

Practice Item Guide

Virginia Standards of Learning

Geometry

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Pearson

Table of Contents

OVERVIEW	3
SYSTEM REQUIREMENTS FOR TESTNAV	4
TECHNOLOGY-ENHANCED ITEM (TEI) TYPES.....	5
Drag and Drop	5
Hot Spot.....	5
Bar Graph or Histogram	5
Fill-in-the-Blank.....	6
OPENING THE VIRGINIA SOL MATHEMATICS PRACTICE ITEMS.....	7
MATERIALS NEEDED FOR COMPLETING VIRGINIA SOL MATHEMATICS PRACTICE ITEMS	8
ONLINE TOOLS AVAILABLE ON THE VIRGINIA SOL MATH PRACTICE ITEMS	8
SPECIFIC DIRECTIONS FOR THE SOL GEOMETRY PRACTICE ITEMS.....	9
Introduction.....	9
APPENDIX A	52
APPENDIX B	55

OVERVIEW

The practice items available in the Virginia SOL Geometry practice tool provide examples of the new content and increased rigor represented by the 2009 SOL. Additionally, these items illustrate the new technology-enhanced item (TEI) types. These practice items do not cover all the Geometry 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 Geometry. 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 Geometry test. The directions in the guide will also lead students through practice with the online tools, and will familiarize students with how to navigate through the test, and 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	10/31/2012	Additional practice items added to existing set. Various changes throughout guide regarding how TEI appear on the Section Review screen. Updated directions and screen shots for exiting TestNav. Added Appendix B.

SYSTEM REQUIREMENTS FOR TESTNAV

The minimum hardware requirements for all workstations used to access TestNav are available at <http://www.pearsonlinetesting.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 Geometry will introduce three of the TEI types.

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.

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 correctly answer the item.
- 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, the testing software used in Virginia, 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 light 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.

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.

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.

OPENING THE VIRGINIA SOL MATHEMATICS PRACTICE ITEMS

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

MATERIALS NEEDED FOR COMPLETING VIRGINIA SOL MATHEMATICS PRACTICE ITEMS

Scratch paper, pencil, and graphing calculator

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 tool can be used to respond to the questions.

Tool Icon	Description
	Pointer – Use the pointer to answer 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 on multiple-choice questions to mark choices 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.
	Compass – Use the compass to draw circles or arcs on graphics.
	Exhibit – Click the exhibit icon to view the formula sheet.
	Help – Use the help tool to display information about a specific tool on the top toolbar.

SPECIFIC DIRECTIONS FOR THE SOL GEOMETRY PRACTICE ITEMS

Introduction

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

SAY Today you will be working on some Geometry practice items for the SOL test. There are 31 questions that will show you some of the types of test items that will be administered as part of the new End-of-Course Geometry assessment. Some questions are multiple-choice and others are technology-enhanced items. Technology-enhanced items require you to 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 for these practice items. 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 scored, but I will tell you the correct answer for each item.

Are there 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 question 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.

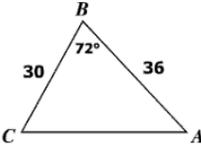
The Help tool has information about the tools. If you would like your students to explore the Help tool, you can have them do this at the end of the practice items, after they have been exposed to the tools while working these items.

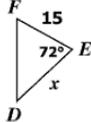
SAY Remember that the tools at the top of the screen are there to help you solve a problem, but only the pointer tool can be used to mark an answer to a question.

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

SAMPLE A

For what value of x is $\triangle ABC \sim \triangle DEF$?





A 18

B 21

C 25

D 72

Flag for Review Sample Section 1 Section Review Previous Next

SAY For any of the practice items or items on the actual SOL test, you may use scratch paper and your calculator to solve for the answer. 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 A, 18.

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.”

Make sure students see the directions box at the top of the screen.

SAY This sample question is an example of a fill-in-the-blank technology-enhanced item. For a fill-in-the-blank item, you will type your answer in the empty box on the screen using the keyboard.

Now read the question to yourself.

Pause.

SAY Before you answer this 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. The icon is a line with points on either end. 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 “total number of lines of symmetry” in the question. Next, use the straightedge to draw the lines of symmetry for this figure. Click again on the straightedge tool on the toolbar to put the tool away, and then type the answer to the question in the empty box.

Pause while students use the tool and answer the question. Assist students as necessary.

SAY What answer did you type in the box?

Pause for replies.

SAY The correct answer is 2. Notice the correct answer 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, the question will show as “Answered” on the Section Review screen.

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

Answer all questions.

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 31.” Read the question to yourself.

Pause while students read the first question.

A company makes two similar cylindrical containers. The total surface area of the smaller container is 0.81 times that of the larger container. The height of the larger container is 60 centimeters. What is the height of the smaller container?

A 54 cm

B 48.6 cm

C 24.3 cm

D 21 cm

SAY This item requires you to find the height of a cylindrical container. For items where you may need a formula to solve the problem, you should refer to the exhibit tool located in the toolbar to find the formula sheet.

Let's take a moment to locate the formula sheet. Click on the exhibit tool () and the formula sheet will appear inside a window. You can resize the window by dragging the right corner of the window. You can use the scroll bar on the right side of the formula sheet window to view all of the formulas. After you write the formula you need on your scratch paper, click on the exhibit tool to put the formula sheet away.

Now, determine the answer and make your selection.

Which answer did you choose?

Pause for replies.

SAY The correct answer is option A, 54 cm. Do you have any questions about the answer or about using the formula sheet?

Answer all questions.

SAY Click *Next* at the bottom of the screen to go to question 2.

Pause.

SAY Read the question to yourself and select the correct answer.

Pause while students solve the problem and select an answer.

Which construction represents a correct first step in constructing a line segment perpendicular to \overline{JK} through point P ?

A

B

C

D

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

Flag for Review Question 2 of 31 Section 1 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY You should have chosen B. Are there 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 words. To use this tool, click the icon that looks like a picture of a yellow highlighter



(). Clicking the highlighter tool will change your pointer tool to an arrow with a highlighter next to it.

Practice using the highlighter by highlighting the question, "Which construction represents a correct first step in constructing a line segment perpendicular to line segment JK through point P ?" Then click again on the highlighter tool on the toolbar to put the tool away.

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

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

Answer all questions.

SAY Click *Next* at the bottom of the screen to go to question 3.

Pause. Check to see that students are on the correct question.

SAY Read question 3 to yourself.

Pause.

SAY Before you answer this question; let's practice using the compass tool. Click on the compass icon () in the toolbar at the top of your screen, and a compass will appear.

To move the compass without drawing, click and drag the circle with the red crosshair.

To resize and rotate the compass without drawing, click and drag the head of the pencil, which is in the shape of a hexagon.

To lock the compass, click on the padlock icon in the center of the compass arm. Clicking the padlock again will unlock it, allowing you to change the drawing radius.

To draw a circle or an arc, click and drag the tip of the pencil. A pencil icon will appear when you roll your mouse over this control.

Now, take a minute and use your compass to draw a circle, and then change the drawing radius and draw an arc. You may put the compass away when you have finished by clicking on the compass icon in the toolbar.

Also practice using the eraser tool () on the toolbar. The eraser tool icon looks like a pink eraser. When you click on this icon your pointer will have a pink eraser next to it. Click on a marking you just made with the compass to erase it. When you are done with the eraser tool, click on the icon again to put it away.

Pause while students practice with the compass and eraser tool.

SAY Now answer question 3. You may use the compass and eraser tools as you are answering this question.

Pause while students find the answer.

SAY Which answer did you choose?

Pause for replies.

SAY The correct answer is C.

Are there any questions?

Answer all questions.

SAY Click *Next* at the bottom of the screen to go to question 4.

Pause.

SAY Before you read 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, you would click the choices you believe are not correct. Practice putting a red X over choices A and B. Then click on 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 the red X on answer choices A and B.

Pause while students practice using this tool.

Given: Three concentric circles with the center O

$\overline{KL} \cong \overline{LN} \cong \overline{NO}$
 $KP = 42$ inches

Which is closest to the area of the shaded region?

A 231 sq in.
 B 308 sq in.
 C 539 sq in.
 D 616 sq in.

Question 4 of 31
 Section 1

Section Review Previous Next

SAY Click on the eraser tool icon to put it away. Now read the first question, use the eliminator to eliminate choices you do not wish to consider, and then click on your answer.

Pause while students work to eliminate choices and determine the answer to the question.

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected D, 616 square inches.

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 5 to yourself. Then take a moment to answer the question. You may use any of the tools we have practiced as you work to find the answer.

Pause while students answer the question.

A cylinder has a volume of 300π cubic centimeters and a base with a circumference of 10π centimeters. What is the height of the cylinder?

A 30 cm

B 15 cm

C 12 cm

D 3 cm

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected C, 12 cm.

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 Question 6 is an example of a technology-enhanced graphing item. The directions banner says, “Click on the grid to plot the point you want to select. You must select a point other than point P .”

To answer this question, you will place your pointer tool on the grid and click the location of the point you want to select. A red point will appear on the grid to mark your selection. If you change your mind about the location of the point, you may click on the point again with your pointer and the point will disappear, or you may use the eraser tool to remove it.

Now, read question 6 to yourself and answer the question.

Pause while students read and answer the question.

John doe
Geometry Practice Items (2009 Math SOL) Exit

Directions: Click on the grid to plot the point you want to select. You must select a point other than point P .

Line l contains the points $(-4, 7)$ and $(5, -8)$.

Plot a point other than point P with integral coordinates that lies on a line that is parallel to l and passes through point P .

$P(3, 4)$

Question 6 of 31
Section 1

Section Review

Previous Next

SAY What are the coordinates for the point you plotted on the grid?

Pause for replies.

SAY There is more than one correct solution for this question. Any one of the following points is a correct response: $(6, -1)$, $(9, -6)$, or $(0, 9)$.

SAY Since this question indicates that one point must be plotted, this question will appear as “Answered” on the Section Review screen once one answer has been selected. If the number of answers is not indicated in the question or directions, and you have to decide how many correct answers there are, then the Section Review screen will show the item as “Answered” once you select one answer. This is so no hint or clue is given as to how many correct answers there are.

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 Before we go to the next question, let’s discuss the dot tool. Look at the toolbar at the top of the screen. Locate the dot tool () that is directly to the left of the exhibit window. You can use this tool to place dots on the screen if using this tool would help you work through a problem. However, it is very important to note that you cannot use the dot tool to indicate an answer to any item.

If an item requires that a point or points be plotted on a number line or coordinate plane to answer a question, only the pointer tool can be used to plot the points. On the SOL test, points plotted with the dot tool will not be scored.

To show you how this works, please use the eraser tool to remove the points you selected a moment ago. (Pause.) Now, click on the dot tool in the toolbar, and then use the dot tool to place a dot on the grid at $(6, -1)$. (Pause.) Notice that this dot is large blue and looks different than the points you plotted earlier with the pointer tool. These large blue dots can never be used to indicate an answer. Now click on the dot tool again to put the tool away. (Pause.)

Let’s move to the Section Review by clicking on the Section Review button at the bottom of your screen. (Pause.) Scroll down to question 6, which is the coordinate grid item we are discussing now. (Pause.) The screen should indicate that question 6 is “Unanswered,” even though there is a dot on the grid. If you make a mistake during an actual SOL test and use the dot tool to plot a point instead of using the pointer tool to indicate your answer, the Section Review screen will remind you to return to that item and answer it. During testing, the Examiner will not be able to assist or remind you about how the tools work, so it is important that you understand this before testing.

We will discuss the Section Review screen and how it works in more detail when we reach the end of the practice items. Now, click on question 6 in the left column of the Section review screen to return to that item. (Pause.)

Take a moment to use the eraser tool to remove the dot, and then use the pointer tool to plot the ordered pair $(6, -1)$.

Pause while students remove the dot and plot points with the pointer tool. Assist as necessary.

SAY To summarize, you must be very careful on the SOL test not to use the dot tool to answer a question. You must only use the pointer tool to answer the item. For a number line or coordinate plane item that requires you to plot a point or points to answer the question, if you plot points with the dot tool and not with the pointer tool, the item will show as “Unanswered” on the Section Review screen, as we have just seen.

Do you have any questions about the difference between correctly plotting your answer using the pointer tool and using the dot tool?

Answer all questions. Make sure that students understand that the dot tool cannot be used to answer a question. An item will show as unanswered on the Section Review screen if the student used the dot tool, rather than the pointer tool, to answer the question.

SAY Click *Next* at the bottom of the screen to go to question 7.

Pause.

SAY Question 7 is another fill-in-the-blank item. Read the question to yourself and find the solution.

Pause while students read and solve the problem.

Directions: Type your answer in the box.

In circle O , $m\angle SOT = 68^\circ$.

What is $m\angle SRT$?

$m\angle SRT =$ $^\circ$

Question 7 of 31
Section 1

Flag for Review Section Review Previous Next

SAY How did you answer the question?

Pause for replies.

SAY The measure of angle *SRT* is 34° .

Do you have any questions?

Answer all questions. Please note 34.0 would also be acceptable since the decimal is an allowable character.

SAY For questions that are fill-in-the-blank, once any character is entered into 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 any 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 Notice the correct answer does not need to be the same length as the box. Try entering other characters into the box, such as letters, spaces, or other symbols.

Pause while students try to enter other characters. In this item, they will not be able to enter any characters other than numbers (0-9) and a decimal (period).

SAY This answer box will only accept numbers and a decimal. 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 their answer.

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 Earlier we went to the Section Review screen. 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, as well as those you have flagged for review. 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 question 8.

Pause.

SAY Question 8 is another graphing technology-enhanced item where two points are required to completely answer the item. Read the directions and the item to yourself and then plot the two points.

Pause while students read and answer the item.

Directions: Click on the grid to plot the points you want to select.

Circle O is defined by the equation $x^2 + (y - 2)^2 = 25$. Plot the center of circle O and one point with integral coordinates that lies on circle O .

The grid shows the x-axis and y-axis both ranging from -9 to 9. The origin (0,0) is labeled. The grid lines are spaced at 1-unit intervals.

Question 8 of 31
Section 1

Flag for Review Section Review Previous Next

SAY This item has two parts. The first part required that you plot the center of Circle O . What is the location of the center of Circle O ?

Pause for replies.

SAY The center of Circle O is located at $(0, 2)$. The second part requires you to plot a point that lies on Circle O . What are the coordinates for the point you plotted?

Pause for replies.

SAY Any of these points with integral coordinates lie on Circle O and would be correct: $(0, -3)$, $(0, 7)$, $(5, 2)$, $(-5, 2)$, $(4, 5)$, $(-4, 5)$, $(4, -1)$, $(-4, -1)$, $(3, 6)$, $(-3, 6)$, $(3, -2)$, or $(-3, -2)$.

It is important to note that two points are required to completely answer this item. If you only plotted one point, the question will show as “Unanswered” on the Section Review screen. You must have used the pointer tool and NOT the dot tool to select the answers. If you had plotted these points using the dot tool, this question would appear as “Unanswered” on the Section Review screen.

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 go to question 9.

Pause.

SAY Question 9 is an example of a hot spot technology-enhanced item. The gray directions banner at the top of the screen says, “Click on the two objects you want to select.”

To answer the item correctly, you will use your pointer tool to select two objects that answer the question.

Before you answer this question, let’s practice using the pencil tool to eliminate the answer choices you do not wish to consider. Click the icon on the toolbar that

looks like a green pencil (). Draw an “x” over one of the cylinders. Then put the pencil tool away by clicking on the icon again. Since this is a technology-enhanced item, you cannot use the eliminator tool to eliminate your answer choices. (Pause.)

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

When you are done with the eraser tool, click on the eraser icon again to put the tool away. (Pause.)

Now read the question and determine the correct answer or answers. You may use the pencil tool to eliminate answer choices, if that will help you answer the item.

Pause while students answer the question.

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

Directions: Click on the two objects you want to select.

Two cylinders, a sphere, and a cone are shown. Select the two objects with the same volume.

Flag for Review Question 9 of 31 Section 1 Section Review Previous Next

SAY Which two objects did you select?

Pause for replies.

SAY You should have selected the cone and the sphere. Do you have any questions about the answer or about using the pencil tool?

Answer all questions.

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

Since the number of correct answers was indicated in the question, this item will show as “Unanswered” on the Section Review screen if only one answer is selected.

Please make sure students understand this concept, as a traditional multiple-choice question only requires one answer. 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 The gray directions banner at the top of the screen says, “Click and drag each selected number to the correct box.” The item says, “The ratio of the volume of two spheres is 8:27. What is the ratio of the lengths of the radii of these two spheres?”

To answer the item, you need to click and drag numbers from the dark gray box to the empty boxes on the screen to form the ratio. If you change your mind about a number you have selected, you can click and drag that number back to the dark gray box. (Pause.)

Now, find a solution and answer the question.

Pause while students solve and answer the problem.

The screenshot shows a digital interface for a math problem. At the top, there is a toolbar with various icons for interaction. Below the toolbar is a gray banner with the text: "Directions: Click and drag each selected number to the correct box." The main content area contains the question: "The ratio of the volume of two spheres is 8:27. What is the ratio of the lengths of the radii of these two spheres?" Below the question is a ratio input field consisting of two empty boxes separated by a colon. At the bottom of the main area is a dark gray box containing a list of numbers: 1, 2, 3, 4, 6, 8, 9, 13, 19, 27. The bottom of the interface features a navigation bar with a "Flag for Review" button, "Question 10 of 31 Section 1", a "Section Review" button, and "Previous" and "Next" buttons.

SAY How did you answer the question?

Pause for replies.

SAY The ratio is 2:3 or 3:2. Remember, for this item to be completely answered, you must have numbers in both boxes. If you only placed one number in the ratio, this question would show as “Unanswered” on the Section Review screen.

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.

SAY Read the directions banner and question 11 to yourself, then complete the proof.

Pause while students read and answer the question.

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

Select the reasons for the last three statements of this proof.
 Given: $\angle QSR \cong \angle TRS$; $\overline{PR} \cong \overline{PS}$

Prove: $\triangle QSR \cong \triangle TRS$

Statements	Reasons
1. $\overline{PR} \cong \overline{PS}$ $\angle QSR \cong \angle TRS$	1. Given
2. $\angle TSR \cong \angle QRS$	2. <input type="text"/>
3. $\overline{SR} \cong \overline{RS}$	3. <input type="text"/>
4. $\triangle QSR \cong \triangle TRS$	4. <input type="text"/>

Options

- Base angles of an isosceles triangle are congruent
- Corresponding parts of congruent triangles are congruent
- Reflexive property
- Angle-Side-Angle (ASA) Postulate
- Side-Angle-Side (SAS) Postulate

Question 11 of 31
 Section 1

SAY Which property did you choose for each statement given?

Pause for replies.

SAY For statement 2, the correct reason is: **Base angles of an isosceles triangle are congruent.** For statement 3, the correct reason is: **Reflexive property.** For statement 4, the correct reason is: **Angle-Side-Angle (ASA) Postulate.**

You must have selected and placed each of these three properties in the correct location within the proof for your answer to be correct.

In order for this question to show as “Answered” on the Section Review screen, each of the three boxes must contain a phrase.

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.

SAY Read question 12 to yourself, then answer the question.

Pause while students read and answer the question.

The screenshot shows a digital testing interface. At the top, there is a toolbar with icons for a mouse, eraser, highlighter, delete, calculator, ruler, compass, protractor, and help. The user's name 'John doe' and the title 'Geometry Practice Items(2009 Math SOL)' are visible in the top right. The main content area displays the following text:

Given: Circle W
 $W(-4, 6)$
 Radius = 10 units

Which point lies on circle W ?

Four radio button options are listed:

- A (0, 4)
- B (2, 10)
- C (4, 0)
- D (6, 16)

At the bottom, there is a navigation bar with a 'Flag for Review' button, 'Question 12 of 31 Section 1', a 'Section Review' button, and 'Previous' and 'Next' buttons.

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected C, the ordered pair (4, 0).

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 13 to yourself, then answer the question.

Pause while students read and answer the question.

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

What value of x makes $\triangle STW \cong \triangle XYZ$?

$\triangle STW$ side lengths: $ST = 3x - 1$, $TW = 2x + 1$, $SW = 3x + 1$

$\triangle XYZ$ side lengths: $YZ = x + 5$, $ZX = 4x - 3$, $YX = 4x - 5$

A 2

B 3

C 4

D 6

Flag for Review Question 13 of 31 Section 1 [Section Review](#) [Previous](#) [Next](#)

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected C, 4.

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.

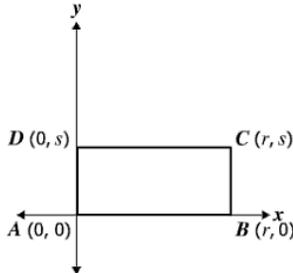
Pause.

SAY Read question 14 to yourself, then answer the question.

Pause while students read and answer the question.

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

Given: Quadrilateral $ABCD$



Which expression proves that $ABCD$ is a rectangle?

A The length of each diagonal is $\sqrt{r^2 + s^2}$.

B The common midpoint of the diagonals is $\left(\frac{r}{2}, \frac{s}{2}\right)$.

C The slope of \overline{AC} is $\frac{s}{r}$ and the slope of \overline{BD} is $-\frac{s}{r}$.

D The length of both \overline{AB} and \overline{CD} is r and the length of both \overline{AD} and \overline{BC} is s .

Flag for Review Question 14 of 31 Section 1 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected A, The length of each diagonal is $\sqrt{r^2 + s^2}$.

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 15 to yourself, then answer the question.

Pause while students read and answer the question.

In circle O , $m\widehat{FG} = 30^\circ$, $m\widehat{BC} = 120^\circ$, and $\angle J \cong \angle K$.

What is $m\widehat{EH}$?

A 35°
 B 40°
 C 45°
 D 50°

Flag for Review Question 15 of 31 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected D, 50° .

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 16 to yourself, then answer the question.

Pause while students read and answer the question.

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

If the height of a rectangular prism is decreased by $\frac{1}{3}$, then which statement is true?

A The volume would decrease by $\frac{1}{3}$.

B The volume would decrease by $\frac{1}{6}$.

C The volume would decrease by $\frac{1}{9}$.

D The volume would decrease by $\frac{1}{27}$.

Flag for Review Question 16 of 31 Section 1 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected A, The volume would decrease by $\frac{1}{3}$.

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 17 to yourself, then answer the question.

Pause while students read and answer the question.

The heights of two similar triangles are in the ratio 2:5. If the area of the larger triangle is 400 square units, what is the area of the smaller triangle?

A 64 square units

B 160 square units

C 1,000 square units

D 2,500 square units

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected A, 64 square units.

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 18 to yourself, then answer the question.

Pause while students read and answer the question.

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

Help

Given: Circle T with $WP = 36$ centimeters

Which best represents the area of the shaded sector?

A $117\pi \text{ cm}^2$

B $180\pi \text{ cm}^2$

C $234\pi \text{ cm}^2$

D $468\pi \text{ cm}^2$

Flag for Review

Question 18 of 31
Section 1

Section Review

Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected A, $117\pi \text{ cm}^2$.

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 19 to yourself, then answer the question.

Pause while students read and answer the question.

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

Quadrilateral $QRST$ is to be reflected over the line $y = -x$.

What are the coordinates of point T' after this reflection?

A $(-4, 2)$

B $(-2, -4)$

C $(2, 4)$

D $(4, -2)$

Flag for Review Question 19 of 31 Section 1 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected D, the ordered pair $(4, -2)$.

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 20 to yourself, then answer the question.

Pause while students read and answer the question.

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

Lines a and b intersect lines c and d .

Which of the following statements could be used to prove that $a \parallel b$ and $c \parallel d$?

A $\angle 1 \cong \angle 6$, $\angle 3 \cong \angle 5$

B $\angle 1 \cong \angle 6$, $\angle 4$ and $\angle 5$ are supplementary

C $\angle 1 \cong \angle 4$, $\angle 1$ and $\angle 2$ are supplementary

D $\angle 1$ and $\angle 3$ are supplementary, $\angle 1$ and $\angle 6$ are supplementary

Flag for Review Question 20 of 31 Section 1 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected B, $\angle 1 \cong \angle 6$, $\angle 4$ and $\angle 5$ are supplementary.

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 21 to yourself, then answer the question.

Pause while students read and answer the question.

The figure shown is a regular hexagon.

What is the length of the diagonal AC ?

A $4\sqrt{3}$ in.

B 8 in.

C 12 in.

D $8\sqrt{3}$ in.

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected A, $4\sqrt{3}$ in.

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 22 to yourself, then answer the question.

Pause while students read and answer the question.

The figure represents the side view of a rectangular frame for metal shelves. Two diagonal braces support the frame.

Which is closest to the measure of x ?

A 7°

B 14°

C 28°

D 76°

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected C, 28° .

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 23 to yourself, then answer the question.

Pause while students read and answer the question.

This figure is composed of a regular pentagon and a rectangle.

What is the measure of each of the angles identified as x ?

A 36°

B 54°

C 72°

D 108°

Flag for Review Question 23 of 31 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected A, 36° .

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 the directions banner and question 24 to yourself, then complete the proof.

Pause while students read and answer the question.

John doe
Geometry Practice Items (2009 Math SOL) Exit

Directions: Click and drag an answer to each empty box.

Complete the proof.

Given: $\overline{BA} \perp \overline{AC}$
 $\overline{DC} \perp \overline{AC}$
Prove: $\triangle BFA \sim \triangle CFD$

Statements	Reasons
1. Given: $\overline{BA} \perp \overline{AC}$ $\overline{DC} \perp \overline{AC}$	1. Given
2. $\overline{BA} \parallel \overline{DC}$	2. If two lines are perpendicular to a third line, then the two lines are parallel.
3. <input type="text"/>	3. If two parallel lines are cut by a transversal, alternate interior angles are congruent.
4. $\triangle BFA \sim \triangle CFD$	4. <input type="text"/>

$\angle DFC \cong \angle BFA$;
 $\angle DAB \cong \angle BCD$

$\angle CBA \cong \angle ADC$;
 $\angle BAD \cong \angle DCB$

$\angle CDA \cong \angle BAD$;
 $\angle CBA \cong \angle BCD$

Angle-Angle (AA) Postulate

Side-Angle-Side (SAS) Postulate

Flag for Review Question 24 of 31 Section Review Previous Next

Section 1

SAY How did you complete the proof?

Pause for replies.

SAY In the left column of the proof, for Statement 3 you should have selected $\angle CDA \cong \angle BAD$; $\angle CBA \cong \angle BCD$. In the right column of the proof, for Reason 4 you should have selected Angle-Angle (AA) Postulate. For your answer to be correct, you must have both of these answers in the correct boxes within the proof.

In order for this question to show as “Answered” on the Section Review screen, both of the empty boxes must contain an answer. 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.

SAY Read the directions banner and question 25 to yourself, then select your answer.

Pause while students read and answer the question.

John doe
Geometry Practice Items (2009 Math SOL) Exit

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

Let p represent
 $\angle A$ is acute.

Let q represent
 $\angle B$ is acute.

Create a symbolic representation of the following argument.

$\angle A$ is acute if and only if $\angle B$ is acute.

$\angle A$ is acute or $\angle B$ is acute.

Therefore, $\angle A$ is acute and $\angle B$ is acute.

$p \rightarrow q$ $p \leftrightarrow q$ $p \wedge q$ $p \vee q$ $\therefore p \wedge q$ $\therefore p \vee q$

Flag for Review Question 25 of 31 Section 1 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY From the top receptacle to the bottom receptacle, the correct answer is:

$p \leftrightarrow q$; $p \vee q$; and $\therefore p \wedge q$.

If you did not choose all three symbolic representations, this question would show as “Unanswered” on the Section Review screen.

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 about the answer?

Answer all questions.

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

Pause.

SAY Read the directions banner and question 26 to yourself, then complete the equation.

Pause while students read and answer the question.

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

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

Given: Circle O with diameter \overline{CD}
 $C(-7, -4)$ and $D(1, 2)$

Create the equation of this circle.

The Equation of the Circle

+ =

$(x - 3)^2$	$(x + 3)^2$
$(y - 1)^2$	$(y + 1)^2$
25	100

Flag for Review Question 26 of 31 Section 1 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY Either of these solutions would be counted as correct:

$$(x + 3)^2 + (y + 1)^2 = 25, \text{ or}$$

$$(y + 1)^2 + (x + 3)^2 = 25.$$

In order for this item to show as “Answered” on the Section Review screen, there must be an answer option in each of the three empty boxes. Do you have any questions about the answer?

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 Read the directions banner and question 27 to yourself, then select your answer.

Pause while students read and answer the question.

Directions: Click on the two triangles you want to select.

Given: $\triangle ACF$ is subdivided into smaller triangles
 $\overline{AC} \perp \overline{AF}$ and $\overline{AC} \perp \overline{BE}$ and $\overline{AE} \perp \overline{CF}$
 Point B lies on \overline{AC} and points D and E lie on \overline{CF}

Based on the given information, identify two triangles that may NOT be similar.

$\triangle ACF$ $\triangle BCE$ $\triangle BEA$ $\triangle DBE$ $\triangle EAF$

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected $\triangle DBE$ AND one of the following: $\triangle ACF$, or $\triangle BCE$, or $\triangle BEA$, or $\triangle EAF$.

This question will show as “Answered” on the Section Review screen if any two of the options have been selected. Do you have any questions about the answer?

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 Read the directions banner and question 28 to yourself, then plot the point on the grid.

Pause while students read and answer the question.

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

Directions: Click on the grid to plot the point you want to select. Lines will connect this point with points D and E .

The vertices of $\triangle ABC$ and the endpoints of \overline{DE} have integral coordinates. Plot point F with integral coordinates so that $\triangle ABC \cong \triangle DEF$.

Question 28 of 31
Section 1

Section Review

Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY You should have plotted one of these ordered pairs: $(-8, -4)$ or $(-4, -8)$.

You must have used the pointer tool and NOT the dot tool to select the answer. If you had plotted this point using the dot tool, this question would appear as “Unanswered” on the Section Review screen.

Do you have any questions about the answer?

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 Read question 29 to yourself, then answer the question.

Pause while students read and answer the question.

Point A represents a vertex of an equilateral triangle inscribed in circle O .

Which other point is also a vertex of this equilateral triangle?

A Point W

B Point X

C Point Y

D Point Z

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected D, Point Z.

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 the directions banner and question 30 to yourself, then select your answer.

Pause while students read and answer the question.

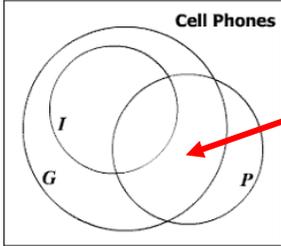
John doe
Geometry Practice Items (2009 Math SOL) X Exit

Directions: Click on the diagram to highlight each region you want to select. You must select all correct regions.

This Venn diagram represents the set of cell phones in a store.

- Let P represent the cell phones that take pictures.
- Let I represent the cell phones that connect to the Internet.
- Let G represent the cell phones that have games.

Identify each region of the Venn diagram that represents the cell phones that only take pictures and have games.



Flag for Review Question 30 of 31 Section 1 Section Review Previous Next

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected only the portion of the diagram that represents the intersection of circles G and P excluding the intersection of circles P and I . (The region indicated by the arrow in the image above.)

This item would show as “Answered” on the Section Review screen once any one of the regions has been selected.

Do you have any questions about the answer?

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.

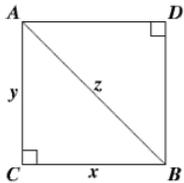
SAY Read the directions banner and question 31 to yourself, then select your answer.

Pause while students read and answer the question.

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

Directions: Click on the statement you want to select. You must select all correct statements.

This figure models a gate that has been constructed using two parallel vertical boards with a diagonal board connecting them. Identify all of the statements that must be true.



$\sin\angle CAB + \cos\angle CAB = 180^\circ$
$\sin\angle CAB = \cos\angle CBA$
$\angle CAB \cong \angle DAB$
$x^2 + y^2 = z^2$
$\overline{AD} \parallel \overline{CB}$

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

SAY Which answer did you choose?

Pause for replies.

SAY You should have selected each of the following answers:

$\sin\angle CAB = \cos\angle CBA$; $x^2 + y^2 = z^2$; and $\overline{AD} \parallel \overline{CB}$.

Since the number of correct answers was not indicated in the question, this item will show as “Answered” on the Section Review screen once one answer is selected. Again, this is so no hint or clue is given as to how many correct answers there are, since the directions indicate you must “select all.”

Do you have any questions about the answer?

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.

If you want your students to practice using the Help tool (as mentioned on page 10), they can do so now.

SAY Click *Next* at the 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	33 Answered	0 Unanswered
Sample		✓ Answered	
Sample		✓ Answered	
Question 1		✓ Answered	
Question 2		✓ Answered	
Question 3		✓ Answered	
Question 4		✓ Answered	
Question 5		✓ Answered	
Question 6		✓ Answered	
Question 7	🚩 Flagged for Review	✓ Answered	
Question 8		✓ Answered	
Question 9		✓ Answered	
Question 10		✓ Answered	

CONTINUE
TO TEST OVERVIEW
▶

john doe | Geometry 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 #7, the question we flagged for review. You should see a picture of a flag in the “Flagged for Review” column next to the question. (Pause.) You can then return to this screen by clicking on the “Section Review” button at the bottom of the screen on question #7.

Pause while students practice returning to question #7 and then come back to this screen.

The ruler tool was not used as students worked through the practice items. If you would like students to practice with the ruler, have them return to question 11 and measure the height of the dark gray box using either the inches or centimeters ruler. The box has a height of 10.7 cm, or $4\frac{7}{8}$ inches.

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 light blue box 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.

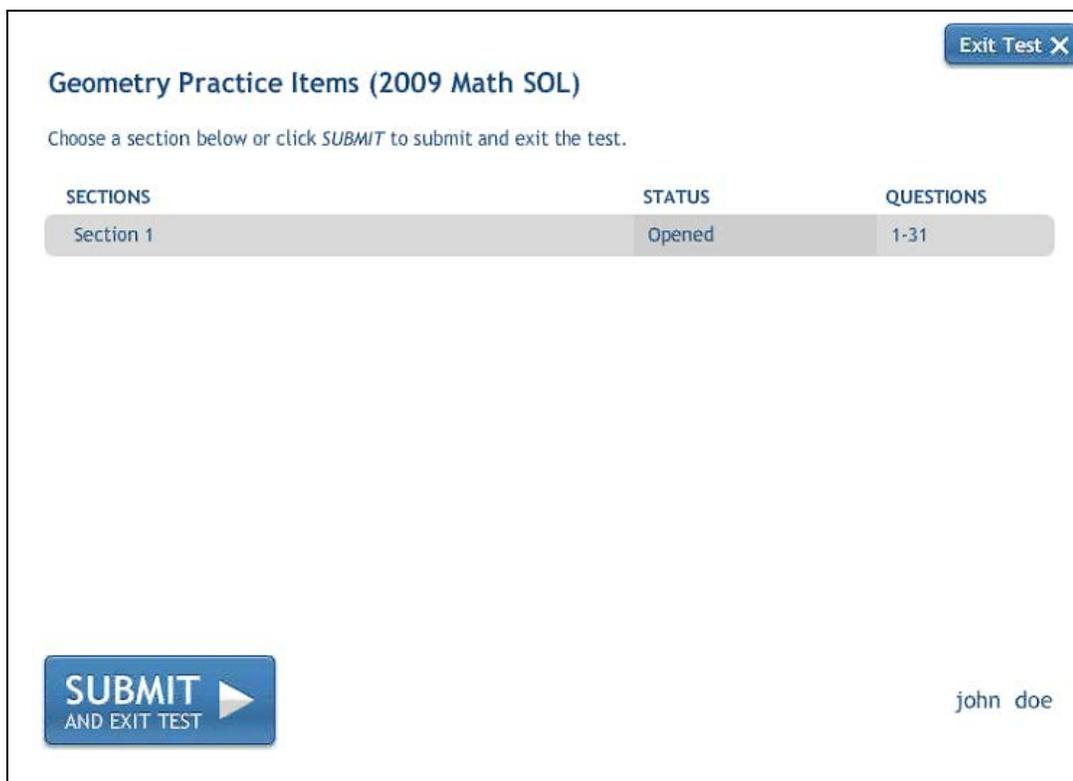
Are there any questions?

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, click the top left-hand column header titled “_ of 33 Total Items”.

The number in the blank will vary, depending on the last column the student has filtered on. The total number of items is 33: two sample items plus the thirty-one practice items. The blank number will vary, depending on the last column the student has filtered on.

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.)

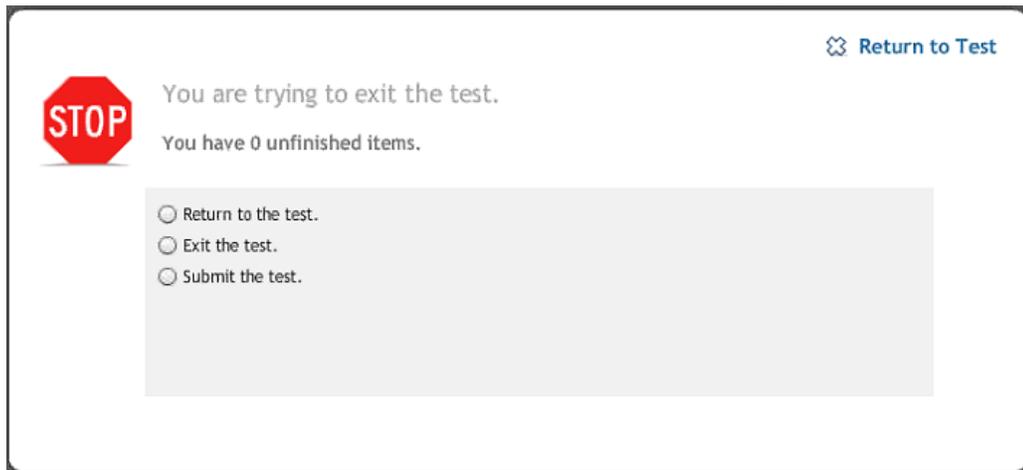


SAY From the Test Overview screen, you can return to the test or move to the final screen. Clicking on Section 1 will take you to the last practice item you were working on or went back to review. Since we have finished with the practice items, we will not return to any question within the section. Clicking 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.

SAY 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 Geometry Practice Items.

Thank you for reviewing the Geometry Practice Items with your students.

APPENDIX A

Answers to Geometry Practice Items

Sample A

The correct answer is A, 18.

Sample B

The correct answer is 2.

Question 1

The correct answer is A, 54 cm.

Question 2

The correct answer is B.

Question 3

The correct answer is C.

Question 4

The correct answer is D, 616 square inches.

Question 5

The correct answer is C, 12 cm.

Question 6

The correct answer is any one of the following points: (6, -1), (9, -6), or (0, 9).

Question 7

The correct answer is 34° .

Question 8

Must plot the center of Circle O at (0, 2) and one of these points that lie on the circle: (0, -3), (0, 7), (5, 2), (-5, 2), (4, 5), (-4, 5), (4, -1), (-4, -1), (3, 6), (-3, 6), (3, -2), or (-3, -2).

Question 9

The correct answer is cone and sphere.

Question 10

The correct answer is 2:3 or 3:2.

Question 11

For statement 2, the correct reason is: Base angles of an isosceles triangle are congruent; For statement 3, the correct reason is: Reflexive property; For statement 4, the correct reason is: Angle-Side-Angle (ASA) Postulate.

Question 12

The correct answer is C, the ordered pair (4, 0).

Question 13

The correct answer is C, 4.

Question 14

The correct answer is A, The length of each diagonal $\sqrt{r^2 + s^2}$.

APPENDIX A (Continued)**Answers to Geometry Practice Items****Question 15**

The correct answer is D, 50° .

Question 16

The correct answer is A, The volume would decrease by $\frac{1}{3}$.

Question 17

The correct answer is A, 64 square units.

Question 18

The correct answer is A, $117\pi \text{ cm}^2$.

Question 19

The correct answer is D, the ordered pair (4, -2).

Question 20

The correct answer is B, $\angle 1 \cong \angle 6$, $\angle 4$ and $\angle 5$ are supplementary.

Question 21

The correct answer is A, $4\sqrt{3}$ in.

Question 22

The correct answer is C, 28° .

Question 23

The correct answer is A, 36° .

Question 24

The correct answers are for Statement 3: $\angle CDA \cong \angle BAD$; $\angle CBA \cong \angle BCD$, and for Reason 4: Angle-Angle (AA) Postulate.

Question 25

The correct answer is *from top receptacle to bottom receptacle*: $p \leftrightarrow q$; $p \vee q$; $\therefore p \wedge q$.

Question 26

One of the following solutions: $(x + 3)^2 + (y + 1)^2 = 25$, or $(y + 1)^2 + (x + 3)^2 = 25$.

Question 27

$\triangle DBE$ should have been chosen along with one of the following: $\triangle ACF$, or $\triangle BCE$, or $\triangle BEA$, or $\triangle EAF$

Question 28

The correct answer is the ordered pairs: $(-8, -4)$ or $(-4, -8)$.

APPENDIX A (Continued)

Answers to Geometry Practice Items

Question 29

The correct answer is D, Point Z.

Question 30

The correct answer is the portion of the diagram that represents the intersection of circles G and P excluding the intersection of circles P and I .

Question 31

All three answers must be selected: $\sin \angle CAB = \cos \angle CBA$; $x^2 + y^2 = z^2$; and $\overline{AD} \parallel \overline{CB}$.

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 erases 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 dragers. 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 dragers have been input by the student. Or, in another example, if the directions or question indicate that all dragers need to be used to answer the item, then the item will show as answered on the Section Review only when all dragers have been used. If the number of dragers 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.