Virginia

Standards of Learning
Guided Practice Suggestions

**For use with the Algebra I
Practice Items in TestNav^{TM} 8**

Table of
Contents

Change Log

Updates to this document will be reflected in the table.

Change Log		
Version	**Date**	**Description**
V.2	10/21/2016	General information updated.
V.1	09/02/2016	Original Document Posted.

Introduction to TestNav^{TM} 8: MC/TEI Document

The *Introduction to TestNav 8: MC/TEI* document serves as an introduction to the new online navigation, tools, accessibility features, and overall functionality and appearance of TestNav 8. It is highly recommended that teachers (or other adults) read the
Introduction to TestNav 8: MC/TEI document prior to reading this guide, the *Guided Practice Suggestions* for the Algebra I practice item set.

Reading the *Introduction to TestNav 8: MC/TEI* document will give teachers an understanding of the features of TestNav 8 prior to working with students**.** In part, the document provides information on:
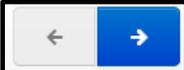
- opening the practice item sets within the required TestNav 8 Application,
- navigating through the practice item sets,
- answering technology-enhanced items (TEI) and multiple-choice items,
- using the online tools, and
- using the accessibility features available in TestNav 8.

This important information should be used in conjunction with the information found in this guide.
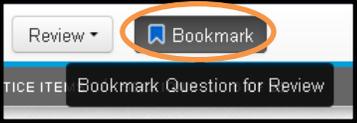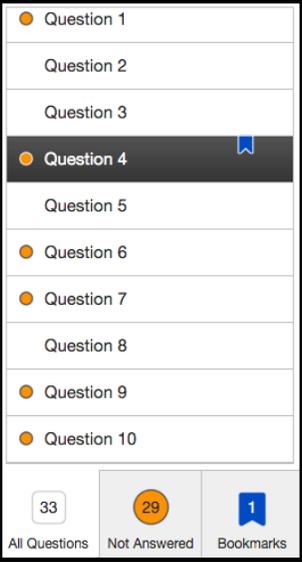
Guided Practice Suggestions

This guide provides specific item information for each question in the Algebra I practice item set in table format. Along with the item information in the table, there is a column titled "Guided Practice Suggestions." This column contains information for teachers as they guide students through the practice items. For instance, guided practice suggestions can state, "Use the eliminator tool to place a red 'X' on the answers that are not correct," or, "Make sure students know how to select draggers and place them in the empty boxes using their mouse, keypad, or touchscreen." Following the suggestions in the table will ensure that students are exposed to all of the different tools within TestNav 8, the different functionality features of TEI, and the common messages that may appear as students complete TEI.

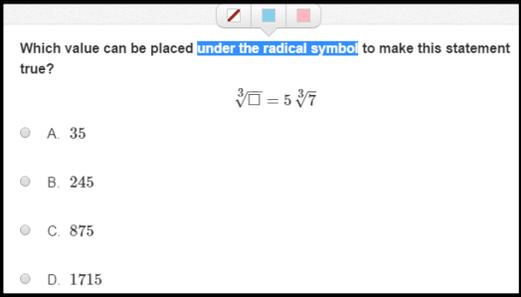# Algebra I Practice Item Information and Recommended Guided Practice Suggestions

Question	Item Type	Answer Key	Guided Practice Suggestions
1	MC	B 35	Throughout the practice item set, move to the next or previous screen in a section by selecting an arrow in the top left corner of the screen. An arrow with a blue background indicates the button is active and can be selected. (On a computer adaptive test, only the forward arrow will be active.)
2	TEI Hot Spot	All of the following must be selected: $3; 3x + 2; x - 5.$	The eliminator tool may be used on this item to assist students in eliminating answers that are not correct. Have students select the eliminator tool located in the toolbar and then place a red "X" on the answers that are not correct.

Directions: Select the correct answers.

When factored completely, identify the factors of this polynomial.

$$9x^2 - 39x - 30$$

| 3 | ~~3x + 15~~ | 3x - 2 | x - 5 |
| ~~9~~ | 9x + 6 | 3x + 2 | x + 5 | |

Question	Item Type	Answer Key	Guided Practice Suggestions
2 (Cont.)			To remove an "X" keep the eliminator tool active and select the "X" to remove it. Have students practice removing an "X." The eliminator tool may also be used to eliminate an answer that was selected with the pointer tool. Remind students that placing an "X" on the incorrect answer choices does not complete the item. A selection must be made with the pointer tool in order for the item to be considered "Answered."
3	MC	D $\dfrac{5}{x^{18}}$	Have students practice using the eliminator tool on this multiple choice item. Have students select the eliminator tool located in the toolbar and then place a red "X" on the answers that are not correct. To remove an "X" keep the eliminator tool active and select the "X" again. Have students practice removing an "X." Which represents this expression in simplest form? $$\dfrac{15(x^{-2})^3}{3(x^{-4})^{-3}}$$ A. $\dfrac{12}{-6}$ B. $2x^{18}$ C. $\dfrac{5}{-6}$ D. $\dfrac{5}{x^{18}}$

Question	Item Type	Answer Key	Guided Practice Suggestions
3 (Cont.)			Tell students: Multiple-choice items must be answered in TestNav 8 by selecting the letter of the answer option or the option itself using the mouse, keypad, or touchscreen. On multiple-choice items, once an answer is selected, the item cannot be returned to an unanswered state (no answer selected) unless the student uses the eliminator tool to place an "X" over the selected answer. Remind students that placing an "X" on the incorrect answer choices does not complete the item. A selection must be made with the pointer tool in order for the item to be considered "Answered."

Question	Item Type	Answer Key	Guided Practice Suggestions
4	MC	D $5x - 6$	Have students select the *Bookmark* button and tell them that when they select the *Bookmark* button, it will turn dark gray. This button would be used to mark a question for review at a later time. Then have students select the *Review* button. A drop-down menu will appear. All of the questions in the current section will be listed. The question that the student is viewing on the screen will be shaded dark gray. This question has an orange circle next to it because it has not yet been answered. This question will also have a blue flag next to it because it was just bookmarked.

Question	Item Type	Answer Key	Guided Practice Suggestions
4 (Cont.)			Have students practice using the scroll bar to see the status of each question in the drop-down menu. Have students close the *Review* drop-down menu and deselect the *Bookmark* button. Then, tell them to look at the *Review* drop-down menu again to see that the question no longer has a blue flag.
5	MC	D $6x^4y^8\sqrt{5x}$	
6	MC	C $12\sqrt[3]{2}$	

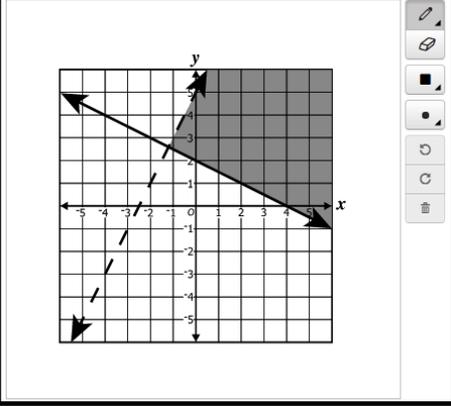| Question	Item Type	Answer Key	Guided Practice Suggestions
7	MC	C 875	Have students use the highlighter tool to highlight "under the radical symbol." Which value can be placed under the radical symbol to make this statement true? $$\sqrt[3]{\Box} = 5\sqrt[3]{7}$$ A. 35 B. 245 C. 875 D. 1715 To highlight using a keyboard, place the cursor next to "under," left click, hold down, and drag over the text. Then select the highlighter color.* To remove the highlight, left click, hold down, and drag over the text. Then select the white box on the left with the red line. On a touchscreen, hold down on the text with a finger, and adjust the area to be highlighted with the blue anchors. Then select the highlighter color.* To remove the highlight, hold down on the text with a finger, then select the white box on the left with the red line. On a touchscreen, the following message may appear when students highlight text. Copy │ Define │ Share… In the practice items, selecting one of the options listed will open a new window and direct students to the internet. This will not occur in the actual testing environment; selecting an option will not direct the students to another screen.

Question	Item Type	Answer Key	Guided Practice Suggestions
7 (Cont.)			*Pink and blue are the two highlighter colors available when the foreground and background settings are set to the default (black text on white background). These colors may change when the foreground and background setting is changed. Practice with changing the foreground and background colors is included on a later question in this practice item set. Tell students that the highlighter tool will only work on text. It will not work on art (images/pictures).
8	MC	C $x = -1$ and $x = -1.5$	
9	TEI Hot Spot	The student should select: The equation has no solutions.	This item specifies the number of answers a student must select. If a student tries to select more than the number of answers indicated, a message appears in the top right corner of the screen. This message will remain for approximately five seconds unless the "X" is selected to close the message. Have students try to select an additional answer so that they can see this message appear. You must remove an answer before you can choose a new one.

Question	Item Type	Answer Key	Guided Practice Suggestions
10	TEI Fill-in-the-Blank	The student may enter: $x > -9$ or $-9 < x.$	Have students attempt to enter a character that cannot be used as part of the answer. A message will appear that states: You cannot use that character. This message will remain on the screen for approximately three seconds. Tell students that the answer does not need to be as long as the response box. For fill-in-the-blank questions such as this, once any character is entered into the response box, the question will show as "Answered" on the Review screen.
11	TEI Hot Spot	The student should select: Multiplication Property of Inequality.	

Question	Item Type	Answer Key	Guided Practice Suggestions
12	MC	B $\dfrac{-2(x+50)}{-2} \leq -\dfrac{16}{2}$	Have students practice using the Answer Masking accessibility feature with this item. Select the user drop-down menu in the top right corner of the screen and select *Enable Answer Masking* from the menu. The answer options on multiple-choice items will now be masked as shown in the screenshot.
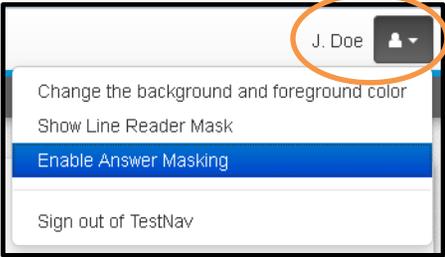
Question	Item Type	Answer Key	Guided Practice Suggestions
12 (Cont.)			Students may show or hide each option by selecting the "eye." An inequality is shown. $$^-2(x + 50) \geq 16$$ Which inequality is true because of the division property of inequality? A. $\dfrac{^-2(x + 50)}{^-2} \geq {}^- \dfrac{16}{2}$ Answer Masking will remain on in each multiple-choice item until it is turned off. To turn off Answer Masking, select the user drop-down menu and select *Disable Answer Masking.*

Question	Item Type	Answer Key	Guided Practice Suggestions
13	TEI Drag and Drop	Students should select: $y \geq \frac{-1}{2}x + 2$ and $2x + 5 > y$	Have students select draggers and place them in the empty boxes using the mouse, keypad, or touchscreen. Selecting a dragger and moving it to the empty box may cause the remaining draggers to shift location in the answer option area. Have students practice moving draggers back to the gray box. Draggers will go back to their original location when returned to the gray box. Have students try to place one dragger "over" another dragger, to show how the draggers will return to the gray box. If a student wishes to change an answer, the dragger must be moved back to the gray box and another option must be selected and moved into the response box. This question will show as "Answered" on the Review screen once the student uses two draggers. If only one dragger is selected, the item will show as "Unanswered" on the Review screen. This question has the Drawing Interaction Tool. The Drawing Interaction Tool is a boxed area that exists on certain mathematics questions. The pencil may be used to make marks, notations, straight lines, or dots on or around artwork or graphs inside the Drawing Interaction area. The student selects the specific tool he/she wants to use, and uses it to help answer the question.

Question	Item Type	Answer Key	Guided Practice Suggestions
13 (Cont.)			Directions: Drag the two selected inequalities to the box. Using the inequalities shown, create a system of two inequalities that could be represented by this graph. The top tool is the pencil or straight line tool. The arrow in the bottom right corner expands the tool so a student may select free draw or the straight line. A dot may be placed if a student uses their mouse, keypad, or touchscreen. The student would select free draw and use their mouse or keypad to click and release to place a point. If using a touchscreen, the student would use their finger to place a point. The second tool is used to erase selected lines or writing. The third tool allows the markings to be black or green. The arrow in the bottom right corner expands the tool so a student may select the color.

Question	Item Type	Answer Key	Guided Practice Suggestions
13 (Cont.)			The fourth tool allows the students to select the thickness of the markings. The arrow in the bottom right corner expands the tool so a student may select the size. The fifth and sixth tools are to Undo or Redo the most recent markings. The last tool allows all markings to be eliminated at the same time. Have students practice drawing markings and removing them to help answer the question. Students must select the correct answer using the answer options below the Drawing Interaction Tool.

Question	Item Type	Answer Key	Guided Practice Suggestions
14	TEI Hot Spot	Region 2 should be selected.	This question is a type of hot spot technology enhanced item. Students must use the hot spot buttons beneath the graph to select the region of the graph to be shaded. Tell students that this item will be considered "Answered" once a region is selected. If the student wishes to change an answer, he/she should select another region or use the eliminator tool to remove the answer. Please tell students If the eliminator tool is used to remove an answer, the shading will remain on the graph until another region has been selected and the item will appear as "Unanswered" on the Review screen.
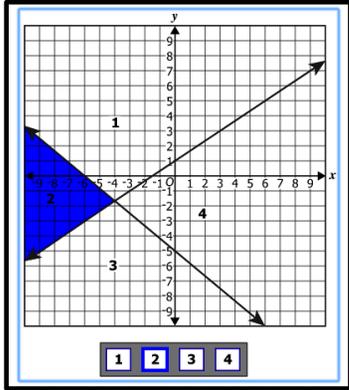
Question	Item Type	Answer Key	Guided Practice Suggestions
14 (Cont.)			Remind students that placing an "X" on the incorrect answer choices does not complete the item. A selection must be made with the pointer tool in order for the item to be considered "Answered."
15	MC	C	
16	TEI Hot Spot	Students should plot any two of the following ordered pairs: $(-10, -10)$, $(-8, -7)$, $(-6, -4)$, $(-4, -1)$, $(-2, 2)$, $(0, 5)$, or $(2, 8)$.	This coordinate grid is a type of hot spot technology enhanced item. Information for teachers: Though the directions indicate the student should select two ordered pairs, the question will show as "Answered" on the Review screen once the student has plotted one point. Remind students it is important to read the item to determine if the number of answers that should be selected is specified.
17	MC	B 3	

Question	Item Type	Answer Key	Guided Practice Suggestions
18	TEI Hot Spot	$g(x) = 9(x - 8)$ and $j(x) = x^2 - 8x + 16$	Information for teachers: Students must select both of these functions and only these two functions to get the item correct. The item will show as "Answered" on the Review screen once one answer is selected. This is so no hint or clue is given as to how many correct answers there are, since it was not indicated in the question.

Question	Item Type	Answer Key	Guided Practice Suggestions
19	TEI Hot Spot	$h(x) = \dfrac{5}{3}x - 5$ and $k(x) = 3x^2 - 11x + 6$	Have students practice zooming in to look at the question on the screen, and then have them zoom out. On a PC or Chromebook, press the CTRL and + keys at the same time to zoom in. Press the CTRL and – keys at the same time to zoom out. Press the CTRL and 0 (zero) keys at the same time to return to the default screen size. On a Mac, press the COMMAND and + keys at the same time to zoom in. Press the COMMAND and – keys at the same time to zoom out. Press the COMMAND and 0 (zero) keys at the same time to return to the default screen setting. On a touchscreen, have students touch two points on the screen and then move your fingers away from each other to zoom in. Touch two points on the screen and then move their fingers toward each other to zoom out. As students are practicing how to zoom in and out, make sure they are doing so within reason. If students zoom in too far, they may not be able to see all of the information necessary to answer the question. If students zoom out too far, they may not be able to clearly see details of the question on the screen. It should also be noted that zooming in and out on the screen may cause the text wrapping to change. Remind students that they should only use this feature when necessary. Before students go to the next question, make sure they return to the default screen.

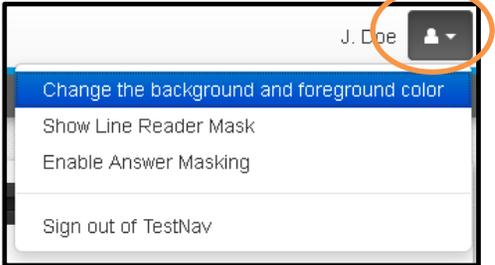| Question	Item Type	Answer Key	Guided Practice Suggestions
20	TEI Hot Spot	Students must plot any three of the following ordered pairs: $(-6,10)$, $(-4,5)$, $(-2,2)$, $(0,1)$, $(2,2)$, $(4,5)$, or $(6,10)$.	This coordinate grid is a type of hot spot technology enhanced item. Information for teachers: Though the directions indicate the student should select three ordered pairs, the question will show as "Answered" on the Review screen once the student has plotted one point. Remind students it is important to read the item to determine if the number of answers that should be selected is specified.
21	MC	C	

Question	Item Type	Answer Key	Guided Practice Suggestions
22	MC	D The volume of the gas varies inversely with the pressure because $vp = 3{,}600$.	Have students practice using the Line Reader Mask accessibility feature with this item. Select the user drop-down menu and *Show Line Reader Mask* from the menu. The Line Reader Mask will appear over the item. Have students use the diagonal line areas to practice resizing the area covered by the line reader and the window through which content can be seen. Have students use the cross to move just the window through which content can be seen. Hold down on any part of the gray area and drag the tool to move the entire tool. To turn off the Line Reader Mask, select the drop-down menu and select *Hide Line Reader Mask*. If the student does not turn off the Line Reader Mask, it will automatically turn off when the student navigates away from the item.
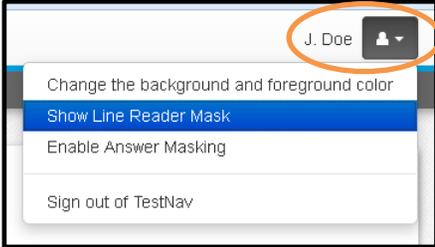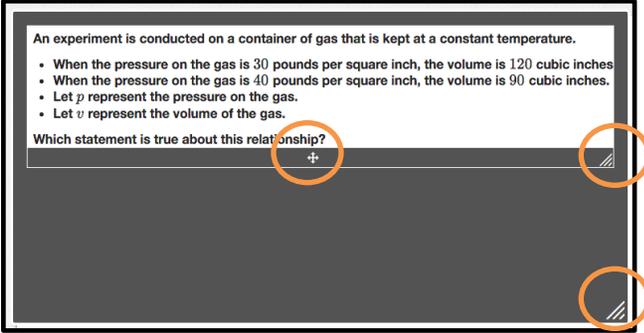
Question	Item Type	Answer Key	Guided Practice Suggestions
23	MC	D It is an inverse variation because $10 = xy$.	
24	TEI Hot Spot	Students must plot any two of the following pairs: (0,0), (4,6), (6,9).	This coordinate grid is a type of hot spot technology enhanced item. Information for teachers: Though the directions indicate the student should select two ordered pairs, the question will show as "Answered" on the Review screen once the student has plotted one point. Remind students it is important to read the item to determine if the number of answers that should be selected is specified.

Question	Item Type	Answer Key	Guided Practice Suggestions
25	MC	C 8	Students may want to use the *Algebra I Formula Sheet* when answering this question. In order to access the online formula sheet, students can select the black *Exhibits* icon that is located on the far right of the screen. When the icon is selected, the formula sheet will appear on the screen. Have students practice scrolling to the bottom of the formula sheet and back up to the top. On a desktop or laptop, scroll by using the scroll bar on the right side of the *Exhibits* window. On a touchscreen device, use a finger to hold down on the white part of the formula sheet to drag it up and down. Have students practice moving the *Exhibits* window around the screen. To move the *Exhibits* window on a desktop or laptop, place the cursor on the gray bar across the top of the *Exhibits* window and drag it to a new location on the screen. To drag the *Exhibits* window on a touchscreen device, use a finger to hold down on the gray bar across the top of the *Exhibits* window, and drag the window to a new location. To close the *Exhibits* window, select the "X" in the upper right corner.
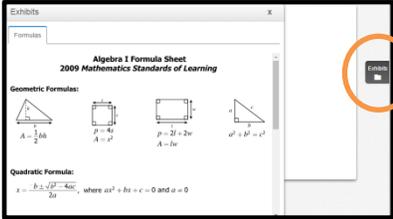
Question	Item Type	Answer Key	Guided Practice Suggestions
26	MC	B Kelli	Students may want to use the *Algebra I Formula Sheet* when answering this question. This question does not require the use of the ruler tool, but have students practice measuring the width of the table using the centimeter ruler. This provides them the opportunity to practice manipulating the tool. There are two ruler tools on the top of the screen ( ). The icon on the left should be used to access the eighth inch ruler and the icon on the right should be used to access the centimeter ruler. Have students select the appropriate ruler for this question, the centimeter ruler. To move the ruler, select and drag the ruler over to the object to be measured. To rotate the ruler, select and drag an end with the circle. Have students practice moving and rotating the ruler. Selecting the ruler tool icon again will put the ruler tool away; or, select the pointer tool to put it away. Students will use the pointer tool to select the answer after measuring.
27	TEI Fill-in-the-Blank	-1.44	Students may want to use the *Algebra I Formula Sheet* when answering this question. For fill-in-the-blank questions such as this, once any character is entered into the response box, the question will show as "Answered" on the Review screen.

Question	Item Type	Answer Key	Guided Practice Suggestions
28	TEI Hot Spot	Students should select all of the following intervals: $26 - 28, 28 - 30,$ $30 - 32, 32 - 34,$ $34 - 36, 36 - 38,$ $38 - 40.$	Students may want to use the *Algebra I Formula Sheet* when answering this question. Information for teachers: Students must select all of these intervals, and only these intervals for the item to be correct.
29	TEI Hot Spot	Students should select all of the following numbers: $75, 78, 80, 82, 85.$	Students may want to use the *Algebra I Formula Sheet* when answering this question. Since the number of correct answers was not indicated, this item will show as "Answered" on the Review screen once one answer is selected. This is so no hint or clue is given as to how many correct answers there are.
30	MC	C $a = 45$ and $b = 45.8.$	Students may want to use the *Algebra I Formula Sheet* when answering this question.
31	MC	D $36 \leq x < 42$	Students may want to use the *Algebra I Formula Sheet* when answering this question.
32	MC	D 18	

Question	Item Type	Answer Key	Guided Practice Suggestions
33	MC	D $y = 1.7x^2 + 2.9x - 5.2$	Have students practice using the accessibility feature that allows them to change the background and foreground color. Select the user drop-down menu and *Change the background and foreground color* from the menu*.* There are six different options other than black on white, which is the default setting. Have students select a contrast setting and then the *Continue* button to enable this feature. This feature could be used by students who would benefit from the use of color contrasting to make text more distinct. This setting will remain enabled until turned off. To turn off this setting, select the user drop-down menu, select *Change the background and foreground color,* and then select the button next to the default setting. Then select the *Continue* button. Information for Teachers: This is the end of the practice item set. See the *Introduction to TestNav 8: MC/TEI* document for information on closing TestNav.