

Practice Item Guide

Virginia Standards of Learning

Grade 3 Mathematics

These practice items are meant to provide students practice with the content and types of questions that can appear on the Grade 3 Mathematics Standards of Learning (SOL) test. Students can also use these items to practice with the online tools available within TestNav™.

It is important to note that the navigation through the practice items does not replicate the navigation through the online Grade 3 Mathematics Computer Adaptive Test (CAT). Practice with the navigation through a computer adaptive test (CAT) is available in an [Elementary School Mathematics CAT Training Test](#) provided on the Virginia Department of Education Web site.

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OVERVIEW

The practice items available in the Virginia Standards of Learning (SOL) grade 3 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 3 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 3 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 3 mathematics test.

The directions in the guide will also lead students through practice with the online tools. **However, it is important to note that the navigation through these practice items does not replicate the navigation through the online version of the Computer Adaptive Test (CAT) being administered to students beginning with the spring 2016 test administration.** Practice with the navigation through a CAT is available in an [Elementary School Mathematics CAT Training Test](#) provided on the Virginia Department of Education Web site.

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	04/19/2012	Dot tool practice was amended on page 29.
V.3	10/31/2013	Various changes throughout the guide regarding how TEI appear on the Section Review screen. Updated directions and screen shots for exiting TestNav. Added Appendix B.
V.4	03/15/2013	Overview amended; 20 new practice items added.
V.5	04/08/2016	Updated guide due to implementation of Computer Adaptive Testing for Grade 3 Mathematics, including removal of information about the Flag for Review Button, the Section Review Screens, closing screens, and the amendment of Appendix B.

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 3 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, history, 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 may be used in reading, writing, mathematics, history, 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 3 link. Since this is a web-based application, the link will take you directly to the grade 3 mathematics practice items.

MATERIALS NEEDED FOR COMPLETING THE VIRGINIA SOL PRACTICE ITEMS

Grade 3 Mathematics: Scratch paper and pencil

ONLINE TOOLS ALABLE 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.
	Dot tool – Use the dot tool to plot dots on the screen.
	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 3 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 3 mathematics practice items. There are 35 questions that will show you some of the types of test items that you may see on the SOL mathematics assessment. 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 that the questions you see are practice questions. They will not be graded, and I will tell you the answer for each question.

Are there any questions before we start?

Pause to answer questions.

SAY There are some navigation features within these practice items that will not be available when you take the actual Grade 3 Mathematics computer adaptive Standards of Learning (SOL) test. A computer adaptive test (CAT) provides a customized test for every student. When you are taking the CAT, the questions and problems presented to you will be based on how you answer the questions.

(Recommended.) We will be taking a practice CAT at another time so you can experience what the navigation through the actual SOL test will be like. Today we will be focusing on the content of the questions, the types of questions, and the online tools that are available to use.

The [Elementary School Mathematics CAT Training Test](#) is comprised of previously released grade 3 mathematics test questions. It is recommended for use with grade 3 mathematics students so that they can practice navigating through a computer adaptive test prior to the actual test-taking experience. Because of the limited number of grade 3 mathematics released items, the CAT training test has fewer questions than an actual SOL test. Therefore, the training test will not have the same degree of customization for different levels of achievement as the actual CAT will provide. The training test will not be scored.

The online tools available within these practice items are the same as those available in the online computer adaptive version of the test.

SAY Let's look at the bottom of the screen. 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 There is a *Flag for Review* button () located at the bottom left of the screen. Please disregard this button as we will not be using it today.

It is really important for me to say again that these features are different than what you will experience when you take the actual computer adaptive test. In the CAT, you will NOT see a *Previous* button or a *Flag for Review* button. In the CAT, you will only be able to click on the *Next* button after you have answered the question on the screen.

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 ()

Let's look at the first item, Sample A

John doe
Grade3 Practice Items(2009 Math SOL) X Exit

SAMPLE A

Carlos made this tally chart to record the chores done by 12 of the students in his class.

Chores Done by Students

Chore	Number of Students
Washing Dishes	
Walking Dog	
Emptying Trash	
Cleaning Room	

Which chore was done by 5 students?

A Washing Dishes
 B Walking Dog
 C Emptying Trash
 D Cleaning Room

Flag for Review Sample Section 1 Section Review Previous 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 B, *Walking Dog*.

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."

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.

John doe
Grade 3 Practice Items (2009 Math SOL) X Exit

Directions: Type your answer in the box.

SAMPLE B

$2 \times 5 = \underline{\quad ? \quad}$

Flag for Review Sample Section 1 Section Review Previous Next

SAY Which answer did you type in the box?

Pause for replies.

SAY The correct answer is 10. Notice that the answer you entered 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 be considered “Answered.” 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 be considered “Answered” 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 Notice the bottom of your screen now says “Question 1 of 35.” Read the question to yourself but do not answer it yet.

Pause while students read the question.

John doe
Grade3 Practice Items(2009 Math SOL) X Exit

Which of these is best represented by this number line?

A $6 + 2$

B 6×2

C $2 + 3$

D 2×3

Flag for Review Question 1 of 35 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 on multiple-choice questions. To eliminate answers, 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 click on the answer you have chosen.

Pause while students answer the question.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is D, 2 x 3. Make sure the circle next to choice D is selected as your answer.

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

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.

The screenshot shows a digital math practice interface. At the top, there is a toolbar with various icons: a mouse cursor, an eraser, a highlighter, a red X, a pencil, a ruler, a calculator, a lightbulb, and a lifebuoy labeled 'Help'. The user's name 'John doe' and the text 'Grade3 Practice Items(2009 Math SOL)' are visible in the top right corner, along with an 'X Exit' button. The main content area contains the text 'A hairclip is shown.' followed by a grayscale illustration of a hairclip with a horizontal dimension line below it. Below the illustration is the question: 'What is the length of this hairclip to the nearest half inch?'. There are four multiple-choice options: A $2\frac{1}{2}$ inches, B $3\frac{1}{2}$ inches, C 6 inches, and D 7 inches. At the bottom of the interface, there is a navigation bar with a 'Flag for Review' button, 'Question 2 of 35 Section 1', a 'Section Review' button, and 'Previous' and 'Next' buttons.

SAY Question 2 asks you to find the length of the hairclip to the nearest half inch. You can measure the length using the ruler.

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. In this question, you want to click on the “Inches Ruler.”

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

A hairclip is shown.

What is the length of this hairclip to the nearest half inch?

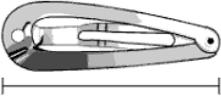
- A $2\frac{1}{2}$ inches
- B $3\frac{1}{2}$ inches
- C 6 inches
- D 7 inches

SAY When “Inches Ruler” is clicked in the drop down list, an inch 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. Practice moving and rotating the ruler.

Pause while students practice with the ruler tool.

John doe
Grade3 Practice Items(2009 Math SOL) [X Exit](#)

A hairclip is shown.



What is the length of this hairclip to the nearest half inch?

A $2\frac{1}{2}$ inches



B $3\frac{1}{2}$ inches

C 6 inches

D 7 inches

Flag for Review Question 2 of 35 Section Review Previous Next

Section 1

SAY Now measure the hairclip and select the correct answer. Clicking on the ruler tool icon again will put the ruler tool away; or, you may click on the pointer tool to put it away. You will use the pointer tool to select your answer after you finish measuring.

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, $2\frac{1}{2}$ inches.

Do you have any questions about selecting the correct answer or using the ruler tool?

Answer all questions.

Pause.

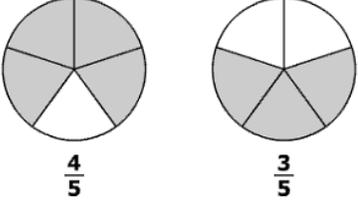
SAY Click *Next* at the bottom of the screen to go to the next question.

Read question 3 to yourself.

Pause while students read the question.

John doe
Grade3 Practice Items(2009 Math SOL) X Exit

What is $\frac{4}{5} + \frac{3}{5}$?



$\frac{4}{5}$ $\frac{3}{5}$

A $\frac{3}{7}$

B $\frac{7}{10}$

C $1\frac{2}{5}$

D $2\frac{2}{5}$

Flag for Review Question 3 of 35 Section Review Previous Next

Section 1

SAY Use your scratch paper to solve the problem and decide which answer is correct. Then 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 C, $1\frac{2}{5}$.

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 4 to yourself and find the answer.

Pause while students read the question and find the answer.

John doe
Grade3 Practice Items(2009 Math SOL) X Exit

Claire arrived at the zoo at 12:45 P.M. She left the zoo at 3:45 P.M. What was the total amount of time Claire was at the zoo?

A 3 hours

B 4 hours

C 9 hours

D 12 hours

Flag for Review Question 4 of 35 Section 1 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is option A, 3 hours.

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 the highlighter by highlighting the phrase "total amount of time" in the question. Click again on the highlighter tool on the toolbar to put the tool away.

The screenshot shows a digital math practice interface. At the top, there is a toolbar with icons for navigation and editing, including a highlighter icon. The user's name 'John doe' and the text 'Grade 3 Practice Items (2009 Math SOL)' are visible in the top right. The main content area contains a word problem: 'Claire arrived at the zoo at 12:45 P.M. She left the zoo at 3:45 P.M. What was the total amount of time Claire was at the zoo?'. The words 'total amount of time' and 'total' are circled in red. Below the question are four multiple-choice options: A 3 hours, B 4 hours, C 9 hours, and D 12 hours. At the bottom, there is a navigation bar with buttons for 'Flag for Review', 'Section Review', 'Previous', and 'Next'. The text 'Question 4 of 35 Section 1' is also present in the bottom bar.

Pause while students practice using the highlighter and put it away.

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 question 5 to yourself.

Pause while students read the question.

The screenshot shows a digital math practice interface. At the top, there is a dark blue header bar with various icons (pencil, eraser, highlighter, calculator, etc.) and a 'Help' button. On the right side of the header, it says 'John doe' and 'Grade 3 Practice Items (2009 Math SOL)' with an 'Exit' button. The main content area is white and contains a word problem: 'Quinn had 354 rings in his store. He sold 138 of these rings. Then he bought 96 more rings. What is the total number of rings he has in his store?'. Below the problem are four multiple-choice options: A 120, B 216, C 312, and D 588. At the bottom of the interface, there is a dark blue footer bar with a 'Flag for Review' button, 'Question 5 of 35 Section 1', a 'Section Review' button, and 'Previous' and 'Next' navigation buttons.

SAY You may use your scratch paper to help you decide which answer is correct. Then 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 C, 312.

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.

Pause while students read the question.

John doe
Grade3 Practice Items (2009 Math SOL) [X Exit](#)

Claudia painted a picture as shown.

Key:  = 1 foot

Which measurement is closest to the perimeter of Claudia's picture?

A 14 feet

B 12 feet

C 8 feet

D 6 feet

Flag for Review Question 6 of 35 Section 1 [Section Review](#) [Previous](#) [Next](#)

SAY Question 6 asks you to find the perimeter of the picture. Use the key to estimate the measurement of the perimeter, in feet. Click on your answer.

Pause while solve the problem and select the correct answer.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is B, 12 feet.

Do you have any questions?

Answer all questions.

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

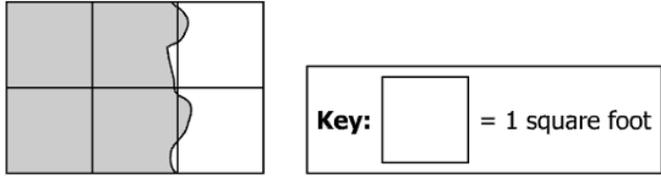
Pause.

SAY Read question 7 to yourself.

Pause while students read the question.

John doe
Grade3 Practice Items(2009 Math SOL) [Exit](#)

This model shows a rectangle that is 3 feet long and 2 feet wide.



Which is closest to the area of the shaded part of this model?

A 8 square feet
 B 6 square feet
 C 4 square feet
 D 2 square feet

[Flag for Review](#)
Question 7 of 35
Section 1
[Section Review](#)
[Previous](#)
[Next](#)

SAY Determine 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 C, 4 square feet.

Do you have any questions?

Answer all questions.

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

Pause.

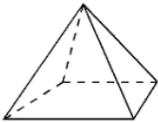
SAY Read question 8 to yourself.

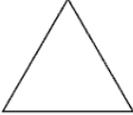
Pause while students read the question.

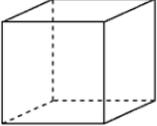
John doe
Grade3 Practice Items(2009 Math SOL) X Exit

Which object has exactly eight vertices?

A 

B 

C 

D 

Flag for Review Question 8 of 35 Section 1 Section Review Previous Next

SAY Let's determine which object has exactly eight vertices. We will use the dot tool () to count the vertices in the answer choices. Click on the dot tool in the toolbar. It is the circle found to the left of the Help icon. Now move your cursor to answer choice B and click on each vertex. A blue dot will appear where you click. (Pause.) For this answer choice, you should be placing five blue dots on the figure, so option B is not the answer to this question.

Use the dot tool if it will help you, and determine which figure has eight vertices. When you are done using the dot tool, you can click on the dot tool icon to put the tool away, or click on the pointer tool. It is important to know that the dot tool is only to be used to help solve a problem. The dot tool will never be used to answer a question. Points plotted with the dot tool are not scorable responses.

Now determine the answer, and then select it on your screen using the pointer tool.

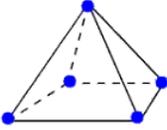
Pause while students work to find the answer to the question. It is important to make sure students know that the dot tool will never be used to answer a question. The dot tool is only to be used to help solve a problem. Points plotted with the dot tool are not scorable responses.

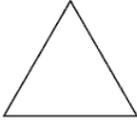
John doe
Grade 3 Practice Items (2009 Math SOL) X Exit

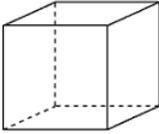
Help

Which object has exactly eight vertices?

A 

B 

C 

D 

Flag for Review Question 8 of 35 Section 1 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is D.

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 9 to yourself.

Pause while students read the question.

The screenshot shows a digital math practice interface. At the top, there is a toolbar with icons for a mouse cursor, eraser, highlighter, red X, green checkmark, pencil, and a help icon. The user's name 'John doe' and the page title 'Grade 3 Practice Items (2009 Math SOL)' are visible in the top right corner, along with an 'Exit' button. The main content area contains the question: 'Which number sentence shows the use of the identity property of addition?' with four radio button options: A $43 + 1 = 44$, B $37 + 0 = 37$, C $8 + 8 = 8 + 8$, and D $5 + 2 = 2 + 5$. At the bottom, a navigation bar includes a 'Flag for Review' button, the text 'Question 9 of 35 Section 1', a 'Section Review' button, and 'Previous' and 'Next' navigation buttons.

SAY Determine which number sentence shows the use of the identity property of addition. 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, $37+0 = 37$.

Do you have any questions?

Answer all questions.

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

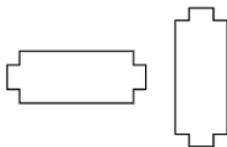
Pause.

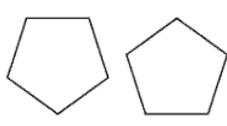
SAY Read question 10 to yourself.

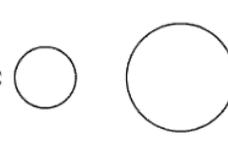
Pause while students read the question.

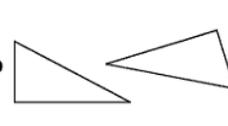
John doe
Grade 3 Practice Items (2009 Math SOL) X Exit

Which pair of figures appears to be noncongruent?

A 

B 

C 

D 

Flag for Review Question 10 of 35 Section 1 Section Review Previous Next

SAY Determine which pair of figures appears to be noncongruent. 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 C. The pair of circles is noncongruent.

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 fill-in-the-blank technology-enhanced item. The gray directions banner at the top of the screen says, "Type your answer in the box." The directions tell you how to answer the question. Always read the directions before answering the question.

The question says, "How is 'seven hundred five thousand, three' written in standard form?" Use your keyboard to enter your answer into the empty box on the screen.

Pause while students answer the question.

The screenshot shows a digital test interface. At the top, there is a toolbar with icons for navigation and editing, and a user profile for 'John doe' with 'Grade3 Practice Items(2009 Math SOL)' and an 'Exit' button. Below the toolbar, a grey bar contains the instruction: 'Directions: Type your answer in the box.' The main area of the screen displays the question: 'How is "seven hundred five thousand, three" written in standard form?' Below the question is a single-line text input box. At the bottom of the interface, there is a navigation bar with a 'Flag for Review' button, 'Question 11 of 35 Section 1', a 'Section Review' button, and 'Previous' and 'Next' buttons.

SAY How did you answer the question?

Pause for replies.

SAY You could have entered 705,003 or 705003 (without the comma). Notice that the correct answer does not need to be the same length as the box.

Remember, 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 be considered "Answered." 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 be considered "Answered" 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 a number or a comma.

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

SAY Notice that the box will only accept numbers and a comma. 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 you can use the delete key. To use the delete key, place the pointer in front of the character you wish to delete and then press the delete key, or highlight the character you wish to delete and press the delete key. Try clearing your answer and retyping it in the box.

Pause while students clear their answer and reenter it into the box.

SAY Do you have any questions about how to type your answer in the box or how to change your answer?

Answer any questions.

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

Pause.

SAY Question 12 is an example of a drag and drop technology-enhanced item. The directions say, "Click and drag the correct place value name to each box."

So, to answer this question, you will click and drag the correct place value name from the dark gray box on the right side of the screen to the correct location in the box on the left. To answer the question completely, you must drag an answer into each of the empty boxes.

If you change your mind after clicking and dragging a place value to a box, you can drag the place value back to the dark gray box and select another place value to drag into the empty box.

Now read the question and think about your answer, but do not move any of the answer choices into the boxes yet.

John doe
Grade3 Practice Items (2009 Math SOL) X Exit

Directions: Click and drag the correct place value name to each box.

Label the place value for the digits 3 and 0 in this number.

431,025

The place value for the digit 3 is

The place value for the digit 0 is

Ten thousands	Tens
Ones	Thousands
Hundred thousands	Hundreds

Flag for Review Question 12 of 35 Section 1 Section Review Previous Next

SAY Before you answer the question, 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 narrow down 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. Your pointer tool will have a green pencil next to it.

Look at the number given, 431,025. What digit is in the ones place in this number?

Pause for replies.

SAY The digit 5 is in the ones place, so you know that neither the digit three nor the digit zero is in the ones place. Use your pencil tool to cross out "Ones" in the dark gray box since this is NOT the answer for either of the empty boxes.

Pause while students cross out "Ones" in the dark gray box.

SAY Click on the pencil tool icon to put the tool away.

Pause while students put the tool away.

SAY You must be careful to consider if an answer choice is correct for either one of the empty boxes before eliminating that answer choice. If you change your mind after eliminating an answer with the pencil tool, you can use the eraser tool to remove the “X.”

Now use your pointer tool to answer the question.

Pause while students answer the question.

SAY How did you answer the question?

Pause for replies.

SAY The place value for the digit 3 is ten thousands.
The place value for the digit 0 is hundreds.

Do you have any questions about how to click and drag the answers to the correct location on the screen or how to use the pencil tool?

Answer all questions.

SAY In order for this question to be considered “Answered,” both boxes must contain a place value. If you do not click and drag a place value into each one of the boxes, the question will be considered unanswered because you did not completely answer the question.

Please note that additional information regarding the requirements for an item to be considered “Answered” 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 13 is an example of a hot spot technology-enhanced item. The directions at the top of the screen say, “Click on each part you want to shade.”

The item says, “This picture is shaded to represent one whole. Shade this picture to represent the number $3\frac{4}{6}$.” To answer this question correctly, you will need to click on the boxes below the question to shade your answer. If you change your mind and want to remove shading from a box, click on the box again. You may shade your answer now.

Pause while students answer the question.

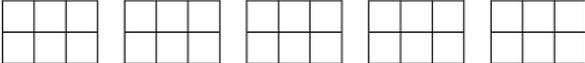
John doe
Grade3 Practice Items(2009 Math SOL) [X Exit](#)

Directions: Click on each part you want to shade.

This picture is shaded to represent one whole.



Shade this picture to represent the number $3\frac{4}{6}$.



Flag for Review Question 13 of 35 Section Review [Previous](#) [Next](#)

Section 1

SAY How did you answer the question?

Pause for replies.

SAY You could have shaded any 22 boxes.

Since you are being asked to decide how many boxes to shade, this item will be considered “Answered” once one box is selected. This is so no hint or clue is given as to how many boxes you need to shade. Do you have any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to be considered “Answered” 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 14 is an example of a graphing technology-enhanced item. The directions say, “Click on a location above each bar to show the bar height.”

The item says, “Create a bar graph to show the data in the tally chart.”

To answer this question correctly, you will click the location above each bar so the correct height is displayed. Use the tally chart on the left side of the screen to determine the correct height for each bar.

As you graph the data, if you change your mind about a bar height, you can click on another location, and the bar height will change.

Pause while students create the graph.

The screenshot shows a software interface for a math practice item. At the top, there is a toolbar with various icons and a 'Help' button. The user's name 'John doe' and the text 'Grade3 Practice Items(2009 Math SOL)' are visible in the top right corner. Below the toolbar, a grey bar contains the directions: "Directions: Click on a location above each bar to show the bar height." The main area is divided into two sections. On the left, a text prompt reads: "This tally chart shows the number of pictures four students collected for art class." Below this is a table titled "Pictures Collected":

Student	Number of Pictures
Nancy	
Bryan	
Kristen	
Ricardo	

On the right, another text prompt reads: "Create a bar graph to show the data in the tally chart." Below this is a bar graph titled "Pictures Collected". The y-axis is labeled "Number of Pictures" and ranges from 0 to 10 with major grid lines every 2 units. The x-axis is labeled "Student" and lists Nancy, Bryan, Kristen, and Ricardo. There are four bars: a blue bar for Nancy, a green bar for Bryan, an orange bar for Kristen, and a yellow bar for Ricardo. The bars are currently very short, near the zero line.

At the bottom of the interface, there is a navigation bar with a "Flag for Review" button, "Question 14 of 35 Section 1", a "Section Review" button, and "Previous" and "Next" buttons.

SAY Which bar height did you choose for each student?

Pause for replies.

SAY You should have selected the following bar heights:
Nancy – 5; the blue bar should reach halfway between intervals 4 and 6.
Bryan – 3; the green bar should reach halfway between intervals 2 and 4.
Kristen – 8; the orange bar should reach the interval labeled 8.
Ricardo – 9; the yellow bar should reach halfway between intervals 8 and 10.

Pause while students answer the item.

SAY How did you answer the question?

Pause for replies.

SAY A correct line plot will include all of the following:

- Directly above 0 – two X's
- Directly above 1 – four X's
- Directly above 2 – one X's
- Directly above 3 – zero X's
- Directly above 4 – two X's
- Directly above 5 – one X's

Since you are being asked to decide how many “X’s” are needed to create the line plot, this item will be considered “Answered once one “X” is placed above the line. This is so no hint or clue is given as to how many “X’s” you need to complete the line plot. Do you have any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to be considered “Answered” is located in Appendix B for reference.

SAY Click *Next* at the bottom of the screen to go to question 16.

The screenshot shows a digital math practice interface. At the top, there is a dark blue header bar with various icons (arrow, eraser, pencil, highlighter, calculator, ruler, compass, protractor, help) and the text "John doe", "Grade 3 Practice Items (2009 Math SOL)", and an "Exit" button. The main content area is white and contains the question: "What is 3,359 rounded to the nearest thousand?". Below the question are four radio button options: A 3,000, B 3,300, C 3,400, and D 4,000. At the bottom, there is a dark blue footer bar with a "Flag for Review" button, the text "Question 16 of 35" and "Section 1", a "Section Review" button, and "Previous" and "Next" navigation buttons.

SAY Read question 16 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, 3,000.

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 to 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 "to the nearest thousand". Then click again on the straightedge tool and then on "Tool 2" on the toolbar to put the 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 underline text?

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 dark blue header bar with various icons (arrow, eraser, pencil, highlighter, X, calculator, ruler, compass, Help) and the text "John doe" and "Grade3 Practice Items(2009 Math SOL) X Exit". The main content area is white and contains the question: "Which number will make this statement true?" followed by the inequality $\underline{\quad ? \quad} > 8,243$. Below the question are four radio button options: A 8,223, B 8,285, C 8,198, and D 8,234. At the bottom, there is a dark blue footer bar with a "Flag for Review" button, the text "Question 17 of 35 Section 1", a "Section Review" button, and "Previous" and "Next" navigation buttons.

SAY Read question 17 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, 8,285.

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
Grade3 Practice Items (2009 Math SOL) X Exit

Directions: Click and drag a symbol or number into each box.

Create a number sentence related to $27 \div 9 = 3$.

$27 = 3$

+	0	5
-	1	6
×	2	7
÷	3	8
	4	9

Flag for Review Question 18 of 35 Section Review Previous Next

Section 1

SAY Question 18 is another technology-enhanced item. The directions banner says, “Click and drag a symbol or number into each 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 symbol or number into each box.

The practice item says, “Create a number sentence related to $27 \div 9 = 3$.”

Notice that there are two dark gray boxes in this item. In the dark gray box on the left, you have operation symbols to use in your number sentence that you may drag into the empty box on the left. The numbers in the dark gray box on the right may be dragged up into the empty box on the right. You will not be able to drag the numbers into the box on the left; only the box on the right will accept the numbers. If you try to place a number or a symbol into the incorrect box, the box will reject it and send it back to the dark gray box.

SAY You may answer the item now. If you change your mind after clicking and dragging a symbol or number to a box, you can drag a symbol or number back to the dark gray box and then select another symbol or number to drag into the empty box.

Pause while students answer the item.

SAY How did you answer the item?

Pause for replies.

SAY You should have dragged the symbol \times into the first box and the number 9 into the second box to create the number sentence $27 = 3 \times 9$.

You must have created this number sentence for your answer to be correct. In order for this question to be considered “Answered,” both of the boxes must contain a dragger. Do you have any questions on how to answer the question?

Answer all questions.

Please note that additional information regarding the requirements for an item to be considered “Answered” 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
Grade3 Practice Items (2009 Math SOL) X Exit

Which correctly compares the fractions represented by the shaded regions of each circle?

A $\frac{3}{4} = \frac{3}{8}$

B $\frac{2}{3} = \frac{8}{12}$

C $\frac{3}{6} > \frac{2}{3}$

D $\frac{8}{12} > \frac{5}{6}$

Flag for Review Question 19 of 35 Section 1 Section Review Previous Next

SAY Read question 19 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, $\frac{2}{3} = \frac{8}{12}$. 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 test interface. At the top, there is a toolbar with various icons (arrow, eraser, highlighter, pencil, eraser, pencil, eraser, pencil, eraser, pencil) and a 'Help' button. The user's name 'John doe' and the test title 'Grade3 Practice Items(2009 Math SOL)' are visible in the top right corner. Below the toolbar, a grey bar contains the directions: 'Directions: Type the answer in the box.' The main area of the screen displays the question: 'What number belongs in the box to make this number sentence true?' followed by a text input box containing a blank space, followed by the equation $\div 2 = 8$. At the bottom of the screen, there is a navigation bar with a 'Flag for Review' button, the text 'Question 20 of 35 Section 1', a 'Section Review' button, and 'Previous' and 'Next' buttons.

SAY Question 20 is an example of a fill-in-the-blank item. The directions say, “Type the 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 16. 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 be considered “Answered.” Do you have any questions about how to type your answer in the box?

Answer all questions. This response box will only accept numerical characters.

Please note that additional information regarding the requirements for an item to be considered “Answered” 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 3 Practice Items (2009 Math SOL) X Exit

Which number sentence best represents this set of cherries?

A $40 - 5$

B $40 \div 5$

C $5 + 8$

D 5×40

Flag for Review Question 21 of 35 Section 1 Section Review Previous Next

SAY Read question 21 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, $40 \div 5$.

Do you have any questions?

Answer all questions.

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

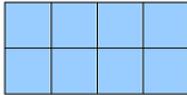
Pause.

John doe
Grade3 Practice Items(2009 Math SOL) X Exit

Help

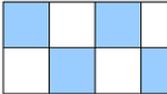
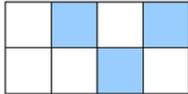
Directions: Click and drag a symbol or number into each box.

This model is shaded to represent one whole.



These two models are each shaded to represent a fraction.

Model 1 **Model 2**

What is the sum of these two fractions?

1	7	8	9	16
---	---	---	---	----

Flag for Review Question 22 of 35 Section 1 Section Review Previous Next

SAY Question 22 is another example of a drag and drop technology-enhanced item. The directions banner says, “Click and drag a number into each box.”

Read the question to yourself but don’t answer it yet. Be sure to refer to the models on the screen.

Pause while students read the question.

SAY You will click and drag your answers from the dark gray box to the correct locations to form a fraction. In order to have a complete answer, you must drag a number into each box.

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

Pause while students answer the item.

SAY How did you answer the item?

Pause for replies.

SAY You should have dragged the number 7 into the top box and the number 8 into the bottom box to create the fraction $\frac{7}{8}$.

SAY In order for this question to be considered “Answered,” both boxes must contain a number. Do you have any questions on how to answer the question?

Answer all questions.

Please note that additional information regarding the requirements for an item to be considered “Answered” 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 assessment interface. At the top, there is a toolbar with icons for a mouse cursor, eraser, highlighter, red X, green checkmark, pencil, eraser, and a help icon. The user's name 'John doe' and 'Grade3 Practice Items (2009 Math SOL)' are displayed in the top right corner, along with an 'Exit' button. Below the toolbar is a gray banner with the directions: "Directions: Click and drag the correct units of money into the box. A unit of money may be used more than once." The main content area contains the text: "Noah went to a toy store." followed by a bulleted list: "• Noah bought a toy boat for \$3.88." and "• He gave the clerk a \$5.00 bill to pay for the boat." Below this is the question: "Exactly how much change should Noah receive?" and a large empty rectangular box labeled "Noah's Change". At the bottom of the content area is a dark gray box containing various units of money: four pennies, three nickels, two dimes, two quarters, one one-dollar bill, and one five-dollar bill. The bottom navigation bar includes a "Flag for Review" button, "Question 23 of 35", "Section 1", a "Section Review" button, and "Previous" and "Next" buttons.

SAY Question 23 is another technology-enhanced item. The directions banner says, “Click and drag the correct units of money into the box. A unit of money may be used more than once.” You will click and drag your answers from the dark gray box at the bottom of the screen to the empty box.

You may answer the item now. If you change your mind after clicking and dragging money into a box, you can drag the money back to the dark gray box and then select another unit of money to drag into the empty box.

Pause while students answer the item.

SAY How did you answer the item?

Pause for replies.

SAY You should have dragged the one dollar bill, a dime, and two pennies into the box. You could also have dragged four quarters, two nickels, and two pennies into the box. The units of money you dragged into the box must equal \$1.12.

There are several combinations of units of money that bring the total inside the box to \$1.12. All units of money except for the \$5 bill may be used more than once, but there is a limit to the number of times a dragger may be used. For example, the penny may be used a total of 9 times, so it would not be possible to represent the 12 cents using only pennies.

SAY This question is “Answered” once one unit of money has been placed in the response box. This is so no hint or clue for the answer is provided.

Please note that additional information regarding the requirements for an item to be considered “Answered” is located in Appendix B for reference.

SAY Take a minute and move all of the money you used to show the answer back to the dark gray box so that the box labeled “Noah’s Change” is empty again.

Pause while students clear the response box.

SAY Let’s talk about the different ways you could use the money to show the 12 cents that Noah should receive. One way would be to use a dime and two pennies. Use the money draggers now to drag one dime and two pennies to the response box.

Pause while students move one dime and two pennies to the response box.

SAY Please move all of the money back to the dark gray box again.

Pause while students clear the response bay.

SAY Next, let’s use only nickels and pennies to show 12 cents. How could you show 12 cents using only nickels and pennies? Please represent 12 cents using only nickels and pennies now.

Pause while students move nickels and pennies to the response box.

SAY What combination of coins did you use?

Pause for responses.

SAY You could use two nickels and two pennies, or you could use one nickel and seven pennies. Either one of these combinations would have the value of 12 cents.

Please move all of the money back to the dark gray box again.

Pause while students clear the response bay.

SAY Another way to show 12 cents would be with 12 pennies. Try this now.

Pause while students move pennies to the response box. Only 9 pennies are available, so students will not be able to move 12 pennies to the empty box.

SAY You will notice that you don’t have enough pennies available to make the 12 cents using only pennies. So, if you needed to show 12 cents and had planned to do this with 12 pennies, you would have to figure out a way to use a combination of nickels and pennies or dimes and pennies to show this amount.

On the SOL test, you may have some items like this one that require you to show an amount of money, and there may be several different combinations that would be correct. If you run out of the type of coins that you planned to use in your answer, you will have to figure out a different way to show that same amount using another combination of coins.

Do you have any questions on how to answer the question?

Answer all questions.

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

Pause.

The screenshot shows a digital test interface. At the top, there is a toolbar with icons for a mouse cursor, eraser, highlighter, red X, green checkmark, pencil, and a help icon. The user's name 'John doe' and the text 'Grade3 Practice Items (2009 Math SOL)' are visible in the top right corner, along with an 'X Exit' button. The main content area contains the following text: 'Use your centimeter ruler to answer this question. A picture of a sailboat is shown. All sides of the sail are the same length.' Below this text is a diagram of a sailboat's sail, which is an equilateral triangle with the word 'Sail' written inside. Underneath the sail is a simple representation of the boat's hull. Below the diagram, the question asks: 'Which is closest to the perimeter of the sail on this sailboat?' and provides four multiple-choice options: A 21 centimeters, B 18 centimeters, C 7 centimeters, and D 6 centimeters. At the bottom of the interface, there is a navigation bar with a 'Flag for Review' button, the text 'Question 24 of 35 Section 1', a 'Section Review' button, and 'Previous' and 'Next' 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 B, 18 centimeters.

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 3 Practice Items (2009 Math SOL) X Exit

What are the area and perimeter of the shaded figure on this grid?

A Area of 24 square units and perimeter of 24 units

B Area of 21 square units and perimeter of 21 units

C Area of 24 square units and perimeter of 21 units

D Area of 21 square units and perimeter of 24 units

Flag for Review Question 25 of 35 Section 1 Section Review Previous Next

SAY Read question 25 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, Area of 21 square units and perimeter of 24 units. 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
Grade3 Practice Items(2009 Math SOL) X Exit

Help

Which is closest to the time shown on this clock?



A 4:08

B 4:40

C 8:04

D 8:20

Flag for Review Question 26 of 35 Section 1 Section Review Previous Next

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 D, 8:20.

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 dark blue header bar with various icons (arrow, eraser, pencil, red X, calculator, ruler, compass, and a red lifebuoy labeled 'Help') on the left. On the right side of the header, the text 'John doe' and 'Grade3 Practice Items(2009 Math SOL)' is visible, along with an 'X Exit' button. The main content area is white and contains the following text: 'Allen arrived at his friend's house at 3:45 P.M. He left 2 hours later. At what time did Allen leave his friend's house?'. Below this text are four multiple-choice options, each with a radio button: 'A 2:45 P.M.', 'B 3:45 P.M.', 'C 4:45 P.M.', and 'D 5:45 P.M.'. At the bottom of the interface is a dark blue footer bar. On the left, there is a 'Flag for Review' button with a yellow flag icon. In the center, it says 'Question 27 of 35' and 'Section 1'. On the right, there is a 'Section Review' button with a grid icon, and two navigation buttons: 'Previous' with a left arrow and 'Next' with a right arrow.

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, 5:45 P.M..

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
Grade3 Practice Items (2009 Math SOL) X Exit

Directions: Click on the correct answer.

Using a thermometer, Jana determined that the temperature outside was 56 degrees Fahrenheit. Show 56°F on this thermometer.

Flag for Review Question 28 of 35 Section 1 Section Review Previous Next

SAY The directions say, “Click on the correct answer.”

The item says, “Using a thermometer, Jana determined that the temperature outside was 56 degrees Fahrenheit. Show 56°F on this thermometer.”

In order to get the item correct, you must click on a location on the thermometer. If you change your mind, you can click on another location, and the bar height will change. Now go ahead and show the temperature on the thermometer.

Pause while students select their answers. Assist students as necessary.

SAY How did you show the temperature 56°F on the thermometer?

Pause for replies.

SAY Since the intervals for this thermometer are increments of two degrees, you should have raised the red bar to the third mark above the line representing 50.

Do you have any questions about the answer?

Pause to answer questions.

Please note that additional information regarding the requirements for an item to be considered “Answered” 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 dark blue header bar with various icons (arrow, eraser, pencil, highlighter, X, calculator, ruler, compass) and a 'Help' button. On the right side of the header, it says 'John doe' and 'Grade3 Practice Items(2009 Math SOL)' with an 'X Exit' button. The main content area is white and contains the following text: 'Here are some clues about a figure.' followed by two bullet points: '• It has exactly 4 sides.' and '• It has exactly 4 vertices.' Below this, it asks 'Which could be the figure described by these clues?' and lists four options: 'A Rectangular prism', 'B Triangle', 'C Square', and 'D Cone'. At the bottom of the interface, there is a dark blue footer bar with a 'Flag for Review' button, 'Question 29 of 35 Section 1', a 'Section Review' button, and 'Previous' and 'Next' navigation buttons.

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 C, Square.

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
Grade3 Practice Items(2009 Math SOL) X Exit

Directions: Click and drag an answer into each box.

Four students collected books for a school project. This list shows the number of books each student collected.

- Jacob — 8
- Luke — 3
- Olivia — 19
- Tori — 12

Use the information from the list to complete the graph.

Books Collected

Student	Number of Books
Olivia	19
Luke	3
Jacob	8
Tori	12

Question 30 of 35
Section 1

Flag for Review Section Review Previous Next

SAY Question 30 is an example of a drag and drop technology-enhanced item. The directions banner says, “Click and drag an answer into each 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 an answer into each box.

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

Pause while students answer the item.

SAY How did you answer the item?

Pause for replies.

SAY From left to right, the bars should be labeled in this order: Olivia, Luke, Jacob, and Tori.

In order for this question to be considered “Answered,” you must have dragged a name into each box. Do you have any questions on how to answer the question?

Answer all questions.

Please note that additional information regarding the requirements for an item to be considered “Answered” 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 math practice item interface. At the top, there is a toolbar with various icons and a 'Help' button. The user's name 'John doe' and the page title 'Grade 3 Practice Items (2009 Math SOL)' are visible in the top right corner. The main content area contains the following text and figure:

This line plot shows the number of envelopes Tammie received in the mail on each of ten days.

Number of Envelopes in the Mail

Number of Envelopes	Number of Days (X's)
3	2
4	2
5	3
6	3
7	1
8	1

Each X represents 1 day.

What is the total number of days on which Tammie received at least 6 envelopes in the mail?

- A 2
- B 3
- C 5
- D 7

At the bottom of the interface, there is a navigation bar with the following elements: 'Flag for Review', 'Question 31 of 35 Section 1', 'Section Review', 'Previous', and 'Next'.

SAY Read question 31 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, 5.

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 dark blue header bar with various icons (arrow, eraser, pencil, highlighter, X, eraser, pencil, eraser, eraser) and the text "John doe", "Grade 3 Practice Items (2009 Math SOL)", and "Exit". Below the header, the main content area is white. It starts with the instruction "Look at this spinner." followed by a circular spinner divided into six equal sectors. The sectors are labeled with numbers: the top-left sector is '1', the top-right is '2', the middle-left is '3', the middle-right is '1', the bottom-left is '1', and the bottom-right is '3'. An arrow points downwards from the center of the spinner. Below the spinner, the question text reads: "The arrow on the spinner will be spun one time. Which best describes the chance that the arrow will land on a section labeled 3 ?". There are four radio button options: A Certain, B Likely, but not certain, C Unlikely, but not impossible, and D Impossible. At the bottom of the interface is a dark blue footer bar containing "Flag for Review", "Question 32 of 35 Section 1", "Section Review", "Previous", and "Next" buttons.

SAY Read question 32 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, Unlikely, but not impossible.

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 chart shows the shape and color choices for stickers.

Shape	Color
	Blue Green Red

Which shows all of the possible outcomes using one shape and one color for stickers?

A
Blue Green Red Blue Green Red

B
Blue Blue Green Green Red Red

C
Blue Blue Green Green Red

D
Blue Green Red

Question 33 of 35
Section 1

Section Review Previous Next

SAY Read question 33 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, Blue checkmark, Green checkmark, Red checkmark, Blue star, Green star, Red star.

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 pattern repeats after the first five cards. Christy removed three cards from the pattern as shown.

P W O Y R P W O Y R P W _ _ _ P W

Which ordered set of cards did Christy remove?

A P W O

B W O Y

C O Y R

D R P W

Question 34 of 35
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 C, the ordered set of cards O Y R.

Do you have any questions?

Answer all questions.

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

Pause.

John doe
Grade3 Practice Items(2009 Math SOL) X Exit

Which of these belongs in the box to show the use of the commutative property of addition?

= 35 + 5

A 5 + 35

B 35 + 0

C 5 × 35

D 35 × 1

Flag for Review Question 35 of 35 Section 1 Section Review Previous Next

SAY Read question 35 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, 5 + 35 .

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.

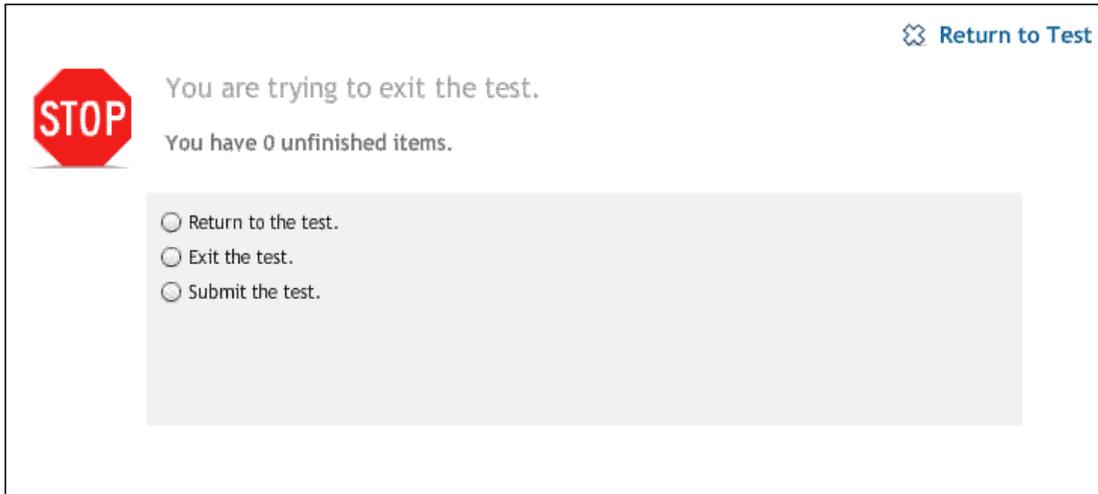
SAY You have completed the practice items. Are there any questions on anything we have reviewed today?

Answer all questions.

Since the Grade 3 Mathematics CAT does not have a Section Review screen, the remainder of these instructions will close TestNav on the student’s workstation without discussion of the Section Review screen. Please have students use the [Elementary School Mathematics CAT Training Test](#) to experience how they will exit TestNav from the CAT.

SAY Now click the *Exit* button in the top right of the screen. (Pause.)

You will see a stop sign with three choices.



SAY Select the third choice, “*Submit the test.*” A green box will appear that says, “*Final Submit.*” Click on this box. Once you click on this box, another box will appear that says, “*Close TestNav.*” Click on this box.

Students will not see this screen in the CAT because a completed CAT is submitted automatically for a student. However, “Close TestNav” will appear on their screen after they have finished the test so they will know it has been submitted.

SAY This completes our review of the Grade 3 SOL Mathematics Practice items.

Thank you for reviewing the Grade 3 Mathematics Practice Items with your students.

APPENDIX A

Answers to Grade 3 Mathematics Practice Items

Question 1

The correct answer is D, 2×3 .

Question 2

The correct answer is A, $2\frac{1}{2}$ inches.

Question 3

The correct answer is C, $1\frac{2}{5}$.

Question 4

The correct answer is A, 3 hours.

Question 5

The correct answer is C, 312.

Question 6

The correct answer is B, 12 feet.

Question 7

The correct answer is C, 4 square feet.

Question 8

The correct answer is D.

Question 9

The correct answer is B, $37 + 0 = 37$.

Question 10

The correct answer is C. The pair of circles is noncongruent.

Question 11

The correct answer is 705,003 or 705003 (without the comma).

Question 12

The place value for the digit 3 is ten thousands.

The place value for the digit 0 is hundreds.

Question 13

Shade any 22 boxes.

Question 14

The bar heights should be:

Nancy – 5; the blue bar should reach halfway between intervals 4 and 6.

Bryan – 3; the green bar should reach halfway between intervals 2 and 4.

Kristen – 8; the orange bar should reach the interval labeled 8.

Ricardo – 9; the yellow bar should reach halfway between intervals 8 and 10.

APPENDIX A

Answers to Grade 3 Mathematics Practice Items (Continued)

Question 15

A correct line plot will include all of the following:

Directly above 0 – 2 X

Directly above 1 – 4 X

Directly above 2 – 1 X

Directly above 3 – 0 X

Directly above 4 – 2 X

Directly above 5 – 1 X

Question 16

The correct answer is A, 3,000.

Question 17

The correct answer is B, 8,285.

Question 18

You should have dragged the symbol X into the first box, and the number 9 into the second box.

Question 19

The correct answer is B, $\frac{2}{3} = \frac{8}{12}$.

Question 20

The correct answer is 16.

Question 21

The correct answer is B, $40 \div 5$.

Question 22

The correct answer is the number 7 into the top box and the number 8 into the bottom box to create the fraction $\frac{7}{8}$.

Question 23

Any combination with a value of \$1.12 is a correct answer.

Question 24

The correct answer is B, 18 centimeters.

Question 25

The correct answer is D, Area of 21 square units and perimeter of 24 units.

Question 26

The correct answer is D, 8:20.

Question 27

The correct answer is D, 5:45 P.M..

Question 28

The bar indicating the temperature should be raised to the third mark above the 50, since the interval for the scale is two degrees.

APPENDIX A

Answers to Grade 3 Mathematics Practice Items (Continued)

Question 29

The correct answer is C, Square.

Question 30

From left to right the bars should be labeled in this order: Olivia, Luke, Jacob, and Tori.

Question 31

The correct answer is C, 5.

Question 32

The correct answer is C, Unlikely, but not impossible.

Question 33

The correct answer is A, Blue checkmark, Green checkmark, Red checkmark, Blue star, Green star, Red star.

Question 34

The correct answer is C, the ordered set of cards *O Y R*.

Question 35

The correct answer is A, $5 + 35$.

APPENDIX B

An Overview of when a Technology-Enhanced Item (TEI) is Considered “Answered” by the Student

On the Computer Adaptive Test (CAT), the student cannot proceed to the next question until the current question is considered “Answered.” When an item is considered “Answered” the *Next* button on the bottom toolbar will be active. Once the *Next* button is selected, the student will proceed to the next question and will not be able to return to any previously answered question.

These criteria will be used to determine when a TEI is considered “Answered.”

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 be considered answered. If a student enters an answer and then completely removes that answer from the fill-in-the-blank box, the item will be considered unanswered.

Histogram or Bar Graph Items

For all histogram or bar graph items, when a student raises any bar, the item will be considered answered. If the student moves all bars back down to the original heights, the item will be considered unanswered.

Hot Spot Items

When the number of correct responses is indicated in the directions or in the item itself, the item will be considered answered only when the student selects that number of hot spots. For example, if the student is directed to select three answers, the item will be considered unanswered if the student selects one or two answers. It will only be considered 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 be considered as answered once the student selects one answer. For example, if the student is required to “Select all the correct answers,” the item will be considered 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.

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 be considered answered 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 be considered answered 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 not be considered answered.

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 as to when it is considered answered. For items with a specified number of bays, the item will be considered as answered once the student uses that number of dragers. For example, if there are three bays and it is intended for a dragger to be placed into each bay, then the item will be considered 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 be considered as answered 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, the item will be considered as answered once the student places one dragger in a bay.