banner at the top of the screen says, “Click and drag the symbols to the equation mat. You may use the symbols more than one time.”

John doe
Grade 5 Practice Items (2009 Math SOL) X Exit

Directions: Click and drag the symbols to the equation mat. You may use the symbols more than one time.

Using this equation mat, model the equation shown.

$$2 + w = 4$$

Equation Mat

Symbol

Key: cup = w ball = 1

Flag for Review Question 14 of 34 Section 1 Section Review Previous Next

SAY Take a moment to answer the question.

Pause while students answer the question.

SAY How did you answer the question?

Pause for replies.

SAY For this question, more than one correct answer is possible. These 2 answers are acceptable:
 Left side – 1 cup and 2 balls; Right side – 4 balls OR
 Left side – 4 balls; Right side – 1 cup and 2 balls

SAY Since you are being asked to model the equation, this item will show as “Answered” on the Section Review screen once one cup or counter is placed on the mat. This is so no hint or clue is given on how to model the equation. Do you have any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

SAY Click *Next* at the bottom of the screen to go to the next question.

Pause.

John doe
Grade5 Practice Items(2009 Math SOL) [X Exit](#)

Directions: Click on each box to choose a number. You must select all of the correct numbers.

Identify each number that will round to 7.53 when rounded to the nearest hundredth.

7.534	7.523	7.521	7.530	7.529	7.535
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Flag for Review Question 15 of 34 Section Review Previous Next

Section 1

SAY The gray directions banner for this question says, “Click on each box to choose a number. You must select all of the correct numbers.” The item says, “Identify each number that will round to 7.53 when rounded to the nearest hundredth.”

SAY This question is another technology-enhanced item. To answer this question, you must click on the correct answers in the dark gray box. Notice with this type of question, a light blue box outlines the answer choice when you move your pointer tool over it. When you click it, the answer option is outlined in orange, indicating you have selected that choice as your answer. If you change your mind, click the orange box to remove the selection, and the orange outline disappears.

Answer the question now.

Pause while students answer the question.

SAY Which answers did you select?

Pause for replies.

SAY To answer this question correctly, you must have selected 7.534, 7.530, and 7.529. You must have selected all three of these numbers, and only these three numbers, for your answer to be correct.

The Section Review screen would identify this question as “Answered” after one number has been selected as a response, since the directions indicated you should select all the correct answers. This is to avoid providing hints or clues as to how many numbers are correct.

Do you have any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

John doe
Grade 5 Practice Items (2009 Math SOL) [Exit](#)

Directions: Click and drag each selected number to the correct box. Do not use a calculator to solve this problem.

Identify the decimal value that is equivalent to each fraction.

Fraction Value	Decimal Value
$\frac{1}{5}$	
$\frac{1}{2}$	
$\frac{2}{5}$	

0.5 0.4 0.2

Flag for Review Question 16 of 34 Section 1 Section Review Previous Next

SAY Item 16 is another example of a drag and drop technology-enhanced item. The directions banner says, “Click and drag each selected number to the correct box. Do not use a calculator to solve this problem.” You will click and drag your answers from the dark gray box to the correct locations. In order to have a complete answer, you must drag a number into each box.

The item says, “Identify the decimal value that is equivalent to each fraction.” You may answer the item now. If you change your mind after clicking and dragging a number to a box, you can drag the number back to the dark gray box and then select another number.

Now use your scratch paper to determine the answer and then answer the question.

Pause while students answer the item.

SAY How did you answer this question?

Pause for replies.

SAY The correct answer must include each of these answers:
 in the empty box next to the fraction one-fifth you should have 0.2 ;
 in the empty box next to the fraction one-half you should have 0.5 ; and
 in the empty box next to the fraction two-fifths you should have 0.4 .

You must have all three numbers in the correct location for your answer to be correct.

SAY This question will show as “Unanswered” on the Section Review screen until each of the empty boxes in the table contains a number. Do you have any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

Directions: Click and drag each selected number to the correct box. Do not use a calculator to solve this problem.

Arrange the four numbers shown from greatest to least.

Greatest	<input type="text"/>
	<input type="text"/>
	<input type="text"/>
Least	<input type="text"/>

4.595	$4\frac{4}{5}$	4.49	$4\frac{1}{3}$
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Flag for Review Question 17 of 34 Section 1 Section Review Previous Next

SAY Item 17 is another drag and drop technology-enhanced item. The directions banner says, “Click and drag each selected number to the correct box. Do not use a calculator to solve this problem.” You will click and drag your answers from the dark gray box to the correct locations. In order to have a complete answer, you must drag a number into each box.

The item says, “Arrange the four numbers shown from greatest to least.” You may answer the item now. If you change your mind after clicking and dragging a number to a box, you can drag the number back to the dark gray box and then select another number.

Now use your scratch paper to determine the answer and then answer the question.

Pause while students answer the item.

SAY How did you answer this question?

Pause for replies.

SAY From greatest to least (top to bottom), the correct order is: $4\frac{4}{5}$, 4.595 , 4.49 , and $4\frac{1}{3}$.

You must have each number in the correct location for your answer to be correct. Similar to the last question we discussed, this question will show as “Unanswered” on the Section Review screen until all boxes contain numbers. Do you have any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

SAY Click the *Next* button at the bottom of the screen to go to question 18.

The screenshot shows a TestNav interface for a math question. At the top, there is a toolbar with various icons for navigation and assistance, including a mouse cursor, eraser, highlighter, red X, green checkmark, calculator, and a Help button. The user's name "John doe" and the text "Grade 5 Practice Items (2009 Math SOL)" are visible in the top right corner, along with an "Exit" button. Below the toolbar, a grey bar contains the directions: "Directions: Click on each box to choose a number. You must select four correct answers." The main content area displays the question: "Identify the four prime numbers." Below the question is a 3x3 grid of input boxes containing the numbers: 51, 21, 5, 63, 2, 39, 29, 57, 17. At the bottom of the interface, there is a dark blue bar with a "Flag for Review" button, the text "Question 18 of 34 Section 1", a "Section Review" button, and "Previous" and "Next" navigation buttons.

SAY The gray directions banner for this question says, “Click on each box to choose a number. You must select four correct answers.” The item says, “Identify the four prime numbers.”

To answer this hot spot technology-enhanced item, you must click on each of the correct answers in the box. Again you will notice that with this type of question, a light blue box outlines the answer choice when you hover over it with the pointer tool. When you click it, the answer option is outlined in orange, indicating you have selected that choice as your answer. If you change your mind, you can click the orange box to remove the selection, and the orange outline disappears.

Answer the question now. Be sure to select four numbers.

Pause while students answer the question.

SAY Which answers did you select?

Pause for replies.

SAY To answer this question correctly, you must have selected all of these numbers and only these numbers: 29, 2, 5, and 17.

Since this item directed you to identify four numbers, the Section Review screen will indicate that this question is “Answered” only after four numbers have been selected.

Do you have any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

The screenshot shows a digital math practice interface. At the top, there is a toolbar with icons for a pencil, eraser, highlighter, calculator, and help. The user's name 'John doe' and the title 'Grade 5 Practice Items (2009 Math SOL)' are visible in the top right. A grey banner at the top of the question area reads 'Do not use a calculator to solve this problem.' Below this, the problem is $4.221 \div 7 = \underline{\quad ? \quad}$. Four multiple-choice options are listed: A 0.063, B 0.603, C 0.63, and D 6.03. At the bottom of the interface, there are navigation buttons: 'Flag for Review', 'Question 19 of 34 Section 1', 'Section Review', 'Previous', and 'Next'.

SAY The directions banner says “Do not use a calculator to solve this problem,” so you will need to use your scratch paper for any calculations you need to do.

Now read question 19 to yourself and determine the answer.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is B, 0.603.

Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

The screenshot shows a digital math practice interface. At the top, there is a toolbar with various icons for drawing and calculation, and a 'Help' button. The user's name 'John Doe' and the text 'Grade 5 Practice Items (2009 Math SOL)' are visible in the top right corner. A grey banner at the top of the question area reads 'Do not use a calculator to solve this problem.' The main question text is: 'Mason has a brick and 5 wood blocks.' followed by two bullet points: '• The brick has a mass of 8.036 kilograms.' and '• Each wood block has a mass of 1.097 kilograms.' The question asks: 'What is the difference between the mass of the brick and the combined mass of the 5 wood blocks?' There are four multiple-choice options: A 5.485 kilograms, B 4.133 kilograms, C 2.551 kilograms, and D 1.939 kilograms. At the bottom of the interface, there is a navigation bar with a 'Flag for Review' button, 'Question 20 of 34 Section 1', a 'Section Review' button, and 'Previous' and 'Next' navigation buttons.

SAY Read the directions and question to yourself and then answer the question. Use your scratch paper for any calculation you need to do.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is C, 2.551 kilograms.

Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

The screenshot shows a digital math practice interface. At the top, there is a toolbar with various icons including a pointer, eraser, highlighter, selection tools, and a calculator. The user's name 'John doe' and the text 'Grade 5 Practice Items (2009 Math SOL)' are visible in the top right corner. The main content area contains the following text and diagram:

A figure is shown.

8 meters

15 meters

5 meters

What is the volume of this figure?

- A 600 cubic meters
- B 195 cubic meters
- C 120 cubic meters
- D 115 cubic meters

At the bottom of the interface, there is a navigation bar with a 'Flag for Review' button, 'Question 21 of 34 Section 1', a 'Section Review' button, and 'Previous' and 'Next' navigation buttons.

SAY Read question 21 to yourself, but do not answer the question yet.

Pause while students read the question.

SAY Before you answer this question, let's practice with the calculator that is available in the toolbar at the top of your screen. To use the online calculator to help solve this problem, click the icon in the toolbar that looks like a calculator ().

Pause while students click on the calculator.

SAY A calculator will appear on the screen. You will use the pointer to click on the numbers and operations you want to enter in the calculator. Let's use the calculator to find the volume of the figure shown in this question. To find the volume, multiply the length times the width times the height of the rectangular prism shown on the screen. You should multiply 5 meters times 15 meters times 8 meters, and the product will be the volume of this prism.

On your calculator, enter 5 times 15 times 8, then press the equal sign.

Pause.

SAY The calculator should display 600, which is the volume of the rectangular prism on the screen. Now find the red button that says “ON/C” that is located at the bottom left of the online calculator and press it to clear the display. (Pause.) The calculator display should now show zero. (Pause.)

Are there any questions about how to use the calculator?

Answer all questions. Students will have the option of using a hand-held four function calculator or the online four function calculator while completing the section of the actual grade 5 SOL mathematics assessment on which calculator use is allowed.

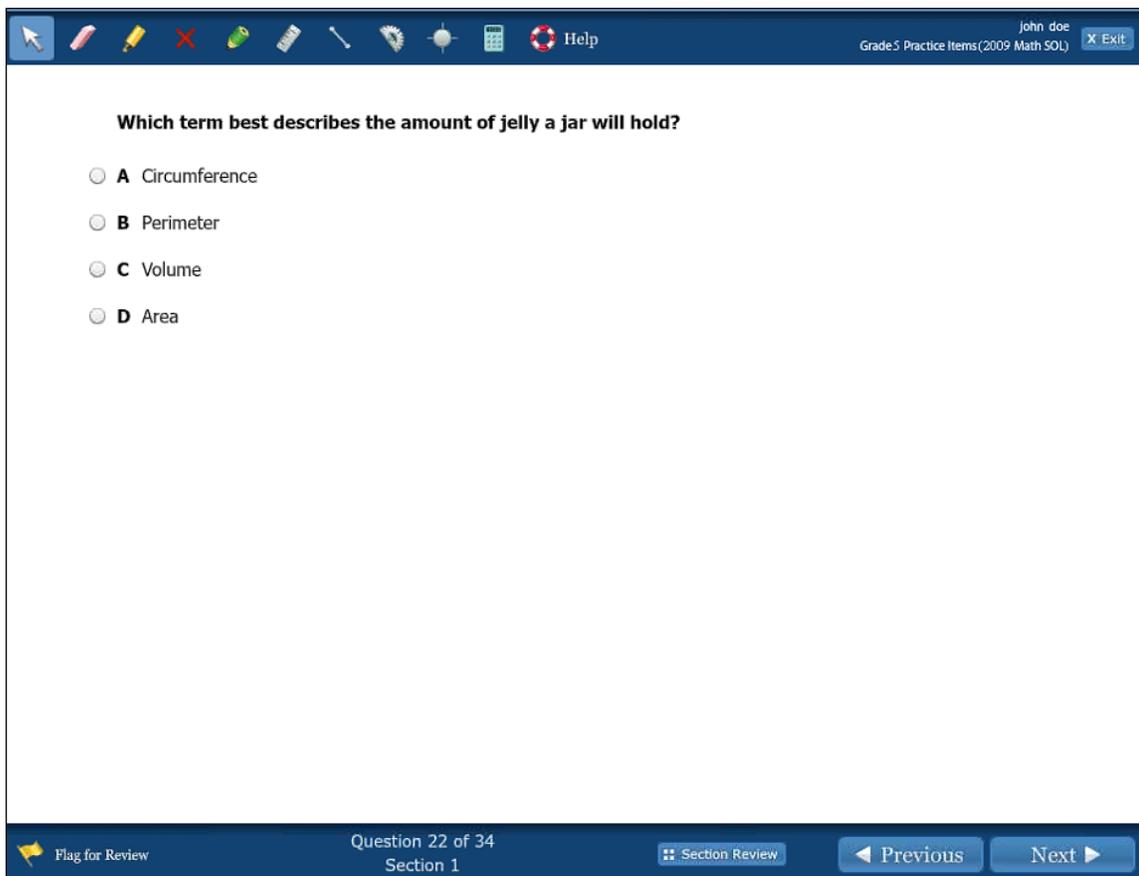
SAY Click on the calculator icon or on the pointer tool icon in the toolbar at the top of your screen to put the calculator away, and then select the answer. We have determined that the correct answer is A, 600 cubic meters.

Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause while students put away the calculator and navigate to the next item.



The screenshot shows a digital interface for Grade 5 Practice Items. At the top, there is a toolbar with various icons: a pointer, eraser, pencil, red X, highlighter, calculator, and a red lifebuoy labeled 'Help'. The user's name 'John doe' and the text 'Grade 5 Practice Items (2009 Math SOL)' are visible in the top right corner, along with an 'X Exit' button. The main content area contains the question: "Which term best describes the amount of jelly a jar will hold?" with four radio button options: A Circumference, B Perimeter, C Volume, and D Area. At the bottom, there is a navigation bar with a 'Flag for Review' button, 'Question 22 of 34 Section 1', a 'Section Review' button, and 'Previous' and 'Next' buttons.

SAY Read question 22 to yourself and then answer the question.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is C, Volume.

Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

The screenshot shows a digital assessment interface. At the top, there is a toolbar with various icons for navigation and calculation, including a mouse cursor, eraser, pencil, highlighter, red X, green checkmark, calculator, and a help icon. The user's name "John doe" and the text "Grade 5 Practice Items (2009 Math SOL)" are visible in the top right corner, along with an "Exit" button. Below the toolbar, a grey bar contains the directions: "Directions: Type your answer in the box." The main area of the screen displays the question: "1.2 liters = milliliters". At the bottom of the interface, there is a navigation bar with a "Flag for Review" button, the text "Question 23 of 34 Section 1", a "Section Review" button, and "Previous" and "Next" buttons.

SAY Question 23 is an example of a fill-in-the-blank item. The directions say, “Type your answer in the box.”

Now read and answer this question. Enter your answer in the box.

Pause while students read and answer the question.

SAY How did you answer the question?

Pause for replies.

SAY The correct answer is 1,200 milliliters. Notice the correct answer does not need to be the same length as the box. For questions that are fill-in-the-blank, once any character is entered into the response box and remains in the response box, the question will show as “Answered” on the Section Review screen. Do you have any questions about how to type your answer in the box?

Answer all questions. This response box only accepts the digits 0 through 9 and a comma. If a student asks, 1200 (without the comma) is also a correct response.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

SAY Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

The screenshot shows a digital interface for a math practice test. At the top, there is a dark blue header bar with various icons (arrow, pencil, eraser, X, highlighter, calculator, help) and the text "John doe" and "Grade 5 Practice Items (2009 Math SOL) X Exit". The main content area is white and contains the following text:

Which of these would most likely have a mass of 0.3 kilogram?

- A One full can of soda
- B One paper clip
- C One crayon
- D One pen

At the bottom of the interface, there is a dark blue footer bar with the following elements from left to right: a "Flag for Review" button, the text "Question 24 of 34 Section 1", a "Section Review" button, and "Previous" and "Next" navigation buttons.

SAY Read question 24 to yourself and then answer the question.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is A, One full can of soda.

Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to question 25.

Pause.

The screenshot shows a digital assessment interface. At the top, there is a toolbar with various icons for navigation and assistance, including a mouse cursor, eraser, highlighter, red X, green checkmark, calculator, and a lifebuoy icon labeled 'Help'. The user's name 'John doe' and the page title 'Grade 5 Practice Items (2009 Math SOL)' are visible in the top right corner. The main content area displays the question: 'At what temperature does water boil?' with four radio button options: A 212°F, B 98°F, C 32°F, and D 0°F. At the bottom, there is a navigation bar with a 'Flag for Review' button, 'Question 25 of 34 Section 1', a 'Section Review' button, and 'Previous' and 'Next' buttons.

SAY Read and answer the question.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is A, 212^o F. Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

The screenshot shows a digital math practice interface. At the top, there is a toolbar with various drawing tools like an eraser, pencil, highlighter, and a help icon. The user's name 'John Doe' and the text 'Grade 5 Practice Items (2009 Math SOL)' are visible in the top right corner. The main content area contains the following text: 'Wayne and Dani both drew congruent circles and marked the center points as Q . They each drew a line segment inside their circle as shown.' Below this text are two diagrams. The first diagram, labeled 'Wayne's Circle', shows a circle with a center point Q and a horizontal line segment extending from the center to the right edge of the circle. The second diagram, labeled 'Dani's Circle', shows a circle with a center point Q and a horizontal line segment extending from the left edge of the circle to the right edge. Below the diagrams is the question: 'Which statement best describes the line segments in Wayne's and Dani's circles?' followed by four multiple-choice options: A, B, C, and D. At the bottom of the interface, there is a navigation bar with buttons for 'Flag for Review', 'Question 26 of 34 Section 1', 'Section Review', 'Previous', and 'Next'.

Wayne and Dani both drew congruent circles and marked the center points as Q . They each drew a line segment inside their circle as shown.

Wayne's Circle Dani's Circle

Which statement best describes the line segments in Wayne's and Dani's circles?

A Wayne's line segment shows a diameter, and Dani's line segment shows a radius.

B Wayne's line segment shows a radius, and Dani's line segment shows a diameter.

C Wayne's line segment shows a diameter, and Dani's line segment shows a chord.

D Wayne's line segment shows a chord, and Dani's line segment shows a diameter.

SAY Read question 26 to yourself and then answer the question.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is B, Wayne's line segment shows a radius, and Dani's line segment shows a diameter. Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

This clock shows the time Xavier finished swim practice.

His practice lasted 2 hours and 20 minutes. What time did Xavier's swim practice start?

A 9:35

B 7:15

C 7:35

D 6:55

Question 27 of 34
Section 1

Flag for Review Section Review Previous Next

SAY Read question 27 to yourself and then answer the question.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is D, 6:55. Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

John doe
Grade 5 Practice Items (2009 Math SOL) X Exit

Which angle appears to be an obtuse angle?

A Angle 1

B Angle 2

C Angle 3

D Angle 4

Flag for Review Question 28 of 34 Section 1 Section Review Previous Next

SAY Read question 28 to yourself and then answer the question.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is B, Angle 2. Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

The figure shown will be cut along the dashed line segments.

What shapes will result after both cuts have been made?

A Square, trapezoid, and parallelogram

B Square, triangle, and rectangle

C Square, triangle, and trapezoid

D Square, triangle, and rhombus

Flag for Review Question 29 of 34 Section 1 Section Review Previous Next

SAY Read question 29 to yourself and then answer the question.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is D, Square, triangle, and rhombus.

Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

Do not use a calculator to solve this problem.

Destiny is delivering a total of 32,000 flowers to several stores. This table shows the number of these flowers she has delivered to Store P and Store Q.

Flower Deliveries	
Store	Number of Flowers
Store P	18,104
Store Q	9,294

The total number of these flowers that Destiny still needs to deliver is —

A 59,398
 B 27,398
 C 8,810
 D 4,602

SAY The directions banner says “Do not use a calculator to solve this problem,” so you will need to use your scratch paper and pencil for any calculations you may need to do.

Now read the question to yourself then answer the question.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is D, 4,602.

Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

John doe
Grade 5 Practice Items (2009 Math SOL) X Exit

Directions: Click and drag each selected number to the correct box.

The number of gallons of milk sold at a store each day for eight days is shown.

30, 40, 51, 30, 34, 20, 30, 45

Determine the value for each statistical measure.

Mean	<input type="text"/>
Median	<input type="text"/>
Mode	<input type="text"/>
Range	<input type="text"/>

30 31 32 35

Flag for Review Question 31 of 34 Section 1 Section Review Previous Next

SAY Item 31 is an example of a drag and drop technology-enhanced item. The directions banner says, “Click and drag each selected number to the correct box.” You will click and drag your answers from the dark gray box to the correct locations. In order to have a complete answer, you must drag a number into each box.

Read and answer the item now. If you change your mind after clicking and dragging a number to a box, you can drag the number back to the dark gray box and then select another number.

Pause while students answer the item.

SAY How did you answer the item?

Pause for replies.

SAY The correct answer will include all of the following:
The mean is 35, the median is 32, the mode is 30, and the range is 31.

You must have each number in the correct location for your answer to be correct. This question will show as “Unanswered” on the Section Review screen until each of the empty boxes contains a number. Are there any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

SAY Before we move to the next question, let’s practice with the ruler tool. Click on the tool at the top of the screen that looks like a ruler (). Notice a drop down box appears. You must select the type of ruler you want to use. For our practice, please click on “Centimeters Ruler.”

Pause while students select the type of ruler they will use.

SAY When the unit of measure is clicked in the drop down box, a ruler will appear on the screen. To move the ruler, click and drag the ruler over to the object to be measured. To rotate the ruler, click and drag the end with the arrows.

Pause while the students practice with the ruler tool.

SAY Now use the ruler to measure the height of the large rectangle in the center of the screen, in centimeters.

Pause while students position the ruler to measure from the top to the bottom of the rectangle in which the words “Mean,” “Median,” “Mode,” and “Range” appear on the screen. Assist students as necessary.

SAY What is the height of the rectangle, in centimeters?

Pause for replies.

SAY The height of the rectangle to the nearest tenth of a centimeter is 6 centimeters. Do you have any questions about how to use the ruler?

Pause for questions.

SAY Click *Next* at the bottom of the screen to continue to question 32.

Pause.

The screenshot shows a digital interface for a math practice item. At the top, there is a dark blue header bar with various icons (arrow, eraser, pencil, X, highlighter, calculator, help) and the text "John doe" and "Grade 5 Practice Items (2009 Math SOL)" with an "Exit" button. The main content area is white and contains the following text:

Which pattern follows the rule "divide by 4" to find each number after the first?

- A 360, 90, 30, 15
- B 256, 64, 16, 4
- C 92, 88, 84, 80
- D 11, 15, 19, 23

At the bottom, there is a dark blue footer bar with a "Flag for Review" button, the text "Question 32 of 34" and "Section 1", a "Section Review" button, and "Previous" and "Next" navigation buttons.

SAY Read the question to yourself and select the answer.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is B, 256, 64, 16, 4.

Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the next question.

Pause.

SAY Read question 33 to yourself and then answer the question.

Pause while students read and answer the question.

John doe
Grade 5 Practice Items (2009 Math SOL) X Exit

Which open sentence represents "a number, y , increased by 45 is 312"?

A $y + 45 = 312$

B $y - 45 = 312$

C $y \div 45 = 312$

D $y \times 45 = 312$

Flag for Review Question 33 of 34 Section 1 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

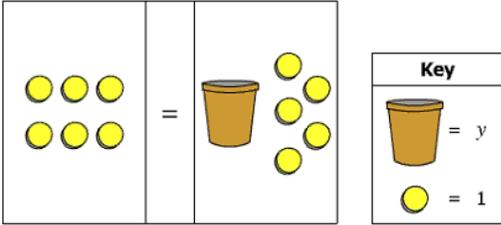
SAY The correct answer is A, $y + 45 = 312$. Do you have any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to continue to the last question.

Pause.

Using the key shown, look at this equation mat.



Which equation is represented by the equation mat shown?

A $y = 5 + 6$

B $y + 5 = 6$

C $y \div 5 = 6$

D $y = 6$

Question 34 of 34
Section 1

Flag for Review Section Review Previous Next

SAY Read question 34 to yourself and then answer the question.

Pause while students read and answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is B, $y + 5 = 6$. Do you have any questions?

Answer all questions.

If you want your students to practice using the Help tool (as mentioned on page 9), they can do so now.

SAY Click *Next* at bottom of the screen to go to the Section Review screen.

Return to Test 

Section 1 Review

Choose an item below or click *CONTINUE* to go to the Test Overview.

All Items	1 Flagged for Review	36 Answered	0 Unanswered
Sample		✓ Answered	
Sample		✓ Answered	
Question 1		✓ Answered	
Question 2	🚩 Flagged for Review	✓ Answered	
Question 3		✓ Answered	
Question 4		✓ Answered	
Question 5		✓ Answered	
Question 6		✓ Answered	
Question 7		✓ Answered	
Question 8		✓ Answered	
Question 9		✓ Answered	
Question 10		✓ Answered	



john doe | Grade 5 Practice Items (2009 Math SOL)

SAY The Section Review screen shows which questions have been answered, which questions have not been answered, and which questions you have flagged for review. To return to a question, click on the question number.

Practice returning to a question by clicking on question 2, the question we flagged for review. You should see a picture of a flag in the “Flagged for Review” column next to the question. You can then return to this screen by clicking on the “Section Review” button at the bottom of the screen on question 2.

Pause while students practice navigating between question 2 and this screen.

The dot tool was not practiced as students worked through the practice items. To practice the dot tool, have students return to question 9 and use the tool to click on the vertices of each figure. It is important to point out to students that the dot tool will never be used to answer a question. Points plotted with the dot tool are not scorable responses.

SAY You can also use the Section Review screen to sort the questions. The top row of the Section Review screen tells you how many questions you have flagged for review, answered, or left unanswered. If you want to view only the questions you flagged for review, simply click on the column header that says “Flagged for Review.” If you want to view only questions you have answered, click the “Answered” header. If you want to view only questions you left unanswered, click on the header that says “Unanswered.” Move your pointer over each column heading and notice how that section of the heading changes.

Pause while students practice sorting the columns.

SAY If the Section Review screen indicates that a question is unanswered, you have not answered a question completely. If this happens, it is a good idea to return to the question, and read the directions and the question again before making any changes to your answer.

Are there any questions?

Students should check any questions that show as “Unanswered” on the Section Review screen. When the student returns to the question he or she may see that there is an answer, but it may be incomplete. It is important to note, however, that some questions will show as answered once a student responds with a single answer. This is necessary at times to avoid hinting or cluing an answer. For example, hot spot items that require students to “Select all” fall into this category. Please see Appendix B for detailed information.

SAY To get back to the Section Review screen that lists all questions and the status of each, click the top left-hand column header, titled “_ of 36 Total Items”. (Pause.)

The number in the blank will vary, depending on the column the student filters on last. The total number of items is 36: two sample items plus the 34 practice items.

SAY We are going to review two more screens. Click on the “Continue to Test Overview” button on the lower left corner of the screen. (Pause.)

Grade 5 Practice Items (2009 Math SOL)

Choose a section below or click *SUBMIT* to submit and exit the test.

SECTIONS	STATUS	QUESTIONS
Section 1	Opened	1-34

Exit Test X

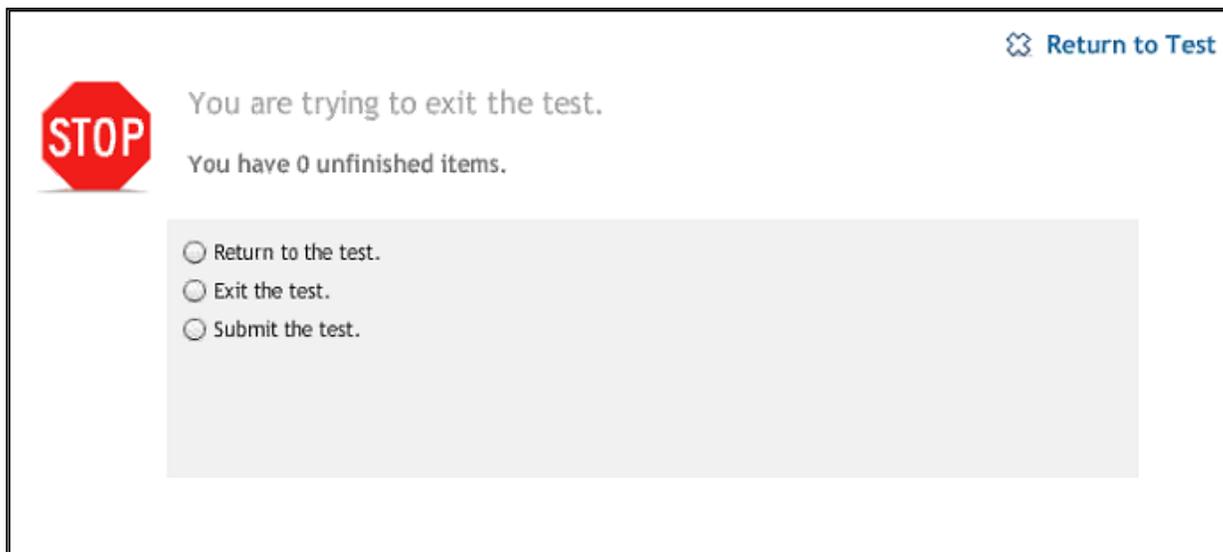
SUBMIT AND EXIT TEST ▶

john doe

SAY From the Test Overview screen, you can return to the test or move to the final screen. Clicking on Section 1 will take you to the last practice item you were working on or went back to review. Since we have finished with the practice items, we will not return to any question within the section. Clicking on the “Submit and Exit Test” button at the bottom of the screen will move you to the final screen. Are there any questions? (Pause to answer all questions.)

Now click on “Submit and Exit Test.” (Pause.)

You will see a stop sign with three choices. It is important to review these three choices. (Pause.)



SAY Notice this screen indicates the number of unfinished items you have on the test.

The first choice states “*Return to the test.*” This option allows you to go back to the practice questions. You would click this option if you wanted to return to any of the questions. Selecting this would first take you to the screen we just reviewed, and then you would click on Section 1 to return to the practice items.

The second choice states, “*Exit the test.*” This option should NOT be chosen. This option may be used during actual SOL testing, but should NOT be used for this practice set. If you click on this option, you will lose all of your work. It will not be saved.

Pause and make sure students understand not to choose option 2. During actual SOL testing, students may be directed to choose this option if they are being moved to a different location to complete their tests or if they need to leave the testing environment (while monitored) for a short time.

SAY The third choice, “*Submit the test,*” allows you to submit your answers.

Once you have finished using these practice items, proceed with exiting the application.

SAY Since we have finished with the practice items, please click on the third option, “*Submit the test.*” Next, click on the green button that says “*Final submit.*” When you click this button during actual SOL testing, your test will be submitted for scoring and you will not be able to return to the test.

This completes our review of the Grade 5 Mathematics Practice Items.

Thank you for reviewing the Grade 5 Mathematics Practice Items with your students.

APPENDIX A**Answers to Grade 5 Mathematics Practice Items****Sample A**

You should have selected D, measure of an angle.

Sample B

The correct answer is 0.21.

Question 1

The correct answer is D, $7\frac{5}{8}$.

Question 2

The correct answer is B.

Question 3

The correct answer is A: 21, 24, 29, 25, 27.

Question 4

The correct answer is A, \$14.73.

Question 5

The correct answer is C, 88.

Question 6

The correct answer is C, $\frac{4}{8}$.

Question 7

The correct answer is A, 3+6.

Question 8

You should have selected B, fair share.

Question 9

The correct answer is C.

Question 10

You should have selected D, eight times the quantity one plus three, close quantity, equals the quantity eight times one, close quantity, plus the quantity eight times three, close quantity.

Question 11

You should have selected:

The sum of two even numbers is even.

The difference between an odd number and an even number is odd.

The difference between two odd numbers is even.

Question 12

The correct answer is 145. Answers ranging from 142 to 148 are acceptable

Answers to Grade 5 Mathematics Practice Items (Continued)**Question 13**

For the stem of 2 : you must have leaf numbers 5 7 9

For the stem of 3 : you must have leaf numbers 0 0 8 8 8

For the stem of 4 : you must have no leaf numbers in the plot

For the stem of 5 : you must have leaf numbers 0 4 6 6

Question 14

These 2 answers are acceptable:

Left side – 1 cup and 2 balls; Right side – 4 balls

Left side – 4 balls; Right side – 1 cup and 2 balls

Question 15

To answer this question correctly, you must have selected 7.534, 7.530, and 7.529. You must have selected all three choices for your answer to be correct.

Question 16

The correct answer must include each of these answers:

in the empty box next to the fraction one-fifth you should have 0.2 ;

in the empty box next to the fraction one-half you should have 0.5 ; and

in the empty box next to the fraction two-fifths you should have 0.4 .

Question 17

From greatest to least (top to bottom), the correct order is: $4\frac{4}{5}$, 4.595 , 4.49 , and $4\frac{1}{3}$.

Question 18

The correct answer is B, 0.603.

Question 19

To answer this question correctly, you must have selected the four numbers 29, 2, 5, and 17.

Question 20

The correct answer is C, 2.551 kilograms.

Question 21

The correct answer is A, 600 cubic meters.

Question 22

The correct answer is C, Volume.

Question 23

The correct answer is 1,200 or 1200 (without the comma).

Question 24

The correct answer is A, One full can of soda.

Question 25

The correct answer is A, 212° F.

Answers to Grade 5 Mathematics Practice Items (Continued)

Question 26

The correct answer is B, Wayne's line segment shows a radius, and Dani's line segment shows a diameter.

Question 27

The correct answer is D, 6:55.

Question 28

The correct answer is B, Angle 2.

Question 29

The correct answer is D, Square, triangle, and rhombus.

Question 30

The correct answer is D, 4,602.

Question 31

The correct answer will include all of the following:

The mean is 35, the median is 32, the mode is 30, and the range is 31.

Question 32

The correct answer is B, 256, 64, 16, 4.

Question 33

The correct answer is A, $y + 45 = 312$.

Question 34

The correct answer is B, $y + 5 = 6$.

APPENDIX B

An overview of how student responses to technology-enhanced items will appear on the Section Review screen is outlined below:

Fill-in-the-blank (FIB) Items

For all fill-in-the-blank items, when a student enters any character into the response box, the item will show as answered on the Section Review screen. If a student enters an answer, and then completely removes that answer from the fill-in-the-blank box, the item will show as unanswered on the Section Review screen.

Histogram or Bar Graphing Items

For all histogram or bar graphing items, when a student raises any bar, the item will show as answered on the Section Review screen. If the student moves all bars back down to the original heights, the item will show as unanswered on the Section Review screen.

Hot Spot Items

When the number of correct responses is indicated in the directions or in the item itself, the item will show as answered on the Section Review screen only when the student selects that number of hot spots. For example, if the student is directed to select three answers, then the Section Review screen will show unanswered if the student selects one or two answers and will only show as answered once the student has selected three answers. If the number of correct responses is not indicated in the directions or in the question itself, then the item will show as answered on the Section Review screen once the student selects one answer. For example, if the student is required to “Select all correct answers,” the item will show as answered once the student selects one answer option. In this case, it is assumed that the student thought there was only one correct answer. This practice avoids providing information as to how many correct answers there are in the “select all” hot spot items.

Number Line or Coordinate Plane Items

Many number line or coordinate plane items require the student to plot one or more points as the response. When the number of points necessary to answer the item is indicated in the directions or the item itself, the item will show as answered on the Section Review screen only when the specified number of points has been plotted. When the directions or the item do not specify the number of points to plot, the item will show as answered on the Section Review screen once the student plots one point. Only points that have been plotted with the pointer tool are scorable responses. Points plotted with the dot tool are not scorable responses. If a student answers a question with the dot tool, the question will show as unanswered on the Section Review screen.

APPENDIX B (Continued)**Drag and Drop Items**

Drag and drop items contain answer receptacles called “bays” and “dragers” that the student moves into the bays to answer the question. There are many types of drag and drop items, and each item is evaluated individually so that the student is given the most detailed information possible on the Section Review screen, without providing hints as to the correct answer. For items with a specified number of bays, the item will show as answered on the Section Review screen once the student uses that number of draggers. For example, if there are three bays and it is intended for a dragger to be placed into each bay, then the Section Review screen will show the item as answered once three draggers have been input by the student. Or, in another example, if the directions or question indicate that all draggers need to be used to answer the item, then the item will show as answered on the Section Review only when all draggers have been used. If the number of draggers necessary to answer the question is not indicated, such as an item that requires the use of a dragger to complete a model or pictograph, then the Section Review Screen will show the item as answered once the student places one dragger in a bay.